

Neuroqueer(ing) Noise:

**A/autisms, affect and more-than-sonic pedagogies in an
integrated early childhood classroom.**

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PhD 2021

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integrated early childhood classroom.**

by

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A thesis submitted in partial fulfilment of the requirements of The Manchester
Metropolitan University for the degree of Doctor of Philosophy (PhD Education).

Education and Social Research Institute

Manchester Metropolitan University

2021

Abstract

In this thesis, I experiment with affect theories to think about neurodiversity, music composition, and early childhood pedagogy: this thesis sits at the intersection of social practice art and empirical social science research to craft new techniques for researching with sound-based methods and A/autistic practices. Drawing from critical disability studies, including crip and neuroqueer theories, and ‘post’ philosophies, I explore how neurodivergence comes to be formulated in the early childhood classroom at the intersection of racialising, abling/disabling, and Anglo-centric assemblages, challenging biocentric notions of A/autisms as residing ‘in’ a bounded body(mind) and the A/autist(ic) as a cohesive ‘type’ of person. At the same time, I keep hold of the valuable political work of A/autistic identity. I illustrate the generative friction between these perspectives with my stylised writing of *A/autisms*. In this thesis, I experiment with sound-based research and practice, through the process of music composition, audio recordings, and the sonified outputs of *electrodermal activity* devices (EDA): I explore the ethical and methodological challenges of researching with EDA in the classroom.

This thesis offers two conceptual contributions for researching in early childhood settings. The first contribution is *music composition research-creation*, which is an artistic method for conducting sound-based research. The second contribution is *A/autisms*, which is an organising concept for doing critical disability research in education by keeping hold of the generative friction between disability identity, the material reality of disability, and the messiness of the label ‘autism’. I suggest that the concept *A/autisms* has implications not just for research in the field of critical disability studies in education, or in early childhood education, but also more broadly in how researchers orient towards the human subject in contemporary social science scholarship that draws from ‘post’ philosophies. Thus, I suggest *A/autisms as method(ology)*. Rather than seek solely to improve educational provision for neurodivergent young people—although I intend to do that too—I hint at the ways that divergence is formulated moment-by-moment in the pedagogical encounter and how (infrequently, momentarily) divergence can be defamiliarised. In these ways, these new concepts emphasise the relationality of the (racialised, disabled) child’s body(mind) at the same time as keeping hold of the need for a dis-identitarian politics of disability. I frame this politics using *neuroqueer* theory.

This thesis is animated by a 14-month in-school music composition research-creation study called *Neuroqueer(ing) Noise*, which was a series of projects with a class of Year 1 (later Year 2) children. The study explores the instability of ‘neurotypicality’ at the intersection of racializing and abling/disabling processes. This study also experiments with and problematises electrodermal activity as method. I also think with my ongoing music composition research-creation study *Oblique Curiosities*.

Acknowledgements

Thank you to Dr Abigail Hackett, Prof Maggie MacLure, and Prof Elizabeth de Freitas for their constant support and attention to detail throughout my research, and who (despite my best efforts) got me here in the end. Particular thanks to Dr Hackett for teaching me to write clearly, to Prof. MacLure for being supremely patient with my shilly-shallying, and Prof. de Freitas for pushing my thinking, especially around propositions.

Thank you to the staff and young people of ‘Kingfisher’ Academy, who were the participants of the in-school research-creation events discussed in this thesis: you couldn’t have been kinder in helping me run the research project.

Thank you to Dr Sarah E. Truman, who co-theorises with me as *Oblique Curiosities*, and whose friendship has walked me up the sides of mountains and on to ever more wobbly horizons. Thank you also to my colleagues at ESRI who have read and thought alongside me these last four years, and to Dr Stephanie Springgay, who has been intellectually generous and highly supportive of my scholarship over the years. Thank you to Ms Hunter, Mr Sowter, Ms Breckenridge, Mr Antonis, Ms Williams, Ms Wheeler, Ms Ansah, Mrs Zielinski, Ms Ahmet, Ms Springer, and all my other teaching colleagues who informed this thesis in myriad ways.

And, finally, thank you to the hundreds of young people I’ve taught or worked with over the last 15 years (neuroqueer or otherwise), whose generosity, selfishness, intellect, good humour, bad moods, and flamboyant piercing bizarrrity have all taught me so very much, and for whom all of this was for: I will not forget one day of it.

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Research Questions

1. How do theories of disability identity and neurotypicality help us make sense of the politics of what goes on in mainstream (or 'integrated') classrooms?
 - *Sub-question 1:* How can creative practice intervene in (neuro)typical representations of disability in educational provision?
 - *Sub-question 2:* What are the implications of thinking propositionally for critical disability and A/autisms research in education?

2. To what extent do research-creation and sound art pedagogies allow the analysis of learning experiences in the classroom?
 - *Sub-question 1:* How do theories of affect problematise the use of sound methods in educational research?
 - *Sub-question 2:* What can attention to music do for the practice of research-creation?

1. Introduction(s): Contributions, key terms, positionality, & *Pigeons* class.

This is a study of how neurodiversity unfolds through music composition, both in the early childhood classroom and the music studio. I experiment with theories of affect to think about neurodiversity, music composition, and early childhood pedagogy. Thus, this thesis is an experiment in transdisciplinarity—operating at the intersection of social practice art, empirical social science research, early childhood pedagogy, and cultural studies—and so in my own conjoined practices as primary school and special education teacher, composer and (now) a researcher.

This thesis is animated by two music composition research-creation projects. The main study, *Neuroqueer(ing) Noise*, was a fourteen-month in-school residency with a ‘mainstream’ class of Year 1 and Year 2 children. In the British education system, a mainstream classroom is one that typically includes disabled young people, but is not a ‘special’ school. The study explores the instability of ‘neurotypicality’ at the intersection of racializing, Anglo-centric, and abling/disabling processes. I also draw from *Oblique Curiosities*, an ongoing glitch-folk/electronica duo consisting of Sarah E. Truman and myself: we write songs as a thinking-through of method and theory. In this brief introduction, I detail how I mobilise both projects in this thesis. I also briefly summarise the two conceptual contributions this thesis makes to researching in early childhood settings—*music composition research-creation* and *A/autisms*—and how they are shaped over the coming chapters. I conclude this brief introduction with a moraine of three essential mini-introductions before the thesis proper starts: (1) a definition of the key

term *body(mind)*, (2) a statement on my positionality, and (3) a brief introduction to the young people who participated in this project.

Contribution 1: Music composition research-creation.

This thesis's first contribution is elucidated over chapters 3, 4, and 5, and addresses my *second* research question and its two sub-questions.

2. To what extent do research-creation and sound art pedagogies allow the analysis of learning experiences in the classroom?
 - *Sub-question 1:* How do theories of affect problematise the use of sound methods in educational research?
 - *Sub-question 2:* What can attention to music do for the practice of research-creation?

Research-creation is a way of researching socio-material processes as art practices: it is both the doing and theorising of research (Truman & Springgay, 2015). It is enacted as feminist, queer-crip, and anti-colonial *praxis* (Loveless, 2019; Shannon, 2020; Truman et al., 2019). I do research-creation as music composition. Research-creation does not adopt any particular theoretical orientation, although many scholars who use the term 'research-creation' are drawn to process philosophies (e.g. Manning & Massumi, 2014), theories of affect (e.g. Loveless, 2019; Shannon, 2020; Springgay, 2020a), and feminist materialisms (e.g. N. Myers, 2017; Shannon & Truman, 2020). This way of thinking about research-creation often takes up Alfred North Whitehead's conceptualisation of *propositions* as its primary organising concept (Manning & Massumi, 2014; Shannon, 2021; Springgay & Truman, 2018a). Similarly, in this thesis, I mobilise Whitehead's

proposition, theories of affect and feminist materialisms. In chapter 3, I offer a detailed elaboration of the methodological underpinnings of my understanding of research-creation, predominantly thought through Whitehead's notion of propositions: I also begin to setup up how I understand 'affect'. Parts of chapter 3 are published in *Matter: Journal of New Materialist Research* (Shannon, 2021: see Appendix A) and, at the time of writing, under review in *Qualitative Inquiry* (Shannon, under review).

Research-creation as I have summarised it above has already been well-theorised through visual (e.g. Leduc, 2016; N. Myers, 2017), performative and gestural (e.g. Manning, 2016a; Ng-Chan, 2021; Springgay, 2011a, 2020a; Springgay & Zaliwska, 2017; Tallbear, 2017), and multimedia, narrative and textual registers (e.g. Dokumaci, 2018; Loveless, 2019; Lupton & Watson, 2021; Pahl & Pool, 2021; Truman, 2016a, 2016b, 2022), as well as through sound and music (Chapman, 2009, 2015). However, the projects described here appear to be the first examples of research-creation done as music composition, wherein the process of composing music is also the process of conducting and theorising the research. I describe how music composition as research-creation works in chapters 4, 5 and 6. In chapter 4, I use theories of 'affect' to consider how music composition research-creation problematises sound methods. I understand 'affects' as pre-personal intensities that modulate body(mind)s' capacities to affect—and be affected by—other body(mind)s. I think about how attention to affect in music composition research-creation might be used to problematise the white masculinist epistemology of sound studies. I draw from my work as half of *Oblique Curiosities* to consider how doing music composition as sound study draws attention to the generative excess of sound, or how sonic experience has blurry edges that are shaped by non-auditory experience. I call this attention the *more-than-sonic*.

In chapter 5, I continue to draw from *Oblique Curiosities* to consider what music composition research-creation does as a mode of pedagogy. I argue that attention to composition defamiliarises habitual sonic relationships between listeners and place. This defamiliarisation, or what I'm calling a *more-than-sonic pedagogy*, sets-up how my in-school project functioned as praxis. Parts of chapter 5 are published in *Journal of Public Pedagogies* (Shannon, 2019b: see Appendix A).

In chapter 6, I detail my in-school study, *Neuroqueer(ing) Noise*. I describe the methods used, including microphones, field notes and electrodermal activity devices, as well as the piloting process. I also attend to the ethical complexities of conducting research-as-art with disabled participants from my positionality as an abled researcher. In summary, across chapters 2, 3, 4 and 5, I establish music composition research-creation as the methodological contribution of this thesis.

Contribution 2: A/autisms.

This thesis's second contribution is elucidated predominantly over chapters 6, 7 and 8, and addresses my *first* research question and its two sub-questions.

1. How do theories of disability identity and neurotypicality help us make sense of the politics of what goes on in mainstream classrooms?
 - *Sub-question 1*: How can creative practice intervene in (neuro)typical representations of disability in educational provision?
 - *Sub-question 2*: What are the implications of thinking propositionally for critical disability and A/autisms research in education?

The second theoretical contribution of this thesis is *A/autisms*, an organising concept for researching with neurodivergent people. My stylised writing of *A/autisms* indicates the multiple, often incommensurate, perspectives on (and with) neurodivergence that researchers must often choose between when researching with *A/autists*.¹ In chapter 2, I summarise contemporary arguments surrounding the field of disability studies as it pertains to education. In chapter 7, I use affect theory to consider how divergence is formulated moment-by-moment in the pedagogical encounter: I add to chapter 4's theorisation of affect by drawing from the turn to affect in critical race and disability scholarship. I also map against the instrumentalisation of the arts (and particularly music) in special educational provision as a means of correcting divergence and instead consider how (infrequently, momentarily) the whole notion of divergence can be defamiliarised through more-than-sonic composition. In these ways, these new concepts emphasise the relationality of the (racialised, disabled) child's body(mind) at the same time as keeping hold of the need for a dis-identitarian politics of disability. I frame these politics using *neuroqueer* theory. Parts of chapter 7 are published in the *Journal of Public Pedagogies* (Shannon, 2019b: see Appendix A) and the *Canadian Journal of Disability Studies* (Shannon, 2020: see Appendix A).

In chapter 8, I establish a case for *A/autisms* as an organising concept for researching with *A/autists*. Perspectives within critical *A/autisms* studies are broadly united by their intention to move away from a rendering of *A/autisms* as 'disorder' (e.g. K. Runswick-Cole et al., 2016; Woods et al., 2018; Yergeau, 2018). The contingency of the category 'autism', the importance of *A/autistic* counter-identity, and the material reality of *A/autistic* ability and disability mean that any singular tracing of *A/autisms* as just one

¹ I pronounce the term '*A/autisms*' as 'ay-autisms' (and '*A/autistic*' as 'ay-autistic') because this is how screen reader software pronounces it.

of these things is always problematic. Rather than understand these perspectives as oppositional, I suggest that we might hold onto the tension between these incommensurate frames as a site of *friction*. I propose illustrating this tension through my stylised writing of the word ‘autism’ as: *A/autisms*. While ostensibly ‘about A/autism’, my activation of the queer inhumanisms in this chapter and across this thesis has potential to unsettle wider tensions in educational research of how to supplant the overrepresented Euro-Western figuration of the human without erasing the structures on which marginalised populations depend for survival. I also return to my discussion from chapter 6 on electrodermal activity (EDA) data. EDA data is increasingly used in research on A/autists. I argue that this research interest is due to several problematic doxa that narrate what A/autisms are and can be. While I unpick these doxa in later chapters, it’s important to state from the outset that my use of this technology maps against this positivist use of physiological data. EDA generating devices (which I later conceptualise as ‘gizmos’) were worn by research participants or myself during my in-school study, *Neuroqueer(ing) Noise*. Parts of chapter 8 are under review in the *International Journal of Qualitative Studies in Education* (Shannon, under review: see Appendix A). I conclude this thesis by summarising my study’s implications for research and teaching practice. I also outline some areas for future research.

Having outlined what’s to come in the rest of the thesis, I conclude this chapter with a moraine of important but mostly unconsolidated artefacts that are necessary precursors to chapter 2.

Moraine: ‘Body(mind)’, positionality, and Pigeons class.

In this section, I explain the key term *body(mind)*: this term speaks to the priorities of my project as a whole and is used throughout instead of the word ‘body’. I then offer a

statement on my positionality as a teacher, artist, and researcher. I conclude this chapter with an introduction to the young people in Pigeons class.

Introducing the key term 'Body(mind)'

Body(mind) is a key term in this thesis. The term is employed here as part of a history of disability studies and activism—notably in the British social model—that have tended to emphasise 'apparent' disabilities (em-body-ment) at the expense of 'non-' or 'intermittently'-apparent disabilities (em-mind-ment) (Price, 2015). Many disability studies scholars have theorised, or used, the term 'bodymind' to account for the continued erasure of intellectual and neurological difference in both disability studies (e.g. Rakes, 2019; Yergeau, 2018) and in wider public consideration of disability (e.g. Clare, 2017; Kafer, 2013; Rakes, 2019). Concomitantly, Margaret Price (2015) argues that 'bodymind' is an essential concept for considering the materiality of ability and disability, because—without specific invocation of the 'mind'—it is all too easy for non-medical understandings of disability to 'skip over' pain and materiality. Rather than a stand-in for body-and-mind, then, Price (2015) argues that 'bodymind' does theoretical work; she defines the bodymind as a "sociopolitically constituted and material entity that emerges through both structural (power- and violence-laden) contexts and also individual (specific) experience" (p. 271). Thus, its invocation of the minding aspects of embodiment is a practice of considering the leaky, material aspects of disability. Moreover, Sami Schalk (2018) considers that bodymind is important for discussing disability where it intersects with racialisation: Schalk argues that the mental-health impact of layers of intransigent institutional(ising) racism necessitates a more overt discussion of em-mind-ment in accounting for experiences of racialised disability. I extend Schalk's argument by adding that unabashed neurodivergence plays out differently—more violently—on racialised and

gendered people than white men: put simply, we need to hold onto how em-mind-ment unfolds in embodied ways. Thus, my use of the term body(mind) does not indicate a dualism—by which the body and mind might be distinct—but, rather, is an explicit invocation of the minding aspects of embodiment that are often ignored in considering what comes to *matter*.

I extend this work further by bracketing ‘mind’ as body(mind): here, the mind is parenthetical, not distinct from the body, but also not forgotten. This also allows me to refer to ‘bodies’ across a more-than-human milieu with the same term, encompassing those bodies that cannot be said to have a mind in the common sense understanding of the term. Having explained my understanding of the term body(mind), I now turn to the positionality of my own body(mind) in the research context.

Introducing myself: Positionality.

I think through crip and neuroqueer strands of critical disability studies here because of my own ‘identification-with’ neurodivergence. I am abled, cis-gendered, gay, white and male. I do not identify *as* disabled. However, I build on the lineage of critical disability scholarship by abled people written in solidarity with disabled people to identify *with* neurodivergence—what Alison Kafer (2013) terms ‘crip affiliation’, Robert McRuer (2006), ‘coming-out crip’, and Schalk (2013), ‘crip-identified’. For Schalk (2013), to identify-with is to have “acknowledged and prioritised political and personal connections to a group with which one does not identify as a member” (para. 20). In other words, as a neurotypical gay man, I recognise something of the shared noising of tendencies between gender and neurological queerness. The identification of gender queerness with neuro-queerness has already been extensively explored, including: at their intersection (e.g. N. Adams & Lang, 2020; Egner, 2019); their co-constitutive ‘discovery’ (e.g. Gibson & Douglas, 2018;

McGuire, 2016); and of the shared medical response in behavioural therapies (e.g. Yergeau, 2018). And yet, in homonormative times, white gay men are often enabled to ‘pass’ in a way that is not yet afforded A/autists. What I’m describing over the coming chapters, then, is not an allegory or conflation, but a productive space for thinking between gender diversity and neurodiversity when researching and creating with young people in the early childhood classroom. In the final section of this brief introduction, I introduce each of these young people.

Pigeons class: Introductions and impressions.

Although I give a thorough introduction to my in-school study in chapter 6, I spend the next few chapters engaged in an extensive series of literature reviews and theoretical discussions: while essential to the work of this thesis, these do delay my discussion of the classroom and young people. For this reason, I want to conclude my ‘Introduction(s)’ chapter with a brief introduction to the research setting and each of the young people.

My in-school study, *Neuroqueer(ing) Noise*, took place at ‘Kingfisher Academy’, which is a two-form primary academy in Leeds, northern England. The study took the form of an artist’s residency, consisting of weekly, hour-long music composition workshops with a whole class of 28 young people called ‘Pigeons’ class. My fieldwork with Pigeons class lasted 14-months: The young people were in Year 1 (aged 5-6) when the fieldwork started, and Year 2 (aged 6-7) when the fieldwork concluded. During these 14-months, I accrued deep and complex *impressions* of each young person. For this reason, my introductions consist of brief anecdotes that convey something of this complexity, rather than emphasising biographical details (such as their precise age, or detailed visual descriptions). I hope that these anecdotes give some glimpse of their *individual* characters—both those who feature extensively in this thesis and those who do not

appear by name again—but that I also convey something of how hilarious, exhausting and stimulating the class was *as a whole*. Note that both the name of the school and all the participant’s names are pseudonyms, chosen by either the young people or myself.

1. ‘Aaron’, a white British boy who likes *Gangnam Style* and is sometimes quite sad. He tells me to ‘get fucked’ during the very first episode, and often heckles me like Statler and Waldorf (“Not rhythm grids *again*”).
2. ‘Abayan’, a hyperlexic, A/autistic Pakistani boy who speaks Urdu at home. He is always bristling with questions and often holds me to account (e.g., “Maybe if you didn’t spend so long on the echo game you wouldn’t run out of time so much?”).
3. ‘Abduhrahman’, a Turkish boy who speaks Arabic as a home language. He is hilarious and frustrating in equal measure: I often call him ‘Matthew’ by mistake, after another young man I’d similarly taught and admired in a previous setting.
4. ‘Agyemang’, a beautifully patient Black African boy.
5. ‘Ama’, a stoic Black Caribbean girl, who speaks Spanish as a home language.
6. ‘Asya’, a Romanian girl who didn’t receive as much attention in this thesis as she could have done.
7. ‘Britney’, a white British girl who has sass for days. She seems to like the microphones more than me (I quite often find her monologuing into them while telling everybody else not to go near them).
8. ‘Danut’, a Romanian boy who is new to school in the September of the project. He is very good at readings maps and likes to point out the different countries where his siblings were born.
9. ‘Emma’, an A/autistic white British girl who is hugely self-determined and has the most fabulous capacity for no-ness (e.g., “Hello Emma.” “No.”). She likes cats a lot and carries a surprisingly pristine crocodile stuffy around with her (which is also called ‘Cat’).
10. ‘Ioan’, who is elegant, graceful and softly spoken. He speaks Romanian and has an enviably stylish fringe.

11. 'Ismael', an Urdu speaker who is very interested in everything being 'fair' and sulks spectacularly when it's not.
12. 'Janai', an out-spoken Black British boy. I often ask him to look after things for me.
13. 'Joseph', a gentle Ghanaian boy.
14. 'Kwodwo', a Black African neuroqueer boy born in a northern European country, who is usually half-naked and covered in paint by the time I arrive (regardless of whether or not paint or nakedness had been part of the learning that day).
15. 'Lucinda', a gregarious Black girl who speaks Spanish as a home language and is always performing something. She has taken a shine to Emma and drags her around the playground ("Let's go play over here." "No.").
16. 'Marie', who is erudite and brilliant. We speak Chinese together, but she often teases me for my poor pronunciation (and then corrects me with something that sounds identical).
17. 'Naafia', a Romanian girl who didn't receive as much attention in this thesis as she should have done.
18. 'Sandy', who is Romanian and new-to-education in the September of the project. She is tiny and cute as a button, and has usually just done something awful to somebody moments before I arrived.
19. 'Michael-James', a very affectionate Czechoslovakian boy who loves hugs.
20. 'Rei', who is A/autistic and Chinese. She carried her PECS book around her neck and loves puppies. She often smiles "Shannon" at me, and we would sometimes speak Chinese together.
21. 'Dean-Damien', a Romanian boy with a squeaky voice who always seems on the verge of bursting open with excitement. I call him 'double-D'.
22. 'Seyifunmi', who finds me exasperating. She makes sure I put everything back in the right place at the end of each workshop ("No, no, it goes HERE."), usually accompanied by a pitch-perfect eye roll.
23. 'Suryanshu', a chipper, eager and impossibly loud Gujarati-speaker, who wears his hair in a bun. He likes to help me move my very expensive music equipment

between the two classrooms at 1:30pm: each time, I have to be quick to make sure he only carries the (inexpensive and indestructible) microphone leads.

24. 'Tyhanna', a merry Black British girl who speaks English as a home language and has a fearsome number of colourful beads in her hair.
25. 'Virginia', a meticulous white British girl who is unimpressed by my jokes and likes to help me carry things between the rooms. I let her carry whatever she wants.
26. 'Ulas', a hilarious Turkish boy, whom I started calling 'Ools';
27. 'Zhang Wei', a meticulous British-born Chinese boy;
28. 'Zion', a tall Nigerian boy who generates small calamities wherever he goes.

I wanted to include some reference to each individual young person to resist the temptation to only write about the participants who were *useful* to me: the ones that say something lovely or perform something conceptually interesting. As it stands, some of these characters won't even feature in the thesis again. Moreover, I could have written pages about some young people and can barely even remember others' faces. This illustrates some of the limitations that my thesis and I encounter in attempting to distance ourselves from the extractive logics I set out to unsettle. However, and as I discuss in chapter 6, even those young people who do not feature extensively still very much shaped what took place in the classroom. In other words, while problematic, I hope that beginning the thesis in this way illustrates something of how each young person left impressions on me that ultimately conditioned the writing of this thesis (as well as conditioning its limitations). Moreover, perhaps by making you laugh, I have conveyed some of the exhausted admiration and joyful frustration that animate this thesis.

2. Critical disability studies in education: A literature.

Preamble: Towards neuroqueer theory.

In this chapter, I trace the different lineages that inform my understanding of disability in this project. I hesitate to call this chapter a literature ‘review’ because each of the remaining chapters introduces further literature. At the same time, the concepts in this chapter underpin many of the coming discussions, and so I feel it necessary to at least begin to shore up some key terms and concepts. My main argument in this chapter is that attention to the complexity of disabled experience—as both *resistance* to and *unsettling* of normative notions of em-body(mind)-ment—is important if we want to make space for A/autistic young people in mainstream classrooms.

Before continuing, I need to include a note on the terminology of disability. I am aware of the different ways of writing the word ‘disability’ that are sometimes adopted in disability scholarship, such as dis/ability and (dis)ability (see, for instance, Annamma et al., 2018; Atkins & Marston, 1999; Goodley, 2014). These are intended to indicate: (i) how both ability and disability are social constructs, (ii) how these constructs are formulated together and through one another, (iii) how disability is often used to demarcate ability, and (iv) how any discussion of ability is also a discussion of *disability*. Although I attend to the conceptual work underpinning these terms in the coming sections, I tend not to adopt this terminology. Mostly, this is because I think their use has become habitual: scholars often use the slash or the brackets without activating these concepts (i.e., contesting the formulation of ability and its imbrication with disability). In other words, they often seem

to be written this way just because ‘that’s how you write it.’ For this reason, I’m not sure how disruptive they can be anymore. These formulations have also been critiqued for euphemising or understating the material reality of disability. In this thesis, then, I tend to write ‘ability and disability’ when I want to make their imbrication or contested nature apparent, and ‘disability’ when I don’t. I tend to capitalise ‘Disability’ or ‘Disabled’ when I’m referring to Disability Arts or Disabled identity: I do this to try to make more apparent the complex specificity of what it is that’s being talked about. Finally, I use ‘abled’ rather than able-bodied to indicate the contingency and situatedness of ability. Having clarified this terminology, I now explain why this chapter is in the thesis and introduce its conceptual work.

Mainstream, integrated British schools have followed an ‘inclusive’ approach to disability provision since the 1970s (Department of Education and Science, 1978). This means most disabled young people attend mainstream schools, particularly at the primary level, with only those with the most significant differences being streamed out into specialist settings. Scholarship that attends to the experiences of disabled young people in mainstream schools is undergoing a significant shift: It is moving away from the language of ‘special educational needs’ (SEN) and towards the language of disability studies in education and (increasingly) *critical* disability studies in education (Douglas & Martino, 2020). While SEN implies an individual body(mind) that ‘contains’ a set of divergent tendencies and so ‘is the problem’, and disability studies in education attends to how those divergent tendencies are received in an education setting, *critical* disability studies draws from queer, feminist and anti-colonial theories to problematise the notion

of body(mind) divergence (Goodley, 2017). ‘Divergence from what?’ it asks.² (In the next chapter, I explain how I take up this question as a methodology.) Thinking about education through a critical disability studies approach attends to how normative notions of em-body(mind)-ment and ability are themselves contingent and problematic (K. Watson, 2018; N. Watson, 2012).³ In other words, then, attention to disabled experience in education through a critical disability studies approach considers “the intersectionality of disability with cultural conceptualisations and notions of citizenship” in the classroom (Picton & Tufue-Dolgoy, 2019, p. 194). This notion of ‘citizenship’ is important to this thesis: Snyder and Mitchell (2010) theorise the intersection of notions of citizenship with ableist logics as *ablenationalism*. For Snyder and Mitchell, Ablenationalism is the:

implicit assumption that minimum levels of corporeal, intellectual, and sensory capacity, in conjunction with subjective aspects of aesthetic appearance, are required of citizens seeking to access the ‘full benefits’ of citizenship. (p. 124).

Failure to demonstrate the minimum capacities required for citizenship means being considered less human (Fanon, 1967). This thesis tries to complicate notions of ‘minimum capacity’ in the classroom: both as they relate to disability and ability, but also of how that experience intersects with other patterns of marginalisation in education. In complicating ‘minimum capacity’, I frequently look to thought outside the disability studies canon, including queer theory, and Black, queer and feminist theories of anti-colonisation and race. These ideas are useful for two reasons. Firstly, they help in considering the intersection of disability with raciality, an intersection which arguably

² Although this is a recent shift in educational research, I’m not sure how new this shift would seem to many of us who work in special educational provision: indeed, this shift often seems to have been driven by current and former special educators (e.g. Douglas & Martino, 2020; Eilers, 2020).

³ It is this attention that writing disability with a slash (as dis/ability) tries to make clear.

remains under-theorised in disability and A/autisms studies (Bell, 2006; Çelik, 2017; Garland-Thomson, 1997).⁴ I'm not the first person to apply anti- (or 'post') colonial concepts to disability: Frantz Fanon (1967) himself considers the overlapping debilitation of racialisation with disability when he writes: "The crippled veteran of the Pacific war says to my brother, "Resign yourself to your color the way I got used to my stump; we're both victims"" (p. 108). Secondly, I also look to these perspectives here to help me unsettle *humanism*, a discussion of which forms the next section of this chapter.

Chapter overview.

In the next section of this chapter, I theorise ablenationalist 'minimum capacities' through a problematising of 'humanism'. In brief, I understand humanism as a particular group of dominant ideological notions of what constitutes the ideal European subject.

Problematising humanism is important in this thesis. In later chapters, I come to unsettle humanism through theories of affect, process philosophy and the feminist ('new') materialisms: I also consider how these unsettlings have methodological implications.

Following my problematising of humanism in this chapter, I summarise the *moral* and *medical models* of disability, which individualise ability and disability. Then, in the following section, I summarise the *social* models; these models individualise *impairment* but continue to situate the abling/disabling processes in a built environment or system. I also think about how education settings orient towards the 'problem' of disability: in the UK, this educational provision often strives for 'inclusion'. I include discussion of the neurodiversity model, as well as problematising how 'inclusion' in British schools—while

⁴ Bell (2006) is often considered the first to discuss how race intersects with disability. While I agree with his critique that disability studies is epistemically white, I find that any genealogy that sees Bell as an 'early' engagement, ironically performs the exact elision that Bell is critiquing.

associated with the social model—retains the rehabilitative logics of the individual models. I then theorise the critical disability studies approaches I adopt in this thesis: namely *crip* and *neuroqueer theories*. These perspectives are in many ways still emerging and so my thinking here is very much how I personally approach these ideas from a position of solidarity—or ‘identification-with’—from outside the community.

Problematizing ‘humanism’ :: Introducing the queer inhumanisms.

The critique of humanism I sketch over the coming pages is of a particular version—or what literary theorist Sylvia Wynter (2003) calls *genre*—of the human. The subject of humanism is the idealised European figuration, or what Wynter (2003)—after Fanon (1952/1967)—calls Man. Rosi Braidotti (2013) contends that Leonardo da Vinci’s *Vitruvian Man* illustrates the qualities of European Man: He is autonomous (p. 101) and rational (p. 67); He is at the top of the species hierarchy (p. 67); He is a symbol of bodily perfection and ‘perfectability’, and so presumably is typically-abled (p. 23). He is also white, cis-gendered and male. The problem of this genre of human isn’t so much the qualities it embody(mind)s, but rather its “overrepresentation... as if it were the human itself” (Wynter, 2003, p. 260): for both Wynter and Braidotti, Man is too often taken to represent what is “‘human’ about humanity” (Braidotti, 2013, p. 13). Thus, Vitruvian Man is transitioned from being thought as one (idealised) version of the many possible configurations of a human to the centre of a hegemonic monoculture. And as trans, crip essayist Eli Clare (2017) writes, it is the maintenance of this monoculture that justifies eugenic violence. So, how are these hierarchies maintained?

Wynter (2003, also in McKittrick, 2015) contends that the monoculture of Man relies on an assumption that what is “‘human’ about humanity”—i.e., the features of ‘Man’—are intrinsic biological features of the properly functioning human body(mind).

She calls this the “biologically absolute” (Wynter, 2001, p. 61) or “purely biological” (Wynter, 2003, p. 264) version of the human, which is maintained through what she calls a *biocentric* perspective. To understand the features of Man as intrinsic qualities of the human is to understand categories—ability, race, gender, sexuality, class—as produced by ‘nature’ and so as essential products of the genetic, rather than them being materialised through social and non-human features of a more-than-human milieu. Thus, Man is often considered at the apex of corporeal taxonomies, and mapping against those biocentric taxonomies is an important project of this thesis.

Mel Chen (2012) considers corporeal taxonomies through the linguistic anthropology concept of the ‘animacy hierarchy,’ which “conceptually arranges human life, disabled life, animal life, plant life, and forms of nonliving material in orders of value and priority” (p. 13): the animacy hierarchy is determined by (and determinate of) doxa of each body(mind)’s “agency, awareness, mobility, and liveness” (p. 2). For Chen, the objectification of classed, racialised, queer, gendered and disabled bodies is a mattering process that depends on situating these populations at remove from Man: consequently, they write, “animacy is political, shaped by what or who counts as human [i.e., Man], and what or who does not” (p. 30). For Chen, then, the greater the difference between a body(mind)’s (assumed) capacities and those ablenationalist minimum capacities (assumed) of the European Man, the less animacy or *humanness* it has: examples of these capacities might include walking, using verbal speech, being social, and whiteness. This problematising of Man and corporeal hierarchies has implications for how we conceptualise the researching subject and so how research methods work, which I attend to in the next chapter. Implicit also in the idea of a *corporeal* hierarchy is a *sensory* hierarchy: sight and hearing, as the ‘distant’ senses, are more highly prized in European epistemologies and so more closely associated with Man, while touch, taste and smell, as

proximal senses, are associated with baser pleasures and disease (Pink, 2009; Springgay, 2011a); meanwhile, I argue that the internal vestibular and proprioceptive senses, which are so important in educational provision for A/autistic young people, are so pathologised as to hardly ever figure in sensory taxonomies at all. My interest in sound cuts across this sensory hierarchy in particular ways, which I explore in later chapters.

The maintenance of corporeal hierarchies such as those described by Chen and Wynter are evident in educational provision, where the intersection of gender, class, ability, disability, language, race and other divergences from Man impact attainment and progress, as well as the likelihoods of being ‘included’ on an inclusion register (Department for Education, 2017b, 2018b, 2019b), or permanently or temporarily excluded (Department for Education, 2017a, 2018a, 2019a). What Chen’s theorisation of the doxa of animacy offers us is a way of thinking about the *impermanence* of these divergences. Chen (2012) considers marginalisation to not “operate intersectionally in a binary analysis” but rather as processes that cannot “securely or finally attach to any body” (p. 187). This is similar to how Jasbir Puar (2017) understands disability as an oscillation between capacitation and debilitation, where each is the consequence of ‘socio-geo-histo-infrastructurel’ factors, including (I would argue) access to accommodations (or ‘differentiation’), intervention, and disability identity: Thus, divergence is a series of “events, actions, and encounters between bodies, rather than simply entities and attributes of subjects” (Puar, 2012, p. 58). In later chapters, I think about intersectionality, capacity and animacy, as well as their impermanence, through theories of affect. For the time being, I’ll just say that it is the central tenet of this thesis that the impermanence of how we constitute divergence has implications for how to accommodate disability in the early childhood classroom. In the next section, I introduce

the *queer inhumanisms*, which are a collection of alternative theories of the human that I use to de-centre humanism.

In this chapter so far, I have argued that hierarchies of aliveness are constructed through the narration of the distance between a body(mind)'s capacities and those of the ideal human subject. This distance is narrated intersectionally. The figuration and problematics of (1) the human and (2) divergence that I've sketched are an essential jumping-off point for what follows: this is because the models of disability that I outline in the next section of this chapter measure the disabled person by their proximity to Man. What complicates my problematising of humanism above is how disabled people and other marginalised groups feel about rejecting humanism. Disabled people, and the grown-ups of disabled young people (or those with 'Special Educational Needs'), are not always ready to 'let go' of the human (Goodley & Runswick-Cole, 2016). Queer and critical race theorists have formulated similar arguments about the perversity of asking those frequently situated furthest from the 'human' to give up on it (e.g. King, 2017; Livingstone & Puar, 2011). Consequently, there is a need to balance what Dana Luciano and Mel Chen (2015) call the tension between "universalizing and locating impulses" (p. 192) when figuring new possibilities for the human that account for marginalised experience without imposing a new unitary (post)humanism. I respond to this tension by drawing from the *queer inhumanisms*, which are perspectives collated from queer, Black and crip theories of the human, and consolidated in a 2015 special issue of *GLQ*, although, also including many older texts whose authors would never have used the phrase 'inhuman' (Luciano & Chen, 2019). Queer inhuman theorists propose new figurations of the human without 'starting from' Man. In other words, rather than set out to specifically problematise Man (which, ironically, just recentres him), queer inhumanisms start with perspectives already close to (or beyond) the limits of European humanism, and so that are already at work in

the “proverbial muck of these queered object relations” (McMillan, 2015, p. 226). Thus, when problematising Man, I respond to Zakkiyah Jackson’s (2015) call to consider “What and crucially whose conception of humanity are we moving beyond?” (p. 215). Importantly, though, these theorists seek to hold onto the human, ‘resurrecting rupture’ (Sedgwick, 2003) by affirming rather than effacing difference. Thus, Luciano and Chen (2015) theorise *inhumanisms* as pointing towards the “violence that the category of the human contains within itself” (p. 196). Similarly, King takes up Tuck and Gee (2013, cited in King, 2019), to argue that the “haunting *is* the resolving, it is not what needs to be resolved” (p. x, my emphasis). In other words, the haunting of the in- prefix points to the violence of maintaining the monoculture of Man: keeping hold of this violence *is* its resolution, but rather than abandon the human, the queer inhumanisms maintain this haunting as an “estranged interiority” (Cohen, 2015, p. 10, cited in Truman, 2019b, p. 113), implying both yearning and distance. In chapter 3, I think about how queer theories of the (in)human politicise feminist (‘new’) material thought, and how they help us attend to queer failure.

Tangentially, Oliver and Barnes (2012) question what such abstract theorising has to offer the practicalities of living with disabilities: this critique is prescient to the application of critical disability studies in educational research. It is my hope that, as an SEN teacher, the arguments I trace here have very practical implications. For this reason, in the conclusion of each chapter, I offer implications or propositions for classroom practice. Moreover, Mitchell, Snyder and Ware (2014) question schools’ “unwillingness” to apply the same logics of accommodation and differentiation to other patterns of learning difference: “to address the range of learning differences comprising today’s classroom demographics” (p. 300). In this thesis, I complicate the concept of neurodivergence to consider how it is a distancing from a Man-as-neurotypical ideal: this

has implications for how I unsettle the adjacent ‘categories’ of race, home language, gender, class etc. In later chapters, I argue that unsettling hierarchies of aliveness is integral to the work of unsettling fixed notions of ability and disability in the classroom: I indicate how my project succeeded at this, but also how it *failed*. However, in order to complicate the disability-ability dyad, I first need to conceptualise ‘disability’: it’s to this that I attend in the next section.

Models of disability.

In this section, I explore different models of disability. I begin with a discussion of the *moral* and *medical* models, which individualise disability. I then describe the *social barriers* model, which is the model ostensibly adopted in British schools: this model individualises impairment but formulates disability as the interaction between an impaired body(mind) and a structure not designed to accommodate that body(mind) configuration. I then consider how these approaches shape special educational provision through a discussion of theories of ‘cure’ and inclusion. I conclude with a discussion of the neurodiversity model.

Individual models of disability: moral and medical.

In this section, I consider two individualistic models of disability: the *moral* and *medical* perspectives. These individualistic models understand disability as a property of an individual disabled person, and so as a direct result of the ‘impaired’ functioning of an organ or individual bodily system. It is important to think about this regarding my own study because, in neoliberal education systems, ‘ability’ is often thought of as something that an individual body ‘has’ and not something produced by the institution.

The moral-individual model of disability understands body(mind) impairment as a consequence of divine displeasure: the disabled person is either monstrous or wonderful (Goodley, 2017; Goodley et al., 2016), while impairment is either a punishment for sin or a Job-like test of faith (Snyder & Mitchell, 2001). Goodley (2017) argues that, while we might consider this understanding of disability as one consigned to history in the UK, it might also be the most prevalent understanding of disability worldwide. And, although it is typically thought of as being confined to theocracies, or to what Wynter (2003; also in McKittrick, 2015) figures as the pre-Enlightenment, pre-*humanist* understandings of the human, I return to this model in chapter 7 to argue that the spectre of disability often continues to be taken up moralistically in education settings and in society more broadly.

The medical-individual model of disability understands disability as synonymous with the impaired functioning of an organ or system, and so as having an entirely medical solution. The medicalisation of disability coincides with the turn to science of the Enlightenment-era break from theocracy: or, what Wynter (2003, also in McKittrick, 2015) might describe as, the first emergence of Man.⁵ A later, resurgent medicalism coincides with the emergence of “bio-economic man” (Wynter, 2003, p. 318):⁶ it’s with the emergence of bio-economic man that the particular geo-historical conditions of possibility that allowed A/autistic experience to be demarcated and described (and, perhaps more importantly, *marketised*) also came into being. I trace this history in more detail in chapter 8. For now, it’s enough to say that, in a biocentric system, the properties of Man are narrated as biological features of the human organism, and so impairment as a set of divergences from that organism must be ‘the problem’. Thus, the disabling of disabled people is naturalised as being inside the disabled body(mind). Having explained

⁵ Also referred to as Man1.

⁶ Also referred to as Man2.

these two individualistic models of disability, I now turn to discuss the social barriers model.

The social barriers model in British education.

The individual models are the dominant perspectives of disability: it is these perspectives that disability studies maps against. The perspectives most commonly adopted in disability studies are the *social models* of disability. In the UK, the social model most commonly referred to is the ‘social barriers approach’ (Goodley, 2017). It is this ‘social barriers approach’ that is ostensibly adopted in UK education policy (e.g., Department for Education & Department of Health, 2015). Broadly, the ‘social barriers approach’ understands impairment and disability as residing in different bodies. Impairment is the improper functioning of an organ or system that is ‘inside’ the disabled person, while disability is caused by societal infrastructure being designed for people without that impairment: in other words, impairment is in the disabled body(mind), but disability is in the wider social body. The idea of distinguishing between impairment and disability was initiated in 1976 by the Union of the Physically Impaired Against Segregation (Goodley, 2001, 2017) and was first conceptualised as ‘the social model’ by Mike Oliver (1983, 2013). Clare (2017) describes the social models as situating disability “not in blindness but in the lack of Braille[...] not in dyslexia but in teaching methods unwilling to flex” (pp. 12–13). In other words, in the social model, “impairments are bodily realities; disabilities are discursive constructions” (Osteen, 2008, p. 3). This ‘bodily reality’ of impairment as taken up in the social model is something that I problematise later. For now, it’s important to note that the social model’s notion of impairment is similar to the medical-individual model’s notion of impairment. So far in this chapter, I have described the moral and medical understandings of individual disability and the social model of disability. In the

next section, I go on to think about how institutions respond to disability when formulated through each of these perspectives.

Cure & Inclusion.

In this thesis, I figure institutional responses to disability—such as accommodations or differentiation—through theories of ‘cure’. Clare (2017) states that cure needs to be understood in nuanced ways, with different orientations to cure being necessary at different points in a disabled person’s life: he considers this complexity through his own intersecting experience as a trans, disabled, schizophrenic man. Part of this nuance is necessary because of the frictional heterogeneity of the word disability. Clare (2017) writes, “in a world saturated with ableism, it’s difficult to acknowledge the connections between disability, chronic illness, and injustice while also holding on to the inherent value of disabled and chronically ill people” (p. 62). I attend more to this ‘friction’ and think it through with Barad’s (2007) concept of diffraction in chapter 8 where I propose the organising concept ‘A/autisms’ as a way of keeping hold of this friction in the mainstream early childhood classroom. For now, though, it’s important to indicate that, just like with the perspectives on disability introduced so far, different perspectives on ‘cure’ are necessary for different disabled people with different disabilities at different points in their lives. In the next paragraph, I introduce queer of colour theorist José Esteban Muñoz’s (1999) triadic model of identity to explain how I approach the complexity of cure.

In schools, cure is usually framed through ‘inclusion’. For this reason, later in this section, I offer a problematising of inclusion. David Mitchell (2014) contends that inclusion “requires the reification of homonormative values”—or minimum capacities—wherein the potential to be integrated is “based on the ability to approximate values of

normalcy” (p. 1).⁷ I want to use this definition as a starting point to think about how disabled people come to be ‘included’ in schools. Muñoz (1999) theorises a triadic model of how minoritarian subjects orient towards majoritarian ideology. I am not the first person to consider disability and cure through Muñoz’s writing on identity: for instance, McRuer (2006) uses it to elucidate *crip theory* and Justine Egner (2019) uses it to explain how the subject position *neuroqueer* is taken up in online spaces. Drawing from Michel Pêcheux’s theory of dis-identification, Muñoz (1999) illustrates how subjects might conform to or resist dominant “discursive and ideological forms” (loc. 454). Muñoz calls these positions identification, counter-identification and dis-identification:⁸

1. *identification*, by which the divergent subject is subsumed into the dominant culture through the elision of their apparent divergences (and so making the divergent individual *identical*);
2. *counter-identification*, by which subjects establish a counter-identity that resists the dominant culture, and is formed through solidarity in the face of oppressive practices (although at the risk of reifying assimilation into one or other mode of being); and
3. *dis-identification*, which seeks to unsettle both the dominant identity as well as the whole notion of *any* identity: dis-identification is a utopic kind of identification, that remains open to those queernesses that we have yet to encounter (Muñoz, 2009).

⁷ Assimilative logics have long been taken up in post- and anti-colonial thought, as well as across queer theory and disability studies. For instance, Fanon (1967) describes the assimilative intent behind French colonial practices, whereby, by adopting French language and culture, the colonised subject could acquire the rights of the French citizen. Fanon writes: “The Negro of the Antilles be proportionately whiter—that is, he comes closer to being a real human being—in direct ratio to his mastery of the French language” (p. 8).

⁸ Muñoz does not hyphenate these terms, but I do so here to make them more easily readable.

When applied to cure, Muñoz's triadic model of identity helps us to understand how disabled people might be rehabilitated (i.e. identification), resist rehabilitation (i.e. counter-identification), or unsettle the fixity of disability by problematising ability (i.e. dis-identification). It is my argument here that inclusion in schools, when thought of as the 'approximation' (Mitchell, 2014) of ablenationalist minimum capacities (Snyder & Mitchell, 2001), is an example of identification as it seeks to make the disabled young person 'identical'. This is not inherently problematic. Indeed, many disabled young people and their grown-ups would see this as an ideal outcome. However, as I sketch out over the coming paragraphs, identification is ultimately impossible. I now expand on this perspective by unpicking how cure works in the medical-individual perspectives on impairment.

Three critiques of restoration.

From a biocentric perspective, disability is the same as impairment, and so cure is equated with 'fixing' that impairment. This can be done either by rehabilitating or removing the disabled person (Clare, 1999, 2017; Fritsch, 2016; Kafer, 2013; Sabatello, 2009). In other words, a medicalised-individual understanding of disability understands the problem of disability as *inside* the individual disabled person's body(mind) and, consequently, the accessibility of an educational provision relies on whether or not that impairment can be dematerialised. Henri-Jacques Striker (1999, cited in McRuer, 2006) contends that rehabilitative logics first developed after the First World War, when soldiers lost 'integrity' when mutilated in battle. Rehabilitation, then, seeks to *restore* integrity and so relies on an understanding that assumes everybody(mind) has a pre-disabled state to which they might be restored. I now argue that this is a problematic notion because: (1) restoration is impossible, not least because (2) not everybody has a

pre-disabled state to which they can be restored, and the idea that they do have such a body means that (3) restoration is a racialising process. I now elaborate on each of these arguments.

First, restoration is impossible. Clare (1999) compares his own experiences of navigating disability and gender transition with the erosion of topsoil and felling of centuries-old tan oaks in America's forests: just as it is impossible to restore environments to a pre-industrial state, so too is it impossible to restore the disabled body to a pre-disabled state. Nobody is less A/autistic after a bout of ABA therapy, just as centuries-old tan oaks can't be regrown overnight. Instead, restoration is a masking process, of 'approximation' (Mitchell, 2014) that disguises ongoing environmental (Alaimo, 2016) and ableist debilitation.⁹

This brings me to my second critique of restorative logics: Kafer (2013) problematises restorative logics because they assume that every disabled person *had* a pre-disabled body. Restoration models of cure rely on an assumption that disability is a single spatio-temporal event with a pre-divergence moment in which the disabled person was (however briefly) 'whole'. Thus, Kafer describes restorative approaches to cure as "*compulsorily hypernormative*" (p. 44, emphasis mine), in that they assume that everyone begins life abled. This is an important argument for this thesis because A/autisms have a predominantly genetic aetiology (between 74 and 98%: Ramaswami & Geschwind, 2018; Vadgama et al., 2019; Yin & Schaaf, 2017): in other words, there is often no 'pre-disabled' moment.¹⁰ Both of these critiques problematise a particular, normative temporality, which posit a distinct past that is now over, and a future that inevitably follows it: I

⁹ Clare's writing here has sprouted into a fully-fledged theoretical space: that of the *eco-crip*, which explores how environmental degradation is analogous to disability and plays out differently on disabled people.

¹⁰ Moreover, some of the earliest theorisations of A/autisms predominantly blamed 'frigid mothers' as the cause.

problematise this notion at length in chapter 9 when I explore how the project played with linear notions of development. For the time being, it is enough to say that restoration is impossible.

The third of my three critiques of restoration proposes that, in assuming that everybody has a pre-disabled body to which they can be restored, restoration is a *racializing* process. Earlier in this chapter, I described how Chen (2012) considers the construction of categories such as ‘race’ as processes that cannot “securely or finally attach to any body” (p. 187). This is an approach often taken up in critical race scholarship, where race is thought as the complex intersection of social and biological processes (e.g. Fanon, 1967; Z. I. Jackson, 2020; Puar, 2009; Weheliye, 2014; Wynter, 2001). I describe these processes in greater detail in the next chapter. As I already described, restoration was first described in the aftermath of the first world war. From its outset, then, rehabilitation was caught up in nationalist notions of restoring the ideal citizen. Moreover, both McRuer (2006) and queer of color theorist Roderick Ferguson (2004) problematise the raciality of restorative logics in that racialised bodies are always-already diverging from the idealised European subject (Man). In other words, while white men would pass as abled if not for the (restorable) divergence, women and Black(ened) people are already irredeemably divergent and so cannot be restored. Thus, inclusion is also a racializing process, wherein to approximate ability is to approximate whiteness: this is a very important notion for thinking about A/autisms, as I argue in chapter 7 and 8 that A/autisms are a *racializing* process. In the next paragraph, I build from discussing these critiques of the compulsory abled-bodiedness, whiteness and impossibility of restorative logics with regards to disability quite broadly, to thinking about the implications of these ideas for neurodivergence in the mainstream classroom.

Cure and education: Rehabilitation-as-inclusion

As I intimated at the start of this section, in British schools, ‘cure’ is often narrated through the language of ‘inclusion’. Inclusion has been a feature of mainstream education practice since the Warnock Report (Department of Education and Science, 1978). Earlier discussions on the folding of disabled children into mainstream settings (Ainscow, 1995; J Bennett et al., 1998; Warnock, 1985) focused on the practicalities of facilitating physical integration of disabled children into mainstream settings. This initially led to SEND provision being a primarily economic consideration, through the emphasis on funded 1:1 Learning Support Assistant ‘hours’ (Runswick-Cole et al., 2018). This has been accentuated since the 2010 advent of austerity, with fewer and fewer special school places available and more and more competition for funded hours. Yet, Odom et al. (2011) define inclusion as meaning “...more than only physical placement of children with disabilities in the same classroom, but rather... that children with disabilities would become a part of larger social, community, and societal systems” (p. 345). Yet, as I come to describe, physical placement, or integration, is often as far as schools (can) go in terms of including young people. Queer and anti-colonial theorists have long argued that ‘inclusion’ functions as an assimilatory logic. For instance, Springgay and Truman (2018a) posit that inclusion as integration “operates as a symbolic gesture that fails to undo the structural logics of racism, ableism, homophobia, and settler colonialism” (p. 66). The marginalised subject, then, becomes an “absent presence” (H. Sykes, 2016, p. 60), who is naturalised as *visually* present while rendering *invisible* the structural logics that excluded them in the first place. Earlier, I described ablenationalism as the expectation that all body(mind)s meet certain (homo)normative minimum capacities to access the rights and benefits of citizenship (Snyder & Mitchell, 2010). Inclusion, then, “requires the reification of [those] homonormative values”—or minimum capacities—wherein integration is

“based on the ability to *approximate* values of normalcy” (Mitchell, 2014, p. 1, italics mine).¹¹ However, as I have problematised above, approximation is all that can be hoped for as restoration is impossible. For Springgay and Truman (2018a), then, integration “naturalizes and neutralizes” ongoing exclusion (p. 69). This has implications for what the project described here does as praxis. In other words, if inclusion is impossible and undesirable, what else can we do? Having problematised medical-individual notions of inclusion-as-rehabilitation, I now want to problematise how these ideas are taken up in the social models more broadly.

The social models’ rejection of medical and biological intervention situates disability as a predominantly architectural issue of access; while this has been a useful political platform for procuring rights, it has been critiqued for obfuscating the lived realities of impairment and pain (Clare, 2017; Kafer, 2013; Morris, 1992; Osteen, 2008). Additionally, both the individual and social understandings of disability have been critiqued for ignoring how disability might be figured as an identity, sapping the disabled community of political agency, as well as intersectional experiences of disability. And as I have already argued, ultimately, both models seek to rehabilitate and erase (McRuer, 2006, p. 112), whether through eugenic extermination of difference, or rehabilitative identification. As McRuer (2006) writes: “A rehabilitation that makes disability disappear (or that promises to do so) is apparently preferable to the degradation of living with disability out in the open” (p. 129). Moreover, the social model in schools remains

¹¹ Assimilative logics have long been taken up in post- and anti-colonial thought, as well as across queer theory and disability studies. For instance, Fanon (1967) describes the assimilative intent behind French colonial practices, whereby, by adopting French language and culture, the colonised subject could acquire the rights of the French citizen. Fanon writes: “The Negro of the Antilles be proportionately whiter—that is, he come closer to being a real human being—in direct ratio to his mastery of the French language” (p. 8).

imbricated with the medical model through the institutional interaction with psy-professionals and medical services (e.g. educational psychologists, speech and language therapists, CAMHS), most obviously in the Education Health and Care plan; this creates a tension in how practitioners come to figure disability, simultaneously placing 'barriers to learning' in school structures, while continuing to subject the disabled child to medicalised intervention.

Finally, both the medical and social models adopt a similar understanding of impairment and so ignoring how impairment's socio-geo-histo-infrastructure construction (Goodley, 2001; Kafer, 2013; Puar, 2017) and materiality (Michalko, 2002). In emphasising impairment as real and disability as social, this misses how impairment itself is formulated in accordance with societal expectations of what a body should be able to do. In other words, unlike the social models, which envisage a 'real' impairment that is then societally disabled, critical disability studies explicates how impairment and disability are *both* socially mediated, constructed and materially manifested (Fritsch & McGuire, 2018; Goodley, 2017). In these ways, an emphasis on 'architectural issues of access' is also an emphasis on 'physical' disabilities and an elision of cognitive disabilities, as well relying on the assumed white cis-male subject of disability studies for whom addressing architecture addresses access: as I indicated in the introduction, it is this problematic that I'm hoping to keep in mind by writing *body(mind)*. These erasures are due in part to the difficulty of 'capitalising' upon learning disability (Puar, 2017), and particularly racialised learning disability (Rice et al., 2015); or what Jasbir Puar (2017) calls *piecing*. Osteen (2008) writes, "our society's ideology of bourgeois individualism and personal productivity does not know what to do with those who cannot compete or produce" (p. 5). Having problematised inclusion and the social models, I go on to think more about

how these logics relate to neurodivergence through a discussion of the concept of neurodiversity.

Neurodiversity: Misconceptions and inclusory logics.

In this section, I offer a two-fold critique of neurodiversity. First, I problematise the frequent misappropriation and misuse of the term ‘neurodiverse’ in educational research. I argue that the term’s frequent (mis)use as a subject position in qualitative research (particularly in scholarship that draws from feminist material and affect theories) is problematic and saps the term of its analytical power. I then go on to further (productively) problematise the *proper* use of the concept for its inclusory undertones that rely on particular sets of A/autistic capacity.

Coined during the 1990s by an online community of A/autistic authors—and often specifically credited to A/autistic sociologist Judy Singer (1999, 2017)—the term neurodiversity was intended to depathologise atypical cognitive experiences such as A/autisms, dyslexia, and AD/HD, by problematising the idea of ‘neurotypicality’. Nick Walker (2014) distinguishes between three conceptual formulations of the term neurodiversity: the biological fact of neurodiversity, the neurodiversity paradigm, and neurodiversity as an argument for rights procurement. Firstly, Walker argues that *neurodiversity* is a biological fact, in that intellectually disabled people are still human organisms; in other words, the category ‘human organism’ includes all manner of different possible embrainments, including those with and without a disability. Secondly, Walker outlines the *neurodiversity paradigm* as a perspective on difference that suggests there is no such thing as a ‘normal’ brain. In other words, there is no absolute neurotypical, and so no absolute (neuro)divergence from that typical: rather, differences such as A/autisms and AD/HD are part of the normal, healthy spectrum of neuro-activity.

The extent of variation included within the neurodiversity *paradigm* varies, but typically includes A/autisms, AD/HD, dyslexia, and other learning disabilities and differences: it also includes ‘neurotypical’, or the abled absence of a neurodivergence. Typically (although not compulsorily) neurodiversity is not thought to include mental ill-health (e.g. Ygender, 2018). Finally, Walker describes the *neurodiversity movement* as a rights-procurement movement that builds from the neurodiversity paradigm. The movement premises that, because there is no neuro-normal, then neurodivergence cannot exist because there is nothing for neurodivergent people to diverge from, and so everybody should be afforded the same rights. Central to these three concepts, then, is the erosion of neurotypicality, and so of the clear boundarying of neurodivergence.

However, in recent years, ‘neurodiverse’ has also begun to be used as a subject description for neurodivergent people (e.g. Manning, 2013, 2016b). Using neurodiverse as a subject position has enabled scholars to think about how diversity should not be thought as tethered to divergence (Manning, 2016b). However, this uptake usually also centres the possibility of a clearly parsed ‘non-neurodiverse’ (neurotypical) person. This works against the central tenant of the biological fact of neurodiversity: that there is no clearly parsed neurotypical against which divergence can be measured. In other words, using neurodiverse as a subject position continues to pathologise some people as the ‘neurodiverse’ ones while normalising those who are neurotypical (i.e. not ‘neurodiverse’). In other words, the term ‘neurodiverse’ is taken to refer both to the idea that there is no clearly parsed neurotypicality and, simultaneously, to an individual who diverges from that same neurotypicality. This saps neurodiversity—the biological fact, the paradigm, and the rights procurement platform—of its analytical and political potential. Here, I use the word neurodiverse in the sense that Walker uses it: to refer to the biological fact of neurodiversity, most commonly in describing my research context as

being a neurodiverse setting (in that it includes both neurotypical people and neurodivergent people). Having clarified how I understand the term neurodiverse, I now turn to my second problematising of neurodiversity.

It's important to clarify that I am not problematising the biological fact of neurodiversity: in other words, I am (literally) not looking to pathologise neurodivergence. Nor I am trying to unsettle the neurodiversity paradigm, which is valuable for its anti-pathologism. Moreover, I follow Woods et al. (2018) in arguing that neurodiversity is established on *difference*, and therefore that neurodiversity is a necessary concept for A/autistic counter-identity. My critique here, in brief, is that neurodiversity as a rights procurement movement is identitarian. In other words, it seeks to posit a universal humanism within which everybody can be encompassed. In other words, it tries to homogenise difference: Specifically though, by attending to particular differences and not others. In so doing, the neurodiversity paradigm assumes an ability to approximate ablenationalist minimum capacities—in other words, it's only possible for those (many people) who can show sufficient neuro-normativity to mostly pass as neurotypical. It is my contention here and in chapter 8 that this elides experiences of the most significant divergences and, so, the most significant marginalisations. This also, ironically, maintains the 'compulsory able-mindedness' of much disability scholarship through what Puar (2017) might call *piecing*. Piecing is the idea that (some) disabled people can rely on the most capacitated (in the ablenationalist sense of the word) pieces of themselves to be more easily included. Thus, sufficiently capacitated people can pass, by leveraging themselves against less capacitated people: Puar calls this leveraging *cripnationalism*. I take up these ideas in more detail in chapter 7. In short, though, neurodiversity as a rights procurement platform euphemises neurodivergent experiences of disability by enabling the *most easily* piecable/passable individuals to approximate

ablenationalist minimum capacities through a cripnationalist leveraging of themselves against *less easily* pieceable/passable neurodivergent individuals. In summary, neurodiversity as described here creates an absent-presence; it visually includes those who might pass, while doing little to address the ongoing structural neuro-ableisms that render other people as unable to pass. This elides the potential for neurodivergence as a political platform or an unsettling of the idea of neurotypical. Thus, adopting neurodiversity as a mode of inclusion in education settings is similar to the medical-individual perspective on disability in that it seeks to identify—as in make *identical*—difference. These ideas are powerful for thinking about mainstream education, where the most piecable individuals can be more easily folded into mainstream classrooms, while the least piecable individuals end up in specialist provision. In the next section, I introduce the *neuroqueer* as a perspective that I take up as problematising this mode of inclusivity.

Summary so far.

In this chapter so far, I have problematised humanism. I have discussed the moral and medical understandings of individual disability and the social barriers model of disability, and how these models situate disabled people as closer or further to the ablenationalist minimum capacities of the idealised European subject (i.e., Man). I also problematised the idea of ‘inclusion’ in schools, as a mode of cure, relies on young people’s ability to approximate those capacities, which plays out in gendering and racializing ways. I brought critiques of these understandings of cure to bear on the idea of neurodiversity as a rights procurement platform, which I problematised here for reifying the same exclusory logics of minimum capacity that it ostensibly seeks to unsettle. So far in this chapter, I have problematised perspectives taken up in disability studies. However, in the next chapter, I argue that *critical* disability studies is my methodology (by which I mean it is the

theoretical orientation that informs how I do my research methods). Critical disability studies contests the socially-mediated formulation of ‘impairment’ rather than just of disability-as-access (Goodley, 2001, 2007; Kafer, 2013; Puar, 2017). It explores how the minding aspects of disabled experience further complicate these ideas. In the next section, I introduce crip and neuroqueer theories as my perspective on critical disability studies.

Critical disability studies in education: Crip & neuroqueer theories.

In the previous section, I established a background of the dominant disability studies perspectives and how they relate to my project. In the next section, I introduce the *critical* disability studies perspectives that I use to map against those ideas. I introduce *crip theory* and the *neuroqueer* as critical theoretical perspectives on disability. I explicate these perspectives, their problematics, and their implications for how we figure cure.

So what is crip theory?

Broadly, I understand *crip theory* as the application of queer theory’s perspective to disability (Kafer, 2013; McRuer, 2006, 2018; Sandahl, 2003): I spend the remainder of this chapter detailing what that means for me and my project. Clare (1999) writes, “Queer and Cripple are cousins: words to shock, words to infuse with pride and self-love, words to resist internalised hatred, words to help forge a politics” (p. 70). Like queer theory’s origins in ACT-UP and Queer Nation, crip theory emerged as the intellectual off-shoot of an activist movement that re-appropriated a former term of oppression. ‘Crip’ is used by disability scholars and disabled people to shock (Clare, 1999; Kafer, 2013; Price, 2015; Sibley, 2013). This shock, for Margaret Price (2015), marks a point of theoretical divergence for crip from queer. While I disagree that, in the British context at least, queer no longer has the capacity to shock, for Price, the very word ‘crip’ has a unique “sonic,

signed, and etymological” trajectory that distinguishes it from queer (p. 269). Jay Dolmage (cited in Price, 2015, p. 270) describes the impediment of the word *cripple*—relying on the “closure of the vocal tract and the use of the lips” (p. 103)—and the subsequent openness and surprise ending of ‘crip’. Thus, the word crip itself is both shocking and generative.

This said, it is erroneous to suggest that crip is *solely* the application of queer theory to disability studies; rather, just as queer of colour theorists have argued that their scholarship cannot be reduced to queerness + raciality—but rather draws from the history and theoretical lineage of queer theory whilst remaining distinct and resisting it (Ferguson, 2004; E. P. Johnson, 2001; Muñoz, 2009)—queer and crip theories are intertwining but distinct approaches to unsettling normative orientations to difference (Price, 2015; Yergeau, 2018). This distinction is important, as “queer theorists cannot always be counted on to convey crip sensitivities, even when directly asked to do so” (M. L. Johnson, 2015, pp. 251–252).

Kafer (2013) describes crip as a “political/relational” (p.4) model of disability. By this, she means that both the disabling process and disability identity are “experienced in and through relationships” (p. 8), while also centring disability politics. This explicit politics is important because of how disabled people are typically framed as “passive, non-agentive, and unified in [their] experiences” (Chandler et al., 2018, p. 253). While the relationality of disability and impairment has been theorised extensively within disability studies for over four decades, including to varying degrees in the social model discussed earlier, Kafer draws from queer theory in elucidating a political/relational model of disability because queer theory has long been thought of as functioning in these ways. For Claire (2001), queer refers both to “lesbian, gay, bisexual, and transgender identity[... and something] odd, quirky, not belonging” (p. 361). For Chen (2012), this first,

adjectival/noun form (i.e. Queer) is deverbilised and atemporalised, “encouraging a bounded reading of the concept’s content,[...] rendering identities finite” (p. 74); concomitantly, the second, verbal form (i.e. queering) is processual, disruptive and temporally contoured. Eve Sedgwick (2003) describes counter-identity as being legitimated by the affect of shame but without the ‘standing-space’ of essence: always “constituted as to-be-constituted” (p. 64). In other words, Queer as a political identity is always in motion, or what Muñoz would call ‘on the horizon’: “Queerness is not yet here” (Muñoz, 2009, p. 1). Thus, using queer theory’s perspective to think about disability invokes the political potentiality of a queerness that isn’t yet (or ever) fully realised. This is by way of a contrast to the lives of disabled people, which are frequently figured as fully known or knowable: more on this later.

Yet, Muñoz (2019) also asks, “If queerness does not exist, how can we have queer politics?” (loc. 3861). It’s this friction between political counter-identity and disruptive dis-identity that speaks to what a political/relational model of disability, such as crip or neuroqueer, do for disability. McRuer (2006, 2018) calls this the paradoxical functioning of crip; he writes: “like queer at its most radical, crip often has the fabulous potential to be simultaneously flamboyantly identitarian[...] and flamboyantly anti-identitarian” (McRuer, 2018, p. 20). This is distinct from other perspectives collected as critical disability studies. Critical disability studies seeks to unsettle the idea of ‘able’, by dis-identarily “working on and against dominant ideology” (Muñoz, 1999, loc. 458). This, in turn, poses a challenge to the notion of disability politics. On the other hand, crip and neuroqueer do this while keeping hold of disability counter-identity. I am further inspired in my thinking by Fred Moten’s concept of *ceaseless fugitivity*. Moten defines fugitivity as the ceaseless capacity of Blackness to exceed its framing by racilogies. In other words, Blackness is *always* more-than the capacity of whiteness to frame it (i.e. ceaseless

fugitivity). In enunciating fugitivity, Moten is inspired by two gestures from Fanon: his notion of double consciousness in *White Skin Black Masks* (1952/1967), by which Blackness doesn't exist before whiteness frames it as its 'opposite'; and Fanon's own indecision in *Wretched of the Earth* (1963) over whether criminality amongst subjugated Black man might be good (because it resisted subjugation) or bad (because it inscribed Blackness *as* criminality). Yet, as David Marriott (2016) contends, Blackness when understood as always in excess of what white supremacy can frame also relies on a pessimism that Blackness can never fully *exceed* white supremacy. Thus, Blackness is always escaping and can never escape, because to escape would be to self-annihilate. Thus, it is 'ceaseless'. The concept 'crip' might be thought of as existing at a similar point of ceaseless labour.¹² This simultaneous Queer/queering (or Crip/cripping), that hangs precariously at a point of self-annihilation, keeping hold of counter-identity, in excess of ablenationalist logics of minimum capacity, but also working on and against the same logics whose persecution allows that counter-identity to exist is essential to my own concept A/autisms, which I explain in later chapters.

Crip also distinguishes itself from the medical-individual and social models through its interest in the "culturally generative (and politically radical) [rather] than a merely reformist social model" (McRuer, 2018, p. 19). I later think about what is 'culturally generative' about disability through Disability Arts and cripistemological perspectives. In short, crip theory opposes both the pathologizing individualism of the medical and the limitation to architectural access of the social. It opposes disability as a

¹² Moten's thinking is important throughout this thesis where I use it to think about experience at the intersection of racialisation and neurodivergence: I clarify this here to pre-empt any concern that I'm offering an extractational engagement with his work.

site of non-agency. It opposes identity and anti-identity. It opposes. In the final section of this chapter, I turn to neuroqueer theory.

Neuroqueer theory.

Crip's bodily heritage has left some neurodivergent individuals to wonder if they should consider it 'their term' (Sibley, 2013; Yergeau, 2018). Moreover, I might suggest that it compounds the invisibility of learning disabilities and the compulsory-neurotypicality of disability scholarship. The neuroqueer is an emerging relational/political theorisation of neurological disability. Unlike crip, which remains a "point of contention in neurodivergent spaces" (Yergeau, 2018, p. 85), the neuroqueer gesture centres experience of learning disability. The neuroqueer was coined by Nick Walker in 2008 (Walker, 2015) and taken-up by a group of A/autistic activists and writers including Walker, Elizabeth J. Grace (2013), Michael Scott Monje Jr. (2015), Athena Lynn Michaels-Dillon—and conceptualised by M. Remi Yergeau (2018). For Walker (2015), neuroqueerness is:

being neurodivergent and actively choosing to embody and express one's neurodivergence (or refusing to suppress one's embodiment and expression of neurodivergence) in ways that "queer" one's performance of gender, sexuality, ethnicity, occupation, and/or other aspects of one's identity" (para. 13).

Thus, neuroqueer theory adopts the simultaneous theoretical gestures theorised of crip above: the adjective/noun "Neuroqueer" (capital-N), which is an uncloseted counter-identity, and the verb "neuroqueering" (lower-case-n), which is an intersectional, trans-corporeal dis-identitarian dissolution of identity and the marginalisations that shape it. As well as identity, then, the neuroqueer "signifies a generous and inter-bodily gesturing, one that postures beyond brains, bones, and dermis" (Yergeau, 2018, p. 86). The title of

this thesis and in-school study—*Neuroqueer(ing) Noise*—is intended to keep hold of this messy duality.

It is my supposition in this chapter, that rehabilitation-as-inclusion is doomed to fail, that neurodiversity can only ever include some people some of the time, and that critical disability studies (when taken up as a theoretical orientation in education) risks being too apolitical. I have established the neuroqueer as a framework on neurodivergent experience that seeks to keep a hold of both A/autistic counter-identity and the unsettling of notions of 'able'. At the same time, I worry that use of neuroqueer theory tends to under-emphasize pain, just as the social model does, as well as leave unchallenged the epistemic whiteness often critiqued of disability studies (e.g. Annamma, Connor, & Ferri, 2013; Bell, 2006), A/autisms scholarship (e.g. Saxe, 2017; Shinn, 2016) and queer theory (e.g. E. P. Johnson & Henderson, 2005). It is into this that my own concept, *A/autisms*, intervene. *A/autisms* tries to keep hold of the complexity of A/autistic experience: of A/autistic counter-identity, of A/autistic disruptive dis-identity, of the geo-historical contingency of the concept 'autism', and of the reality of (and importance of intervention into) A/autistic disability. I introduce this concept in chapter 8.

Chapter summary.

In this chapter, I synthesised some of the literature on disability studies, and explored how it relates to the key tensions that animate my project. So much has been written about disability, and especially about disability in the classroom, that by necessity there are many glaring omissions in this chapter: this is why I call this chapter 'a literature' rather than a 'literature review'. Through this chapter, I have tried to formulate how A/autistic experience in the early childhood classroom might be thought beyond a logic of rehabilitation-as-inclusion (which, as I have argued, is ultimately impossible). This

discussion informs my first research question and its exploration of disability, disability identity and politics, and neurotypicality.

In the coming three chapters, I elucidate how this literature shapes my approach to research. In the next chapter, I'll consider how I understand my methodology *as* critical disability studies, in that it seeks to unsettle humanist understandings of bodily capacities: Thus, it shares intentions with feminist ('new') materialism and theories of affect. In chapter 4, I look to affect theories for how they might complicate notions of bodily capacity. In chapter 6, I outline how Disability Arts contests commonplace understandings of minimum capacity: I do so as an abled person, incapable of curating Disability Arts, but indebted (and so adjacent) to the aims and purposes of that work.

3. Methodology I: Research-creation and propositions.

Preamble: Critical disability studies as methodology.

This is the first of two methodology chapters. A methodology is the collection of theoretical and ethical perspectives that shape how research methods intervene in the research event. I describe the theoretical resources that I use to think about my two research-creation projects in this chapter and the one that immediately follows.

Important to this chapter is Ian Buchanan's (2018) proposition that the critical application of theory "refers to the set of concepts whose reach is always and of necessity greater than their grasp" (p.101): in other words, while I am applying these methodological perspectives to shape how I do method, in the applying something is necessarily reduced. I begin this chapter by conceptualising Whitehead's notion of propositions, which is an important organising concept for how I understand research-creation. Then, I move on to introduce six propositions for research-creation, across which I lay out my methodological understanding of research-creation. In chapter 4, I discuss affect theories and what they might do for (or to) sound methods. After that, in chapter 6, I describe the *methods* I used.

This thesis is activated by a pair of *research-creation* projects: *Neuroqueer(ing) Noise*, which I conducted in an early childhood classroom, and which I discuss in chapters 6, 7 and 8; and *Oblique Curiosities*, which is part of my own artistic practice (with Sarah E. Truman), and which I discuss in chapter 4 and 6. I understand research-creation as a way of researching socio-material processes as art practices, or what Truman & Springgay

(2015) call “the complex intersection of art, theory, and research” (p. 152). Central to research-creation is the idea that ‘art instantiates theory’ (Springgay, interviewed in Truman et al., 2019)—although as Springgay points out, artists already know that ‘art instantiates theory’, and so I state it here purely for clarity. I do research-creation as music composition: by this, I mean that I do research and theorise that research as composing music. This chapter is about me unpicking what that means.

Scholars who do research-creation do not universally adopt any singular theoretical orientation. Consequently, this chapter is about me building my orientation through the many different theorists I’ve encountered over the last four years. This said, many of those who use the term ‘research-creation’ in their scholarship are drawn to a particular group of theoretical resources including process philosophies (e.g. Manning & Massumi, 2014), theories of affect (e.g. Loveless, 2019; Shannon, 2020; Springgay, 2020a), the feminist (‘new’) materialisms (e.g. Shannon & Truman, 2020), and Whitehead’s (1978) conceptualisation of propositions: I also use these perspectives and explain how research-creation activates them later in this chapter. However, one thing that I think should be methodologically consistent across research-creation is that it enacts queer-feminist praxis, by which I mean it is both (1) a way of doing inquiry and (2) a way of driving social change. I follow Natalie Loveless (2019) in this sense, who contends that research-creation should not only be understood:

[...] as a logical extension of post-1968 interdisciplinary and theoretical interventions into the academy, but as specifically indebted to feminist, queer, decolonial, and other social justice movements, as they have worked to remake the academy from within. (p. 57)

Thus, Stephanie Springgay (interviewed in Truman et al., 2019) contends that research-creation “is grounded not in a set of prescriptive criteria but ontological, epistemological,

ethical and political attunements to creating a different world” (p. 227) (and as I come to explain later, I activate these ‘attunements’ through Whitehead’s proposition). For this reason, I primarily understand my methodology *as* critical disability (and critical A/autisms) studies: in making this claim, I follow Julie Avril Minich (2016), who contends that critical disability studies is a methodological intention rather than a field or subject area. This is because, as I explained in the previous chapter, critical disability studies is not the scrutiny of impairment, but rather of “the social norms that define particular attributes as impairments, as well as the social conditions that concentrate stigmatised attributes in particular populations” (Minich, 2016, para. 6). Thus, my orientation to method intends to unsettle the ‘social norms’ that shape how we understand ‘ability’ and ‘disability’. Similarly, I am inspired by Margrit Shildrick’s (2015) contention that disability and ability should not be figured in a ‘binary sense’, but rather as a diversity of body(mind) configurations that offer “embodied absences, displacements, and prosthetic additions...” that “...both limit and extend the performativity of the self” (p. 14). Thus, this thesis is a study of how neurodiversity unfolds through music composition as well as of the affordances of both neurodivergence and neurotypicality. This intention has obvious implications for researching in the early childhood classroom, where normative notions of ability and disability sort children into ‘the included’ and ‘those in need of inclusion’. I discuss inclusion at further length in chapter 7.

As I have already explained in the previous chapter, I am particularly interested in queer-feminist approaches to critical disability studies: namely, crip and neuroqueer theories. These approaches consider disability as a “cultural interpretation of human variation rather than an inherent inferiority” (Garland-Thompson, 2005, p. 1557), but that also examine “the intersectionality of disability with cultural conceptualizations and notions of citizenship” (Picton & Tufue-Dolgoy, 2019, p. 194): Thus, they retain the

valuable political work of centring difference while unsettling the notion of ‘difference from’. To recap, briefly, I understand crip and neuroqueer theories here as theoretical orientations to disability informed by queer theory. Like queer theory, crip and neuroqueer theories are used both to establish disability as a generative political counter-identity, and to disrupt the whole notion of both ability and identity (McRuer, 2006). In other words, it oscillates between what Muñoz (1999) calls counter-identity—identity formed in resistance to dominant ideology—and dis-identity—which resists identification and instead “works on and against dominant ideology” (loc. 458). McRuer (2006) calls this crip’s ‘paradoxical’ functioning, or “the fabulous potential to be simultaneously flamboyantly identitarian[...] and flamboyantly anti-identitarian” (McRuer, 2018, p. 20). It is this fabulous, paradoxical intention that animates much of this thesis, and which inspired the title, *Neuroqueer(ing) Noise: my theoretical and ethical orientation to method is informed by a simultaneous, paradoxical desire to hang onto disability counter-identity in the classroom (i.e., Neuroqueer), at the same time as I unsettle the fixity of ability and identity (i.e. neuroqueering)*. A similar tension animates the feminist material and affective turns that many research-creation scholars attune to. Scholars in education who take up these perspectives have sought to unsettle humanism’s grip on qualitative research through attention to the more-than-human aspects of experience, and the messy, processual ways in which subjects are formed in the classroom. However, as I argue in later chapters, these attempts have often been critiqued for erasing the identity structures on which marginalised people depend for survival. Dana Luciano and Mel Chen (2015) summarise this tension as between “universalizing and locating impulses” (p. 192): in other words, between the desire to keep hold of the specificity of marginalised experience at the same time as loosening the grasp of any universal humanism (even if it’s a universal ‘post’ humanism: more on that later). This is important when researching

in education settings because schools are humanising assemblages designed to reproduce the ideal human subject through changing students' capacities. I think more about this more in chapters 5, 6 and 7, where I discuss the pedagogical implications of these theories and how they might be used to think about the process of making neurodivergence in the classroom.

Chapter overview.

In this chapter, I conceptualise Whitehead's proposition, as well as how research-creation works as *praxis*: in other words, how the process of research-creation intervenes in oppressive structures. In this thesis, I use affect theories and perspectives sometimes collated as feminist ('new') materialism to activate crip and neuroqueer's fabulous, paradoxical potential to build disability identity, even as it unsettles the fixity of concepts like 'identity' and 'ability'. I bring these disparate perspectives together using Whitehead's (1928/1978) conceptualisation of propositions, which is sometimes taken up as the primary organising concept in research-creation. In the next section of this chapter, I briefly explain what propositions are. Following this, I propose six propositions for how I approach research-creation for the purpose of thinking-with the research projects in this thesis:¹³ these six propositions explain how I formulate research-creation and how it works propositionally for me (I am not saying that this is what all research-creation is or should be). As part of thinking through these propositions, I explore key theoretical issues that underpin (and often undermine) my thesis, including theories of affect. I conclude

¹³ It's important to own this orientation as *my* (and no-one else's) research-creation, which works for me as a composer who does research-creation as music composition. It differs, for instance, from Loveless who doesn't use the proposition, or from Springgay who does visual and performative art.

this chapter with a map of the rest of the thesis, indicating how each perspective is mobilised. In the next section, I offer a brief overview of what feminist materialism is.

Feminist ('new') materialisms.

The feminist ('new') materialisms is a collation of work from multiple disciplines: many of the scholars caught up in this turn may not use the term 'feminist new materialism' (Truman, 2019a), while others outright reject it or extensively problematise it. Rather than a bibliography, then, I prefer to think of feminist materialism as a way of thinking through how patterns of social oppression—such as racializing, cis-gendering, and abling/disabling—are material processes. Examples of strands of thought sometimes collated as feminist materialisms include:

- a turn to feminism in materialist fields, such as the life sciences and technology studies (e.g. Barad, 2007; Benjamin, 2019; N. Myers, 2017; Yusoff, 2018);
- consideration of the materiality of oppression in feminist cultural studies (e.g. Chen, 2012; Fritsch, 2016; Keeling, 2019; Kupetz, 2019; Puar, 2007, 2017; Wynter, 2001);
- *explicit* attention to the study or theorisation of affect (e.g. Ahmed, 2004; Chen, 2012; Keeling, 2019; Massumi, 2002, 2015; Schuller, 2018); and
- process philosophies—such as those of Whitehead (1928), Gilles Deleuze (2004), and Deleuze's writing with Felix Guattari (1987)—that attend to how singularities and stasis are actually multiplicities and motion.

I mark the attention to affect above as 'explicit' because much feminist materialist theory shares some intentions with theorisation of affect. In conceptualising affect, I often draw from scholars who are situated within the feminist materialisms even where they don't

explicitly use the word 'affect'. Both of these perspectives might be thought of as 'complete' (Williams, 2010) or adopting a 'common ontology' (Blackman & Venn, 2010), by which I mean that they do not theorise human 'social' processes as distinct from 'physical' or 'natural' ones, but rather look to how the social, the cultural and the discursive both (1) configure and (2) are configured by the material (Barad, 2007). Thus, they adopt what Donna Haraway (2016) describes as a 'natureculture' that dispenses with digitizing conjunctions—and, or—and instead describes their imbrication. The theoretical turns often found in feminist materialism and theories of affect include attention to:

1. how the findings of the social, natural, physical and life sciences are co-constituted;
2. how human em-body(mind)-ment is dispersed as part of a more-than-human network;
3. how the European conceptualisation of the human might be de-centred as both research object and researching subject; and
4. how to place (a little) less emphasis on language and representation in favour of sensation and *more-than-representation*.

My application of feminist material theories mostly relies upon perspectives drawn from the queer inhumanisms. I previously introduced the queer inhumanisms in chapter 2 (from page 17), where I stated that they are a group of alternative figurations of the human that do not start from critiques of Man, but rather from perspectives constructed by those already close to (or beyond) the limits of the European humanism. Thus, Julietta Singh (2018) describes the queer inhumanisms as aiming "to query the human from the position of some of its least privileged forms and designations of life" (p. 5). This has implications for how I apply feminist material theories. As Uri McMillan (2015) contends, the queer inhumanisms mobilise those perspectives already working within the

“proverbial muck of these queered object relations” (p. 226). In other words, starting from the perspective of those treated like objects can help us queer the notion of objecthood. Similarly, unsettling the ablenationalist expectations of minimum capacity that taxonomise non-living matter as ‘less alive’ has implications for how we might upset those same expectations when used to objectify (racialised, disabled, queer) humans. Thus, feminist materialisms and crip-neuroqueer theories (the queer inhuman orientations to disability I introduced in chapter 2) share an intention to unsettle the grasp of humanism on qualitative research, especially the over-represented ‘Man’ version of the human, and how the more-than-human aspects of the pedagogical and the research encounter might be attended to. I return to these theorists throughout this chapter, and particularly in setting out my propositions for how I understand research-creation. For now, though, I set out Whitehead’s proposition as a way of doing research that is theoretically consistent with feminist (‘new’) materialisms.

Whitehead’s propositions.

As I’ve already stated, research-creation scholars sometimes use Whitehead’s (1978) notion of propositions as an organising concept. Use of propositions by research-creation practitioners emphasises Whitehead’s description of propositions as ‘lures’ for speculative and creative activity, where propositions are the restriction of potential to a particular relation of entities: propositions constrain to enable. Perhaps for this reason, propositions have always made sense to me as an activating concept because of its resemblance to the cue sheets I’m sent when working on a film or play: these consist of a list of one-sentence summaries of what each piece of music should do, as well as its length and timbre: these constraints are generative. This thesis makes a small contribution in hashing out more explicitly the relation between Whitehead’s proposition

and its uptake in research-creation (as something that constrains in a generative way), as this is often only mentioned in passing in research-creation publications: I elaborate at much more length here and tie it to my approach to research-creation in relation to both of my projects.

At first glance, Whitehead's proposition seems quite different to the "ordinary logical account of 'propositions'" (p. 25), which is of (1) an idea that is proposed as a written statement and (2) where that idea can be judged to be either true or false. For example, 'it is raining'. However, in *Process and Reality*, Whitehead (1978: abbreviated hereafter as P&R) suggests that the 'truth' of a proposition is linked to its capacity for speculation, which for Whitehead is what's most interesting about it. Whether true or false, Whitehead suggests that propositions are "tales that perhaps might be told about particular actualities" (p. 256). A proposition, then, is "a lure for feeling" (p. 31), where what is 'felt' is the interaction of potential and actual that brings about something new. Bringing about 'something new' is a key function of how propositions are mobilised in research-creation. As Stephanie Springgay (2016) summarises: "Propositions are proposals about how things may be rather than what is" (p. 61). And this propositional 'may be' has a distinctive relationship with true/false determination. In other words, for Whitehead, judging propositions in terms of a true/false binary misses the nuanced way in which truth and speculation are linked, in that it "expresses only a restricted aspect of its role in the universe" (P&R, p. 25, emphasis mine): namely when the subjective form of a proposition—ie. which feeling is 'lured'—is a true/false judgement. As I argue later, the notion of fixed once-and-for-all truth is problematic when conceptualising notions of ability and disability. However, to think beyond the true/false restriction requires an explanation of some concepts from Whitehead's wider 'organic' philosophy, which is what I turn to now.

Whitehead's organic philosophy is an example of what Blackman and Venn (2010) might call a 'common ontology', by which I mean that it does not theorise human social processes as distinct from 'physical' or 'natural' processes. Instead, many of his concepts are *more-than-human*, in that they apply to humans, non-human animals, non-animal life, and non-living matter. This is also true of theories of affect and feminist materialism. Thus, Whitehead's philosophy is 'complete' (Williams, 2010). Whitehead describes reality as made up of streams of thin slices of space and time. 'Things' such as tables, hats and coriander are actually a series of events, or what he sometimes calls 'actual occasions'. Each actual occasion unfolds along a stream of microscopic, micro-spatial, micro-temporal contours. Thus, according to Brian Massumi (2014), 'actual occasions' take "the word "actual" in its etymological sense: "in act"" (p. 59, italics in original). Whitehead uses the term concrescence to describe the contour along which each occasion unfolds. When one actual occasion has fully unfolded—or concresced—it is instantly cannibalised into 'data' for new occasions. Whitehead calls this process 'feeling' or prehension: one fully-concresced event directly feeds (or is felt into) the next, which in turn unfolds until it feeds the next, and so on. All previous occasions are data for all new occasions. Or, to put it another way, every concresced occasion in the whole universe has some part to play in feeding—or feeling—into the next wave of occasions. This processualism and its imbrication with 'feeling' is important to my thesis: I elaborate upon what this does for research-creation later. Now, for Whitehead, the extent to which any individual occasion trickles into the formation of a new occasion depends on how relevant it is. This is where propositions come in: the relevance of prior events (or what Whitehead calls 'definiteness') is determined by propositions. For Whitehead, this means that propositions restrict potential to a particular arrangement of actual occasions, or more

specifically to the relations between those occasions (what Whitehead calls the ‘logical subject’). Whitehead writes:

The proposition is the potentiality of the eternal object, as a determinant of definiteness, in some determinate mode of restricted reference to the logical subjects. (P&R, p. 257)

Or, to paraphrase:

The proposition is [the possibility that a particular potential might be applied] as a determinant of [relevance, or how all previous occasions become fuel for future occasions], in some determinate mode of restricted reference to [the relations within a particular arrangement of occasions]. (P&R, p. 257)

In other words, propositions ‘lure feeling’, initiating a particular iteration of the future through shaping how past occasions are felt. As an organising concept for research-creation’s praxis, propositions activate “ontological, epistemological, ethical and political attunements to creating a different world” (Springgay, interviewed in Truman et al., 2019, p. 227).

Now, in the ordinary, logical account of propositions, potential is restricted to a particular configuration of occasions, in such a way that *how* they feed into the next wave of occasions is as statements that can be judged true/false. For instance, ‘It is raining’ is a proposition that may be deemed to be true or false on any given occasion, but it also lures the speculative potential of rain on any such occasion. Thus, propositions stretch into the speculative dimensions of our research (or ‘truth determination’) methods. But as Whitehead (1978) contends, potential “tell[s] no tales about [its] ingressions” (p. 265): in other words, propositions may be ‘lures for feeling’, but quite what ‘feeling’ is lured depends on who is activating that particular proposition and when. Whitehead goes on to write: “Other propositions are felt with feelings whose subjective forms are horror,

disgust, or indignation” (P&R, p. 25): in other words, human feeling shapes (1) how propositions are interpreted (or ingressed) by humans and (2) what human feelings they then lure. Jane Bennett (2010) writes, the proposition has “no decisionistic power but is a lending of weight, an incentive toward, a pressure in the direction of one trajectory of action rather than another” (p. 103). Instead, Whitehead named the quality of ingression—the ‘how’ of how a proposition is felt—its ‘subjective form’. It’s important to note here that the ‘subjective form’—how a proposition is felt—carries a *more-than-human* truth value, that reaches beyond the event and encompasses non-human entities. This is not to say that each of Whitehead’s concepts applies equally to minerals, toddlers, vegetables, crustaceans and assorted globules: rather, each feels and is felt within its own capacity to do so. As Whitehead writes, propositions can “intensify, attenuate, inhibit, or transmute, without necessarily entering into clear consciousness, or encountering judgment” (P&R, p. 263). Thus, ingression—the process of feeling and how feeling is determined by propositions—is as much a material process that crockery and glaciers undergo as it is an intellectual process that we might deliberately inject into a research encounter. Propositions, then, are not only a written statement or human speech act: propositional behaviour can be conceived at every level of matter. A written statement of a proposition is merely its objectification by a thinking human: it symbolises the relations within the nexus of occasions to which that particular proposition restricts potential. As Sydney Hooper (1945) summarises: “the verbal statement of propositions includes words and phrases which symbolise the [feelings] necessary to indicate the logical subjects of the proposition” (pp. 64-65, emphasis in original). Note here that there are “logical subjects” within any propositional event, whether it pertains to human or non-human processes. The logical subject, for Whitehead, is the relevance of a previous event to the new event, *possibly* being informed by a potential rather than *actually* being informed by

one. The subjective form of a proposition is the extent to which these logical subjects are felt into the next event. Here, Whitehead is attempting to rethink the logical subject as part of his natural philosophy: to wrestle logic away from the tradition that imposes binary true/false judgements on human actants, and towards a new materialism that includes a modal logic capable of comprehending a far more complex 'truthy' landscape. This is an important notion for my project, which tries to map against simplistic, medicalised notions of the 'truth' of (1) what disability is and (2) what the findings of the life sciences tells us about disabled body(mind)s. It is particularly important due to my queer-cripping of electrodermal activity, which I explain further in the next chapter.

Whitehead's proposition: Summary.

In this section, I sought to articulate how I conceptualise propositions. As I have explained, propositions are an important concept for this thesis because, in lieu of fixed schedules and methods, propositions are what structures the research-creation encounter in this thesis. Moreover, as I've argued, Whitehead's complication of the notion of truth is important for my project, which maps against simplistic, positivist notions of the truth of disability. It is particularly important due to my queering/cripping of electrodermal activity, which I explain in more detail in the next chapter. In the next section of this chapter, I'm going to explicate how research-creation as I understand it is activated by propositions across the rest of the thesis: or, how *research-creation is propositional*. I do this through theories of affect, feminist ('new') materialism and 'post'-human theories. I organise this discussion into six propositions for how I understand research-creation. I like to write propositions in two parts: as (1) a statement that can be judged as true or false, accompanied by (2) an imperative that activates that statement. I do this because I think that the subjective interpretation of a proposition (its subjective

form) is more easily activated when propositions are written using imperative verbs: artists, including research-creation practitioners, do this quite often. In these six propositions, then, I explicate what is propositional about my approach to research-creation, through explicating the main theoretical resources that shape my approach to researching in this thesis. The themes of each of these propositions are: failure, trans-disciplinarity, emergence, more-than-representation, politics and process. My six propositions for research-creation are:

Proposition 1 :: 'You have failed' :: research-creation fails flamboyantly.

Proposition 2 :: 'Straddle the hyphen' :: research-creation is art, research & theory.

Proposition 3 :: 'Propositions are not by or for us' :: research-creation attends to what emerges.

Proposition 4 :: 'Issue forth novel reverberations' :: research-creation is more-than-representational.

Proposition 5 :: 'Remember the politics of approach' :: research-creation is politically attuned.

Proposition 6 :: 'Cannibalise condescended products' :: research-creation is processual.

Six propositions for (explaining) research-creation.

Proposition 1 :: 'You have failed' :: Fail flamboyantly.

Essential to my uptake of propositions is that they court failure. Thus, in this thesis, failure is a proposition for research-creation's method(ology). It is also an important

methodological tool for how I approach problematic research methods (i.e., electrodermal activity) in the classroom. In conceptualising failure here, I am animated by its take-up in queer theory. Queer theorists have considered how the inability to measure up to cis-hetero ideals—i.e., to ‘pass’—might be productive. For instance, Jack Halberstam (2011) argues that failure is necessary for capitalist ideals, wherein success for one body(mind) relies on the failure of others. Similarly, Singh (2018) and Puar (2017) both argue that marginalised people can overcome their marginalisation by mobilising capitalist success and failure: Puar theorises this process as *piecing*, by which an individual mobilises the most capacitated aspects of themselves (e.g. ‘masc.’ gays, or wheelchair users doing computer things), while Singh argues that this is achieved by mobilising the failure of others. Failure is also an important concept in this thesis due to how neurodivergence equates with failure in education contexts. Failure in education contexts is the opposite of success: something to be avoided or overcome through repetition and hard work. Thus, failure in education is often “a stopgap between experimentation and success” (Springgay, 2020a, p. 153). Similarly, experimental and improvisatory arts practices are often understood as courting failure: for instance, the possibility of the failed aleatory, the flubbed solo, or the tricky substitution. Although supposedly risky, failure in the art school is “commodified and easily romanticised for being experimental, risky, and innovative” while remaining tethered to heteronormative notions of success (Springgay, 2020a, p. 152). But Halberstam (2011) also argues that failure, rather than lack, “often means being relieved of the pressure to measure up to patriarchal ideals” (p. 4). Thus, failure can—sometimes, momentarily—be generative and productive. Similarly, Jayne Brown (2012) writes that failing to measure up to humanistic ideals is liberating, giving access to other modes of life “free of the regulatory terms of humanness” (para. 14). She asks:

how far [can we] go in imagining life on other terms? What are the ways we already practice these lives? What are the ways we can question or stretch what we consider human, the ways we are released and/or kept bound by raciolgies and the relational dynamics out of which they germinate?" (para. 9).

Thus, failure to properly conform is also to be released from particular formulations of conformity, or even a refusal of those formulations (Muñoz, 2009). As already indicated in chapter 2 (from page 17), and at the start of this chapter (from p. 49), in this thesis, I take up Brown's proposition to 'imagine life on other terms' through the queer inhumanisms. I return to the queer inhumanisms in later chapters. (While failure has been mobilised in educational research, it has only recently been mobilised for considering neurodivergence in the mainstream early childhood classroom. I offer a review of some of this literature in later chapters.) Thus, failure offers opportunities to imagine life, the human, disciplinarity, and method differently.

In this thesis, I treat failure as a proposition. The failure to properly conform is important for how I understand research-creation as: trans-disciplinary, attuned to what emerges, and how I approach problematic research methods (i.e. electrodermal activity) in the classroom. These are all points that I return to in discussing each of the remaining five propositions. Thus, this thesis is animated by an embarrassment of failures (whether I like it or not), as well as the possibility of my own failing, the failure of my methods to do quite what I'd hoped, and so on. At the same time, I'm not oblivious to the privilege inherent in approaching failure as a proposition, nor in associating it with 'release' or 'animation'. Failure animated my writing while I was safe in my tiny, big-windowed flat (even when in full 'burn the 8th symphony' mode). Thus, my encounters with failure are conditioned by whiteness, maleness, cis-gendering, and particular configurations of ability, as well as my experience as a composer and classroom practitioner (although the

field notes are full of examples when my ‘expertise’ was hilariously subverted by one or more classroom calamities). Moreover, each of these conditions was amplified by lockdown. Thus, then, we must be cautious of the privilege inherent to ‘flaunting’ or ‘courting’ failure from particular positionalities. As I reiterate throughout the thesis, unabashed neurodivergence plays out with very different consequences on gendered and racialised body(mind)s. Moreover, queer uptake of failure often fails to account for the materiality of disability (M. L. Johnson, 2015). Particularly in educational contexts, it’s important to note that many of those with parental responsibility (whom I usually dub ‘grown-ups’) don’t want their young person to fail. Invoking the image of the PrEP-taking white bugchaser, Muñoz (2009) contends that courting failure isn’t particularly risky for some body(mind)s, while for others its akin to a death sentence. For this reason, Merri Johnson (2015) calls for a “more precise typology of failure” (p. 264) that acknowledges both the pleasures and perils of failure: both the choices to stand apart from social norms and the “*distress* of failures embodied in lives gone haywire, symptoms run rampant, personal lives devolving into uninhabitable havoc” (p. 264, italics in original). Similarly, Berlant and Stewart (2019) write that “Sometimes failure is just bad. Not queer, better, redeemable, a profile in courage, delicious, or a genuine experiment” (p. 104). My work here, then, is less about desiring failure, and more about subverting the failure already and irredeemably attached to young people in school who attract the label ‘Special Educational Needs’: “less a question of choosing failure than choosing what to do with the failure that has chosen us” (Nyong’o, 2012, cited in M. L. Johnson, 2015, p. 246). I take this up in chapters 7 and 8. In other words, I want to keep hold of what’s bad about failure in the classroom, even while I think about how it unsettles normative expectations of what a body(mind) can do.

Failure as a (trans)disciplinary commitment, Halberstam (2011) writes, may lead us to “want more undisciplined knowledge, more questions and fewer answers” (p. 10). Thus, failure has the potential to open up new lines of inquiry. As Stephanie Springgay (2020a) asks: “How might we think of not-knowing, not as a lack, but as affective potential: as a refusal?” (p. 153). Thus, unlike approaches to educational research that seek to solve a pre-determined ‘problem’, it does what Erin Manning (2016b) calls “problem-making” (p. 11). She writes: “Not to solve problems, or to resolve questions, but to illuminate regions of thought through which problems-without-solutions can be intuited” (p. 21). Thus, propositions are a way of organising educational research that lets us problematise new aspects of practice and pedagogy, not to mention method and methodology through courting failure. I’ll attend more to *how* failure is courted when writing about proposition 3. However, in the next proposition, I think more about failure and disciplinarity, whereupon I conceptualise transdisciplinarity as a problem-making failure to meet disciplinary expectations.

Proposition 2 :: ‘Straddle the hyphen’ :: research-creation is art, research & theory.

The term ‘research-creation’ first emerged as a Canadian research funding category that recognises how artistic practice might be conducted or recognised as research (Manning & Massumi, 2014). It was initially intended as a way to recognise how artists working in universities as teachers were also engaged in research (Springgay & Rotas, 2015). It has since been taken-up and theorised across the humanities and social sciences. Thus, my first proposition explains research-creation as a trans-disciplinary way of doing research. It might be summarised as: ‘When you compose a song, you are doing research and theorising that research, all at the same time.’ In the coming sections, I explicate how I understand the term ‘research-creation’; what research-creation is *not*; how I activate the

crip-queer concept of failure as part of research-creation's methodology; who else is doing similar work; and *why* I am doing it.

Lots of research might be described as engaging with creative methods. Lots of researchers who draw from the same theories as I do also use creative methods. Chapman & Sawchuk (2012) illustrate four different intersections between creative practice and research: *research-for-creation*; *research-from-creation*; *creative presentation of research*; and *research-as-creation*. This model helps to explain how research-creation—as I orient towards it—differs from some of these other approaches to arts-based research.

- 1) *Research-for-creation* is research done to inform the creation of art, but where the art itself is not research. This is something done by all artists as a way of informing their creative practice. For instance, I researched the varsoviana when composing for a production of *A Streetcar Named Desire*, and Tan Dun's *organic music* for the *Junk music* project completed as part of *Neuroqueer(ing) Noise*.
- 2) *Research-from-creation* refers to scholarship that describes or critiques creative practice. This thesis is an example of research-from-creation: it is not art, but rather a description or critical engagement. Given that the projects described here are both music projects, this thesis might be thought of as "Academic Liner Notes" (Truman & Shannon, 2018, p. 58), in that it contextualises and describes the music.
- 3) Chapman and Sawchuk's third intersection is *creative presentation of research*. This refers to a process by which researchers might creatively represent their research findings. *Creative presentation of research* happens after the research has already been completed. For example, the researcher might sing their interview transcripts, decoupage them, or do an interpretive dance.

- 4) Finally, Chapman and Sawchuk outline *creation-as-research*, which is the simultaneous doing of research and creation. In creation-as-research, “creation is required in order for research to emerge” (Chapman & Sawchuk, 2012, p. 19).

The fourth intersection, creation-as-research, is how I understand research-creation: the research and its theorisation described in this thesis were conducted as music composition. This thesis could not exist if the music composition hadn't happened, because that was how the research was done: through the epistemic unfolding of artistic practice. ‘Art instantiates theory,’ writes Springgay: “[some works of art] are not metaphors, nor representations of theoretical concepts; rather, some works of art event concepts” (interviewed in Truman et al., 2019, p. 226). Thus, research-creation is what Manning (2016b) describes as “*a practice that thinks*” (p. 27, italics in original): the practice of composing creates “concepts-in-the-making” (Manning & Massumi, 2014, p. 89). Again, though, this thesis is *not* creation-as-research or research-creation. This thesis is research-from-creation, in that it contextualises and describes the research, which was creation-as-research. At the same time, research-creation as I understand it remains distinct from how I conduct my own artistic practice as a music composer because it incorporates other non-musical methods that formalise its findings for academic contexts: art may instantiate theory, but it is not then usually necessary to accompany the writing of a composition for string trio with field notes or an ethics application, or to then publish on it in an academic journal. This is particularly evident in contextualising my in-school study in chapter 6. Thus, the term ‘research-creation’ is itself a kind of proposition that limits creativity to the confines of what can be done with(in) the academy.

The work in this thesis is amongst the very first to do music composition as research-creation. That said, this work is not the first to associate the term ‘research-

creation' with music composition. For instance, Stuart Riddle (2017a, 2017b) composes and produces music out of interview transcripts and then analyses them with Deleuze's notions of the diagram and becoming. Riddle calls this 'research-creation'. However, rather than the co-creation of creation-as-research, these compositions are musical representations of already-existing interview data. In other words, the research happened just fine without the composition and Riddle's work would seem to be closer to a 'creative presentation of research' (Chapman & Sawchuk, 2015) than 'research-creation' as I understand it. Similarly, and although not using the term 'research-creation', Geert Lovink formed the music duo *We Are Not Sick* with musician John Longwalker. Their first album, *Sad By Design*, is a musical representation of the contents of Lovink's (2019) book by the same name. Again, though, the music is created as a representation of the research and theorisation: the research wouldn't be different if the music hadn't happened and the arts-practice is instrumentalised as a way of disseminating the research in a different form. There's nothing 'wrong' with doing this per se, but it's not how I understand research-creation, and not what I'm doing in this thesis. So, what am I doing?

Trans-disciplinarity.

Unlike those representational approaches to arts-based research outlined above, research-creation is *trans-disciplinary*: it straddles the hyphen between research and creation (and theory)—or the 'as' in Chapman and Sawchuk's 'creation-as-research'—and so "draws attention to the conjunctive at work in its process" (Springgay & Truman, 2018a, p. 2). Doing an interview and then making it into a song—or a Dada poem, or ikebana—conceives the research process and creative process as distinct phases. Instead, research-creation is formed through what Natalie Loveless (interviewed in Truman et al.,

2019) calls “imbricated relationships between form and content” (p. 230). In other words, the research-(creation) findings are interwoven with the form that the (research)-creation takes. This is what Manning and Massumi (2014) call a “thinking-with and across techniques of creative practice” (p. 88–89). For Loveless (2019), *failure* is essential to this trans-disciplinary straddling, because it is impossible to completely occupy more than one disciplinary space. However, rather than problematic, Loveless suggests that it is this failure that makes trans-disciplinary work generative. The failure to do disciplines properly might be thought of as bringing new insights precisely because the full expectations of any one discipline cannot be met: after Halberstam (2011), it releases the researcher from particular formulations of conformity. It is a refusal of those discipline’s boundaries. This is important for my project because I am using electrodermal activity devices in research with A/autists: as I explain in chapter 8, the problematic emphasis of much of these research technologies means that taking them up in a way that is entirely consistent with disciplinary expectations risks re-inscribing the very things I hope to map against. Doing method ‘wrongly’ leaves space to refuse disciplinary expectations.

However, and lest I be misunderstood, to fail to fully occupy a discipline as a mode of refusing that discipline should not be confused with a lack of rigour. Muñoz (2009) writes that queer refusal must court both failure *and* virtuosity. Put another way, investing in failure is not an excuse for making crap. Thus, if research-creation is the conjoined practice of art, theory and research, I would argue that the rigour of its artistic practice determines the rigour of both its research and its theorisation. Indeed, Loveless (interviewed in Truman et al., 2019) contends that disciplinary boundaries must be approached with humility, with a commitment to learning that discipline. She writes:

Disciplinary poaching and dilettantism makes for bad work... To love a form, method, theory, or field, changes how we work with it. It demands respect, care, and commitment. (p. 241)

In other words, taking up an unfamiliar art form to conduct (or to represent) qualitative research findings undermines both artistic practice and the research findings. It also cuts off another funding source for artists: why pay to bring in an artist when you can mosaic your own questionnaires instead? This is not a new claim about research that adopts artistic method: Springgay, Irwin and Wilson (2005) describe the importance of ‘living inquiry’ in such research. Living inquiry is a commitment to sustained thinking through inquiry as artist, researcher, and teacher. Thus, creative practice does not necessarily require training—although I remain thankful for mine—but it *does* require a commitment to learning the discipline. For instance, Ruth Nicole Brown et al. (2018) calls her practice as hip hop collective *We Levitate*, ‘doing digital wrongly’. Brown et al. do not have formal music training but committed to years of experimentation and music-making. As Walter Gershon (2018) argues, “doing work of this nature in sound is incredibly time intensive, requires multiple forms of expertise, and deeply impacts the person doing the soundwork” (p. 9). Thus, enacting research-creation (creation-as-research) needs “practitioners who are comfortable with the language of research and conversant with art and design professions” (Lowry, 2015, p. 44), or else rigorous collaboration that enables that trans-disciplinary practice. Indeed, Loveless (2019) goes so far as to stress the importance of ‘anxiety’ to this transdisciplinary rigour of research-creation, which extends in the first instance from “never fully being at home” in any one disciplinary

space (p. 50).¹⁴ Loveless argues that straddling the space between disciplines without filling any of them is a precarious place to be, because of the constant possibility of missing an aspect of one of the disciplines (or what she calls ‘the missing text’). However, I deviate slightly from Loveless in my approach to anxiety: in no small part because we’ve all had quite enough of it in recent months. I would argue that, while it’s impossible to completely fill each discipline, it’s certainly possible to feel more—rather than less—at home in at least some of the disciplines straddled. Having been a teacher and composer, I am familiar with these disciplinary spaces. Indeed, there are few places I’m more content than the classroom or the studio. I am not exceptional in this regard: there are many artists-academics, and many researchers who work with artists. But, if anxiety haunts the ‘possible missing piece’ of a discipline, then familiarising oneself with those disciplines—or collaborating with somebody who is already familiar with them—reduces the potential for anxiety. Having explained *what* research-creation is (as I understand it), in the final two sections of this proposition I discuss *who* else is doing something similar and *why* I’m doing it at all.

Who else is doing this?

Although I describe the projects explicated in this thesis as the first examples of *music research-creation*, they are not the first examples of *music creation-as-research*. Dr View (DJ View, 2018; Johnson, 2019) composed songs with African American students in historically white universities as a mode of resistance to anti-Blackness: The songs are collected as an album, called *The Space Project*. Similarly, *We Levitate* (R. N. Brown et al.,

¹⁴ I also understand this anxiety as part-and-parcel of research-creation’s attention to the proposition. I expand upon this argument in my discussion of my second proposition below.

2018; R. N. Brown & Smith, 2018) produces songs with research participants as a practice of making “Black girlhood differently than what systemic oppression calls for” (R. N. Brown et al., 2018, p. 396). Again, the composition of songs such as *Flower Girl* is also the process of research: without their composition, there would be no research or theory. Other examples of what might be termed music creation-as-research include Jayson Cooper’s (2015) doctoral thesis, in which he composed songs as an auto-ethnographic practice, and Brett Lashua’s (2006) work with homeless indigenous teenagers, in which the participants composed rapped lyrics to accompany phonographic walks. Sufficed to say then, although this might be the first *music composition research-creation* project (and certainly the first in-school music composition research-creation project), it’s not the first example of *music composition as creation-as-research*.

Why am I doing it?

There are several reasons why I do music composition as research-creation. Firstly, I am a composer in my own right. Thus, somewhat pretentiously, music is already a part of how I orient towards and understand the world. Secondly, there is a rich heritage of Disability Art by disabled artists that unsettles normative notions of embody(mind)ment: my scholarship is adjacent to this work and shares some aims with it, although as a neurotypical, abled person, I’m not capable of producing Disability Art. I attend to my project’s relationship with Disability Art further in chapter 6. Finally, interest in arts-based approaches to research has proliferated in recent years, as scholars seek out ways to do research that is theoretically consistent with the feminist (new) material and affective turn in educational research: it’s to these turns that I now turn in the next two propositions.

*Proposition 3 :: ‘Propositions are not by or for us’ :: research-creation
attunes to what emerges.*

My first two propositions described the importance of failure to unsettling disciplinary boundaries when working at the intersection of artistic practice and social research. My third proposition is about how research-creation as I understand it attunes to what emerges in the research event, and how this attention courts failure. The main thrust of my argument is that propositions cannot be completely pre-determined before the research-creation event, which has implications for the theories we use and for how we conceive of the researching-creating human subject. Moreover, as a robust and rigorous curation of the ‘not completely pre-determined’, propositions have implications for how to do research that draws from affect and feminist (‘new’) materialism. In the next section, I justify what propositions as an organising concept offer qualitative research and its implications for the researching subject. I then return to think about Whitehead’s idea of feeling as how propositions are ingressed: I further complicate this notion by *starting* to introduce affect theory, which is my main theoretical resource in this thesis (I say *starting*, because affect is deeply complex and so I spend most of the rest of the thesis ‘introducing’ it). Finally, I discuss how propositions offer a robust way of attending to the transmission of affect.

What do propositions offer research-creation?

Elizabeth St. Pierre (2016) contends that traditional qualitative educational research has required that researchers ‘know’: to know *what* they want to find out, to know *how* they find it, to know how it might be analysed and represented, and to know what it contributes to their field. St. Pierre contends that, typically, these knowings must all be known before beginning the research project. While I don’t think it’s fair to say that more traditional qualitative research is quite so deterministic, nor that research-creation is

inherently any *less* deterministic (it seems unlikely, for instance, that I would have found data that reinforced medical-individual perspectives on A/autisms), I do agree with Manning (2008) when she writes, “[t]he imposition of a pre-constituted theory onto a work threatens to make it passive[...] dead to what it could still have become” (p. 20). Thus, and as I argue later, over-determining methods and schedules limits the researcher’s ability to theoretically and epistemologically attune to what emerges during the research-creation encounter. Similarly, over-determining the research encounter also over-determines what qualities must be assumed of the researching subject: I framed these qualities through ‘humanism’ in the previous chapter. Thus, ‘knowing’ very often leads to the reproduction of already-existing patterns of inquiry and, so, marginalisation. But taking up failure as a (trans)disciplinary commitment, as I have done in the previous two propositions, entertains the possibility of not knowing. In other words, in desiring to unsettle established empirical practices, “We may, ultimately, want more undisciplined knowledge, more questions and fewer answers” (Judith Halberstam, 2011, p. 10). Loveless (2019) contends that research-creation attends to the unknowability of what unfolds during the research encounter. Thus, research-creation might be thought of as what Muñoz (2009) calls “*ontologically and epistemologically humble*” (p. 28, italics in original), in that it:

[does] not claim the epistemological certitude of a queerness that we simply “know” but, instead, strain[s] to activate the no-longer-conscious and to extend a glance toward that which is forward-dawning, anticipatory illuminations of the not-yet-conscious. (p. 28)

I centre this discussion of unknowability and humility around the idea that the researcher-creator works with propositions to *attune* to the different intensities and flows that emerge propositionally during a research encounter. When theorising

Whitehead's proposition above, I argued that propositions cannot be invented by a thinking human subject: instead, they wait in a 'restricted realm' to be objectified by a more-than-human nexus. The written statement of a proposition taps into some aspect of this entity. Yet, having written a proposition in advance, you might then encounter three others along the way. You also might not (knowingly) encounter any. Thus, thinking propositionally is generative precisely because propositions cannot be entirely pre-determined before the encounter: thinking propositionally attunes to what emerges.

Derek McCormack (2008) summarises the methodology of research-creation as:

involv[ing] an ethical commitment to learning to become affected... by the relational movement of bodies, and a political one borne of the claim that *we can never determine in advance the kinds of relational matrices of which bodies are capable of becoming involved*. (p. 9, emphasis mine)

Thus, working with propositions as an organising concept is making an ethical commitment to attune to what might happen. This is because, in lieu of fixed schedules and pre-determined outcomes, propositions are what shapes research-creation: in other words, research-creation is propositional. This is the second sense in which Loveless (2019) stresses the importance of 'anxiety' to research-creation: the lack of predictability of what—or that *anything*—will happen in the research encounter. Similarly, then, methodological anxiety, as a means of courting transdisciplinary failure, opens the researcher up to what might happen. However, making a commitment to attune as the project unfolds is not an excuse to make crap: rather, it is only possible through rigorous curatorship (Springgay & Truman, 2018a). Think of improvisatory arts practices that court failure: for example, aleatoric music, which incorporates elements of chance, in which throwing a dice can take you down one or other path, but the paths themselves are carefully curated and rely on the skill of the instrumentalists to pull off. Or Moses Cowell's

Mosaic Quartet, which consists of six movements that can be performed in any sequence, but in which the movements themselves are carefully notated. Similarly, improvisations in jazz music are rarely a free-for-all: instead, they follow the modality implied in the composition's chord sequence and rely on the performers' ability to apply them in interesting ways. Thus, attuning to what emerges is a process of both careful curation and of adaptation.

McCormack (2008) summarises the methodology of research-creation as "involv[ing] an ethical commitment to learning to become affected" (p. 9). If working with propositions is the commitment made, then affect elucidates how that commitment is enacted. Like crip and neuroqueer theories, the affect theories I introduce here explore what failure means through unsettling humanist ideals. In the previous chapter, I sketched a critique of 'humanism' (the collection of ideologies that shape the dominant perspective of who is doing research and who is researched). In the next proposition, I think more about how thinking-with affect makes us rethink the researching subject. Here, I use theories of affect to theorise the emergence to which the proposition attunes.

Feeling: Starting to introduce a theory of affect.

I want to tease out a connection between Whitehead's writing on 'feeling' and my understanding of what is theorised in 'affect theory'. Earlier in this chapter, I drew from Whitehead to define feeling as the process by which a proposition is ingressed: by this, I mean feeling is what happens in the restriction of potential to a nexus of actual occasions, as a determiner of the extent to which different pasts impress onto different futures. For Whitehead, this is a more-than-human mode of experience: humans feel, but so too do non-human animals, non-animal life, and non-living matter. Thus, it is as much a fundamental material process that quarks and mesons go through, as it is something that

can be conflated with emotion or equated with the sensation of touch (although Whitehead certainly links them). Thus, for Whitehead, feeling is not necessarily cognised. Or as Kara Keeling (2019) writes: ““Feelings,” not yet “emotions,” are simply matter’s capacity to be affected” (loc. 184). Instead, feeling is what Sara Ahmed (2004) might call an ‘impression’ of the moment of encounter: to feel a body(mind) is to press up against it and transform its surface; and to have been felt by a body(mind) is to have had an impression left upon each body(mind)’s surface. Thus, feeling isn’t (just) passive perception or a mode of cognition, but rather something that impresses upon both *who is feeling* and *who is felt*. Over time, impressions accumulate, changing how further impressions are accumulated in future encounters: in other words, feeling changes the capacity of a body(mind) to affect and to be affected, and the proposition shapes what feeling—what encounter of affecting being affected—is ingressed. So, what is affect? Like Ahmed, I conceptualise ‘feeling’ through theories of affect. You may be wondering why it’s taken me so long to even use the word ‘affect’ given that it’s in the title. This is because affect is a tricky thing to theorise. Clare Colebrook (2014) contends that we need to be careful not to conflate the moment of being-affected—affection, or the encounter—with affect-itself. For Colebrook, this is indicative of the tendency to “reduce the force of concepts to the lived” (p. 89). Yet, thinking and writing about affect without reference ‘to the lived’ is tricky. In some ways, ‘the lived’ is all that can be described. This is because affect is:

an entity that is inimical to conceptualisation, subjective intention or linguistic transcription... [to] ‘turn to affect’ is, in fact, nothing other than a turning *away* from affect. (Brewes, 2018, p. 317, italics in original)

In other words, affect is a capacious concept but keeping holding of that capaciousness without losing analytical precision—or keeping hold of precision without losing

capaciousness—is impossible. (Although, this is arguably true of any theory, as I argued at the beginning of this chapter.) Or at least, I’m still figuring it out (I’ll still be figuring it out when I’m dead, but then that’s rather the point). I understand affect as intensities that change a body(mind)’s capacity to affect other body(mind)s and to be affected by other body(mind)s. In chapter 4 (my second methodology chapter), I offer a much more detailed explication of affect theory and its role in research-creation through its conceptualisation by Deleuze and Guattari. In chapter 7, I think through how affect has been mobilised (and problematised) in critical race and Black studies. For right now though, so as not to get too far off the track of explaining the proposition and research-creation, I want to stay within the language of ‘feeling’.

As I’ve already stated, feeling modifies the surface of body(mind)s in such a way that shapes their future interactions with other body(mind)s. Wynter (2001) describes how the feeling of being human is modulated by the visceral living of social life. She writes:

No matter how the form may vary, the fact that an organism has conscious experience *at all* means, basically, that there is something it is like *to be* that organism. (p. 30, italics in original)

In other words, being human feels like something. Wynter calls the theorisation of this ‘feels like’—or *how* we feel what is felt (or what Whitehead might call the subjective form)—the *sociogenetic principle*. In describing the sociogenetic principle, Wynter draws from Frantz Fanon’s (1967) *sociogeny*. Fanon conceptualises sociogeny as the social stuff that goes along with *ontogeny* (i.e., of individual biology) and *phylogeny* (i.e., of species-level evolution). It is through sociogeny that inessential Blackness comes to be materialised—or black(ened) (Jackson, 2020). Thus, sociogeny and the sociogenetic principle are similar. However, while Fanon’s sociogeny shapes an individual (Black)

persons' experience, Wynter's sociogenetic principle describes how sociogeny rolls over onto ontogeny: the sociogenic is "converted into the stuff of ontogenesis" (Weheliye, 2014, p. 26). In other words, Wynter contends that culture is ontogenetically significant and intervenes in phylogenetic processes; the biological substrate is not a linear causality but rather is porous to the social, with semiotic processes able to override the biological tract. Thus, the social is viscerally lived: what it 'feels like' to be human—and so how propositions are ingressed—is always-already political. In this thesis, Wynter's sociogenetic principle is important to how I think about the transmission of affect. While Wynter's sociogenetic principle has been taken up in relation to A/autisms elsewhere (e.g. Goodley, 2016), this has typically missed the nuance between Wynter's sociogenic principle and Fanon's sociogeny: in other words, its uptake has emphasised how bio- and socio- operate alongside one another, not how they *intervene* in each other. Moreover, while the way that the bio- and socio- have been thought through one another in regards to A/autism, these perspectives have emphasised how 'symptoms' of A/autisms are amplified by diagnosis, so-called 'biolooping' (Hackett, 1999, as cited in J. N. Straus, 2013) rather than through the more complex understanding I've offered here. In short, then, feeling is shaped by the experiences of body(mind)s, including the history of how previous feelings have been felt. In limiting particular potentials to a particular moment of affection, the proposition changes the trajectory of affect and of which particular prior occasions are relevant, and so, of *what* is felt and *how* it is felt, even though this continues to be conditioned by sociogenetic factors. This has implications for how the next proposition comes to be ingressed, and the next one after that, and so on.

This third proposition is about how research-creation attunes to what emerges in the encounter. So far, I've briefly conceptualized this 'attunement' through theories of affect. In the next section, I'll think about what this offers to qualitative research.

Attune.

Over the last decade, theories of affect and feminist materialism have become increasingly popular in qualitative educational research. Educational researchers have looked to these turns as a way of considering how research methods might unfold in situ, and what kind of researching subject this would require (MacLure, 2013a; Springgay & Truman, 2018a; E. A. St. Pierre et al., 2016). Jackson and Mazzei (2013) argue that theory and research practice should be thought through and so “constitute or make one another” (p. 5), contending that ‘putting philosophical concepts to work’ shapes the method and data in new ways: Thus, the theoretical resources I introduced as part of this proposition unsettle the methodological emphasis on knowing, as well as the formulation of the researching subject on which this knowing relies. In later chapters, I argue that this has particular implications when researching using sound-based methods. In chapter 4, I think about what attention to affect does to sound studies, and about how pedagogy might be rethought through attention to affect. In chapter 7, I consider how theories of affect might be put to work in understanding marginalising processes in the classroom, including a careful attention to critiques of some theorisations of affect that are ‘apolitical’ or ‘subject-less’. In chapter 8, I consider how attention to affect might complicate the ontology, politics and ephemerality of A/autisms.

Summary.

In theorising this proposition, I have suggested that thinking propositionally means making an ethical commitment to attuning to whatever emerges in the encounter. The written statement of the proposition is not itself the proposition: no-one knows where one will come from next, which means being open to the ways that their ingression is felt, how that feeling shapes the encounter, and how that then produces further propositions.

Working propositionally, then, makes knowing in advance impossible. Thus, the research-creation site must be approached with an “ethical commitment to learning to become affected” (McCormack, 2008, p. 9) by whatever the researcher-creator might come to entertain. Such an attunement is important for the politics of researching-with disabled participants, as research has typically closed-down or sought to overdetermine what a disability might mean and might do. In the next chapter, I think about the representational logics that this over-determination relies on through the disability studies concept of ‘the Stare’. In my next proposition for research-creation, I set-up this discussion by thinking through propositions and the crisis of representation.

Proposition 4 :: ‘Issue forth novel reverberations’ :: research-creation is (more-than-)representational.

So far, my propositions for research-creation have described it as a transdisciplinary practice that attunes to what emerges in a research-creation encounter. This exposes the researcher to the possibility of something unexpected (or indeed nothing at all) happening, and so courts failure and anxiety. My fourth proposition for research-creation considers how research-creation represents that encounter. Important here, is that the disciplinary straddling of research-creation doesn’t just imply that I’m investigating something that’s already there (i.e., research-): it also implies something new coming out of that investigation (i.e., -creation) (Couillard, 2020). So, while under the previous proposition I described how working with the proposition makes research-creation attune to different intensities and flows as the research encounter develops, this proposition is about what comes to be built in and from encountering those intensities and flows. I frame this discussion through two questions: (1) what is representation? and (2) what can we do to unsettle representational logics? As I will argue, non-representation is ultimately

impossible and so prefer to use the term (more-than-)representation: this hangs on to the idea that it is both a representation, and a conveyer of what is more-than-representational.

What is representation?

'Representation' and 'representationalism' are complex and fraught terms. For Judith Butler (1999), representation of marginalised groups is important because it generates visibility: it normalises the presences of divergent body(mind)s. However, and as I already started to argue in the previous chapter, this normalisation—or inclusion—is often purely visual: it 'includes' whilst leaving the marginalising structures that shape 'divergence' in the first place intact. Moreover, Butler argues that representation creates static notions of truth about represented groups that fix in place once-and-for-all what that group is 'like'. However, to create a representation, whoever is doing the representing must be asynchronous to what they are representing: *spatially* asynchronous, in terms of being at some physical remove from the research encounter, and *temporally* asynchronous, in terms of being able to observe the research encounter after the fact (Olkowski, 1999). Manning (2008) problematises this notion of 'representing from the outside'. She writes: "Evaluated from the outside, the risk is that the work will suffocate, dead to what it could still have become" (p. 20). Similarly, MacLure (2013a) suggests that the representational aspects of traditional qualitative method—specifically coding—quell motion, and making things 'stand still'. Representation, she writes:

categorizes and judges the world through the administration of good sense and common sense, dispensed by the autonomous, rational and well-intentioned individual, according to principles of truth and error (p. 659).

In other words, representing an event from *outside* that event induces stasis so that an accurate (asynchronous) representation can be formed.

Now, the capacity I described to ‘represent from the outside’ relies on a specific formulation of the human capable of creating a representation. Such a researcher would have to be capable of separating themselves from what it is they’re researching. This is the idealised European Man I problematised in the previous chapter. There, I wrote that Man is perceived as “biologically absolute” (Wynter, 2001, p. 61) or “purely biological” (Wynter, 2003, p. 264). I also argued that this absolution allows the monoculture of Man and so the binary of self (Man) and other (not-Man). This binary works in terms of who can demonstrate those qualities of what is “‘human’ about humanity” and who can’t (Braidotti, 2013, p. 13). However, in describing the binary of self and other, Braidotti (2013) is also describing an ontological perspective (p. 15). By conceiving of Himself as distinct from what is not-Himself, European Man constitutes Himself as a bordered, bound, cohesive singularity endowed with the asynchronous capacity to represent what is not-Himself. In other words, European Man (as subject) understands himself as fundamentally separate from His environment (as object). This version of Man is frequently problematised in the feminist (‘new’) materialist and affect theories I employ in this thesis. I explained this in my summary of feminist materialism at the start of this chapter, where I said it attends to ‘how human em-body(mind)-ment is dispersed as part of a more-than-human network’. My conceptualisation of how research-creation is more-than-representational is informed by what feminist quantum theorist Karen Barad (2007) calls intra-action. Unlike “interaction,” which suggests “separate individual agencies that precede their interaction” (p. 33), Barad’s (2007) intra-action “*signifies the mutual constitution of entangled agencies*” (p. 33, italics in original). In other words, researcher and researched are mutually co-constituted in the encounter and so one cannot be

asynchronous enough to represent something else. Similarly, for Whitehead (1978), the idea of representation is an anthropocentric understanding that relies on the perceived capacities of humans to *formulate* such a representation. Whitehead's more-than-human ontology understands perception (or, more exactly, *prehension*) as not limited to particular organisms. Rather, the subjective perception of an object is part of the materiality of both the subject and the object. For both Barad and Whitehead, then, a 'pure' representation of what is researched that is materially distinct from the researcher is impossible because the researcher is part of what they're researching. Rather, the researcher and the researched emerge in the event, "immanent to the field's composition" (Manning, 2016, p. 30). Lots of other theorists have thought about how the researcher is mutually constituted with the research and so incapable of representing: In chapter 4, I think about how theories of affect can be used to think about these ideas. For now, having explained the problems of representation and how I think representation can't really happen, in the next section I want to think about how what I've done in the projects described in this thesis intervenes in representational logics.

What can we do to unsettle representational logics?

Phillip Vannini (2015) writes that the "non-representational answer to the crisis of representation lies in a variety of research styles and techniques that do not concern themselves so much with representing life-worlds as with issuing forth novel reverberations" (p. 12). In seeking to produce such 'novel reverberations', qualitative educational researchers are increasingly exploring arts-based methods as a way of conducting or disseminating research. This is particularly true of research that, like mine, draws from theories of affect and the feminist new materialisms. The turn to arts-based methods appears to be because of a perception that these methods might be able to

better attend to some of the ideas discussed under this proposition: to, in Vannini's words, 'issue forth novel reverberations.' Yet, I think care is needed that we not just try to use 'new' methods (although I don't think that art is 'new'), but also attend to how we apply those methods (and, indeed, existing methods). As Springgay and Truman (2018b) argue, there is an incommensurability between the theories taken up in this thesis and traditional application of research methods: an incommensurability, they argue, that has challenged qualitative researchers to reconsider 'data': what it is, how it is generated, and how it is represented. Importantly, this incommensurability does not necessitate 'different' or a doing-away-with of methods; rather, it is the orientation to method—what Springgay and Truman call the *(in)tension*—including “the *logic of procedure and extraction*,” that should be undone (p. 204, italics in original). Thus, while in this thesis I use quite traditional methods, it is how I deploy those methods that is important. For instance, Riddle's (2017b, 2017a) compositions explored under Proposition 1 use a creative method to represent existing interview data. Thus, they remain representational: i.e., they are representations of events created asynchronously at both physical and temporal remove from the original encounter. By way of a contrast, Elizabeth St. Pierre (2019) contends that methodological uptake of the ontological turn must inform research practice and not just filter into the presentation or theorisation of the research findings. She writes: “a study cannot be made post qualitative after the fact” (p. 10). This is not to say that such work is 'bad' or uninteresting, but just that it doesn't unsettle the logics of representation—and so arguably isn't 'post'-qualitative, and definitely isn't an example of research-creation. Moreover, even if Riddle's original interviews had been done in a way that was theoretically consistent with post qualitative research, their subsequent representation as songs would *still* not make them more-than-representational.

By way of a contrast, research-creation aims to be *more-than-representational* (Truman, 2016a). By this, I mean it is not (just) a representation of an event that was constituted separately from that event. Rather, research-creation is more-than-representational in that it is constituted *in* the research event. The term non-representational is often used in qualitative research. I don't think that it's possible for anything to be truly non-representational. As Andrew Murphie (2016) writes, the product of research-creation always "plays out the tensions between archive and anarchival" (p. 5). What this means is that the songs are still representations (or archives) even though they have more-than-representational (or anarchival) properties that were registered in the research encounter and might then be conveyed to the listener (McCormack, 2008; Snaza et al., 2016). It's for this reason that I have written '(more-than-)representational' in this proposition's title. Research-creation is representational in that it aims to produce a representation, but also more-than-representation in that the created representation might seek to 'enliven, resonate and rupture', rather than and as well as 'report, validate and describe' (Vannini, 2015) through conveying the affective intensities that shaped the work's initial production. In other words, it is both a representation of something but also a deliberate recirculation—an 'issuing forth'—of the original encounter (Truman & Shannon, 2018). I write about this at much greater length in chapter 4, when I describe the more-than-representational aspects of sonic experience through my own concept, the *more-than-sonic*. In the next proposition, I think about how more-than-representation and attunement to what emerges shape research-creation's political intention.

Proposition 5 :: ‘Remember the politics of approach’ :: the rigour of research-creation is ethically and politically attuned.

So far, I have situated my project within a queer-crip lineage of failure. In so doing, I have argued that the politics of research-creation are mobilised by a methodological commitment to failure. Manning (2016b) writes (interviewed in Truman et al., 2019): in “engaging with what does not ordinarily register as value (as knowledge, as productive, etc.)”—and so I might argue ‘who’ does not ordinarily register—“the work [of research-creation] is necessarily political” (p. 246). In other words, in courting failure, and orienting around bodies that fail, research-creation is political. I have also argued that research-creation produces things. For this reason, my fifth proposition is about how research-creation produces things and so the researcher-creator must be responsible for *what* they produce, or what Springgay (interviewed in Truman et al., 2019) calls its “ethical and political attunements to creating a different world” (p. 227). Thus, research-creation demands that researcher-creators “own up to the fact that they add (if ever so meagrely) to reality” (Massumi, 2002, p. 13). In other words, because it ‘issues forth novel reverberations’ (i.e., produces things), research-creation practitioners have a responsibility to attend to *what* reverberations are issued. In the next chapter, I’ll think about how I navigate this responsibility with regard to making art as research with disabled people. Moreover, this ethical responsibility is integral to the notion of rigour in research-creation. This rigour is not Euro-Western notions of artistic rigour, which implies adherence to a canon or particular body of technique, or of rigorous research, which implies conformance to disciplinary boundaries. Rather, Springgay (interviewed in Truman et al., 2019) describes rigour in research-creation as a feminist accountability “to the different human and nonhuman bodies one works with” (p. 241). Similarly, Natasha Myers (interviewed in Truman et al., 2019) contends that rigour is what “keeps research

ethical, accountable, embodied, and situated” (p. 240). Thus, rigour is about taking seriously what is mapped and mapped-against by the encounter (Manning, 2016). I like to think about the rigour of research-creation as part of a *politics of approach* (Shannon & Truman, 2020). A politics of approach is “the ethico-political perspective a methodology implies” (p. 3). Careful uptake of a methodology should bring that methodology’s ethico-political perspective to bear on the methods used. Thus, in adopting critical disability studies as my methodology, I need to make sure that how I use my methods and what ‘different world’ I use them to make is consistent with critical disability studies’ aims and intentions to problematise (homo)normative notions of bodily capacity. Thus, the notion of value—what capacities and what body(mind)s register as valuable—is very important to both the projects discussed in this thesis. In the next chapter, I argue that traditional sound-based methods neglect how sonic experience is constituted by more-than-sonic features. Moreover, in those chapters that engage with my in-school study, I repeatedly explore A/autistic practices that fail to meet ablenationalist expectations of ‘value’ in the classroom. And yet, we shouldn’t forget that research-creation was originally created as a way of applying for research-funds and so of apportioning value (Manning & Massumi, 2014). Thus, it is very much caught up with notions of ‘value’ of the neoliberal metric-centrism of the contemporary university (Loveless, 2019; Springgay, 2020b).

Above, I cited Springgay (interviewed in Truman et al., 2019) as indicating the importance of accountability to both the human and non-human actants in the research-creation encounter. This is a key line of thinking in much of the work of the other theorists I’ve drawn from in this chapter, including Whitehead and the feminist materialists and affect theorists. However, in this thesis, I mostly write about humans: human experience, marginalisation, and issues of ‘including’ humans. In part, this is because of my own interests in including *people* in a human institution: the school.

Moreover, I think it's probably impossible to account for a truly more-than-human inclusivity—humans, non-human animals, non-animal life, non-living matter (e.g. how do you decide what's best for a daffodil?). This leads me to follow Elizabeth Povinelli (2016) in focusing on the human as a 'local problem'. Consequently, I would emphasise here that, although inspired by a trans-corporeal, affective, feminist ('new') material understanding of em-body(mind)-ment, in this thesis my *political* attention is very much to emphasise humans, even while acknowledging the inseparability of humans from their more-than-human "web of interrelations" (Braidotti, 2013, p. 98). Thus, I am inspired by Braidotti (2013) to view the human 'subject' as both situated within "an eco-philosophy of multiple belongings[...] *but still grounded and accountable*" (p 49, italics mine), and so to consider how materiality is constitutive of patterns of human marginalisation. So how does one approach thousands of hours of composition, mixing and production, and 14 months of in-school workshops?

Maggie Maclure (2013b) describes the process by which researchers become attracted to specific data points: she calls this a *glow*. Similarly, Ahmed (2008) states, "there is a politics to how we distribute our attention" (p. 30). Thus, my attention to specific data points, both in the composing and in the writing, is attuned through my political interests. I've already described this interest as a methodological orientation that *is* critical disability study. Many of the events I discuss in this thesis are tiny, what Liselott Olsson might call *micro-events*. Springgay and Zaliwska (2015) draw from Olsson (2009) and Deleuze's concept of the micro (1988, cited in Springgay and Zaliwska, 2015) to conceptualise the 'micro-event' as drawing "as much as possible out of what seems to be a tiny little event," offering "a better chance to see all the singularities" (Olsson, 2009, p. 120). Thus, I follow Kathleen Stewart (2008) in "atten[ding] to things that just don't *add up* but take on a life of their own as problems for thought" (p. 72, italics in original).

Through these micro-events, one might 'listen in detail'. Sound studies scholar Alexandra T. Vazquez (2013) describes 'listening in detail' as opening up attention to the qualities of composition that are in excess of the official recording—both of the music and the state narrative of claiming ownership of music. Through 'listening in detail' one might identify "interruptions that catch your ear, musical tics that stubbornly refuse to go away. They are things you might first dismiss as idiosyncrasies" (p. 19). I begin turning to these musical tics from chapter 4. In my final proposition, I turn to what happens to these 'worlds'—compositions—when they are 'finished'.

Proposition 6 :: 'Cannibalise concreated products' :: research-creation is processual

So far, I have theorised research-creation as a means of doing feminist, trans-disciplinary and more-than-representational praxis. My final proposition theorises research-creation's emphasis on process rather than product. In research-creation, the 'finished' work of art isn't as important as the work's *articulation*. By this, I mean that the product of research-creation is just a proposition for further researching-creating-thinking. Thus, it is "No deliverable. All process" (Massumi, 2015, p. 73). This is another way in which research-creation is shaped by Whitehead's (1978) understanding of the proposition. As I've already described, Whitehead conceptualises 'things' as a series of occasions. Each occasion unfolds along a contour, which he calls its *concreation*. Once fully concreated, the occasion is instantly cannibalised to feed (or be felt into) the next occasion. Like the concreated subject, the output of research-creation is processual; once completed (or concreated), the work is already a datum for those works that will follow it. Likewise, the product of research-creation is part of the process of the next production. Or, as Manning (2008) writes, "Don't stop the work in its tracks! Write the sequel!" (p.21).

In research-creation, theorisation of research happens in the research-creation event. To theorise it afterwards is to bring paucity to it, the same quelling of motion critiqued of the traditional qualitative method (MacLure, 2013a). As Manning (2008) writes, “[t]he imposition of a pre-constituted theory onto a work threatens to make it passive[...] dead to what it could still have become” (p. 20). In research-creation, then, the product (artistic, empirical, theoretical) becomes a proposition for further researching, thinking and composing. This is another way in which research-creation might be thought of as distinct from other approaches to educational research that take-up artistic methods: it is what Manning and Massumi (2014) call a “mutual interpenetration of *processes* rather than a communication of *product*” (p. 88-89, italics mine).

Chapter summary.

In this chapter, I have introduced my methodology, which is critical disability studies. I have introduced my research praxis, research-creation, and explored how propositions can be used as research-creation’s primary organising concept. I have also explored how failure might be a generative practice, particularly with reference to its uptake in queer and crip theory, and in theorisation of affect. The irony of trying to close-down, define and ultimately *represent* a way of doing research that I’m claiming is responsive, more-than-representational and refuses disciplinary boundaries is not lost on me. Through the ‘six propositions for research-creation’ I offered in this chapter, I’m not trying to dictate how everybody should understand research-creation. Rather, I’m stating how I personally activate the term as an oblique approach to doing research.

By way of a summary, I understand research-creation as a way of researching socio-material processes as art practices: it is both the doing and theorising of research through artistic process. Although the research-creation encounter can be carefully

curated, the process of creative practice itself cannot be wholly determined in advance: indeed, knowledge happens through the process of reciprocity through which the researcher-creator attunes to what emerges: through the epistemic unfolding of creative practice. Thus, research-creation refuses the figuration of the omniscient asynchronous researcher so often adopted in research that represents disability and disabled people: instead, it adopts a messy 'ontological and epistemological humility' that more-than-represents in each encounter, cannibalising *products* in the ongoing *process* of doing further thinking. In other words, research-creation "moves away from approaches to qualitative research that assume data can be collected, extracted [and] represented, and towards an affective, emergent, relational and more-than-representational approach to doing-research" (Truman & Shannon, 2018, p. 62).

This chapter has primarily addressed my second research question by theorising how I understand research-creation. It has also addressed the first sub-question for my first research question by explaining how research-creation functions as praxis (and so intervenes in representational logics). Although this chapter is a 'methodology' chapter, thinking these concepts through one another is empirical work (de Freitas & Truman, 2020; E. A. St. Pierre et al., 2016; Truman, 2022): thus, this chapter contributes to the field of research-creation. In the next chapter, I consider how research-creation problematises sound methods.

4. Methodology II: Affect, sound and the more-than-sonic.

Preamble: Introducing *Oblique Curiosities*.

Chapter 4 is the second of my two methodology chapters. In this chapter, I engage methodologically with two interdisciplinary fields: (1) theories of affect; and (2) sound studies. In so doing, I draw from my music research-creation duo *Oblique Curiosities* to understand how music composition research-creation differs from other uses of sound method. Previously, in chapter 3, I explained my understanding of research-creation by discussing the methodological implications of propositions. Important for how I conceptualise propositions are the twin notions of *affect* and *affection*: it is through *affection* (the moment of affecting and becoming affected) that propositions determine the relevance of prior events to novel entities. I offer a lengthy conceptualisation of theories of affect immediately after this introductory preamble.

I also explicate affect theory in this chapter to explore how music composition research-creation relates to and problematises the interdisciplinary field of *sound studies*. Jonathan Sterne (2012) defines sound studies as “a name for the interdisciplinary ferment in the human sciences that takes sound as its analytical point of departure or arrival” (p. 2). A discussion of this field is important to this thesis because, by doing music composition as research-creation, *I take up sound methods*. In other words, if research-creation is a feminist curation of practices from across the boundaries of multiple disciplines—wherein the necessary failure to fully meet the expectations of each of those disciplines is what makes that trans-disciplinarity productive—then it is the disciplinary

boundaries of sound study that my project fails to ‘fill’ (Loveless, 2019). As such, the remainder of this chapter is animated by the question of what this failure will *do* for my methodological intention to contest ability and disability.

Chapter overview.

I draw from my ongoing song writing music composition research-creation project, *Oblique Curiosities*, and contextualise this project through theories of affect to do two things: (1) to problematise the ocular methodological inheritances of sound method, and instead (2) propose how sound methods can be done in more ‘soundy’ ways.

In the next section of this preamble, I explain the specifics of the *Oblique Curiosities* research-creation project. Following the preamble, I offer a detailed elaboration of how I conceptualise affect. I then highlight some of the key debates in sound studies. After this, I use affect theory to argue that sound *methods* tend to inherit white, masculine and anthologising *ocular methodological inheritances* that lead researchers to do six things:

- (1) *separate* themselves from the sonic environment and, in so doing;
- (2) *essentialise* sounds as pre-existing the research encounter, and so imagining sounds as being of that place or of particular body(mind)s;
- (3) *naturalise* the sonic researcher’s auditory perception, and so elide marginalisation;
- (4) *extract* the separated, essentialised and naturalised sounds from a place; and, in so doing
- (5) *decontextualise* those sounds by removing them from the more-than-sonic features of sonority; and
- (6) anthologically *compile* those sounds.

Building from these valuable critiques, I argue for an increased attention to composition in sound studies to attend to what I'm calling the *more-than-sonic* (Shannon, 2019a, 2019b). Jeannette Jones (2016), thinking with the rich heritage of D/deaf music, questions: "If listening is more than what happens with the ears, what does it entail?" (p. 67). In this way, the more-than-sonic indicates the features of sonic experience that are not physically 'heard' via the ear, but rather are experienced as 'sound' through other modes of experience, including: non-auditory sensory experience, socio-cultural experience, and those experiences brought to an encounter by the researcher. When I tried to explain the idea of the more-than-sonic to my friend, musician Luke Jennings, he said "It sounds like you're just talking about songwriting" (2021, personal correspondence): which, in essence, I am. My argument is that composed music sounds more like the original sonic landscape than an audio recording of that landscape would, because the composer registers non-auditory aspects of sonic experience that the microphone cannot. I suggest that attending to composition is one way to unsettle these six inheritances of sonic method and instead do more-than-representational sound study that deeply *immerses* the phonographer, *complicates* what they phonograph, *provokes* political complexity, *stratifies* that complexity, *contextualises* sound, and *queerly compos(t)es*. In explicating these problematics, I draw from my ongoing research-creation project, *Oblique Curiosities*. In the next section, I detail the specifics of *Oblique Curiosities*.

Oblique Curiosities: Specifics of the project.

Oblique Curiosities is a music duo, consisting of myself and research-creation scholar Sarah E. Truman.¹⁵ Sarah and I completed a long walk along St Cuthbert's Way. During the

¹⁵ Sarah has consented to have her name printed alongside the songs, as well as to have them be discussed in this thesis. See Appendix L.

walk, we began humming and chanting melodies and hooks, which were prompted by the many more-than-human encounters along the way. After the walk, these ideas languished as sketches and propositions until I began my PhD programme, at which point they were animated by our shared interest in queer and affect theories, and our concerns for issues of representationalism. We use these sketches and propositions to compose, record and produce nine songs as an album, which we called *Queer the Landscape*. The songs are:

1. *Buttermoon*
2. *It's Okay to Say 'No'!*
3. *Wouldn't that be Sexy?*
4. *Cruel Bliss (Sweet Pain)*
5. *Hurry Up Lover, and Love (the Days Grow Short)*
6. *3 Black Military Helicopters*
7. *All*
8. *Friend*
9. *Deary, Feary, Queery*

These nine songs can be heard via the following link:

<https://soundcloud.com/oblique-curiosities/sets/queer-sonic-cultures-an-affective-walking-composing-project>

Oblique Curiosities grew out of these first nine songs, as did our genre: 'glitch-folk'. We composed a tenth song called [*Ice-Pick in my Eye*](#), which composes with our frustration at the overwrought use of theoretical concepts in scholarship that draws from affect and the feminist ('new') material turn.

Since ‘completing’ the original ten songs, we have started composing and producing new songs. These later pieces extend, compose-with, or unsettle the concepts instantiated by the first ten. They include:

- [Ada: A-D-A!](#)
- [Antebellum Lies](#)
- [Needles \(A Daydream\)](#)
- [Propel our Love](#)
- [Captive Access](#)
- *Bone Coral*
- [Alpha Centauri](#)
- [Cosmic Beavers of Revelation](#)

My engagement with the songs in this chapter is not to treat them as research ‘data’ or findings from the walk (if it was, I’d recommend just listening to the songs instead).

Rather, I think-with *Oblique Curiosities* here to: (1) theorise affect theory, (2) explain how I think affect theory problematises sound method, and (3) explain how music research-creation problematises sound method. These thoughts very much shaped my in-school research as an approach to composing-with young people in the classroom. Moreover, the ideas I explore here will return in later chapters where I think about A/autisms and the electrodermal gizmos: particularly, the music/noise dyad, how certain epistemological suppositions are built into the research device, and how sonic experience is formed by more-than-sonic aspects of experience.

Affect theories: A proposition (in lieu of a definition).

Affect has been theorised from within a variety of academic lineages and has “infinitely multiple iterations” (Seigworth & Gregg, 2010, pp. 3–4). In chapter 3 (my first methodology chapter), I briefly described my understanding of affect as informed by: Whitehead’s process philosophy; Deleuze reading of Spinoza; queer, Black and critical race theorisation of the politics of emotion; perspectives sometimes collated as the feminist (‘new’) materialisms; and queer inhumanisms.¹⁶ I offered a working definition of affect as broadly synonymous with ‘feeling’, where feeling isn’t (just) passive perception, but rather prehension: the *modulation* of who-or-what is feeling and who-or-what is felt as the universe moves forward into novelty. Here, I offer a more extensive engagement with theories of affect to explicate how music composition research-creation attends to features of a sonic environment that are not audible but are still constitutive of sonic experience.

The turn to affect is often understood as being popularised in two moments (e.g. Lara et al., 2017; Seigworth & Gregg, 2010). The first is in Massumi’s translation of Deleuze and Guattari’s (1980/1987) reading of Baruch Spinoza’s *affectus*. The second is in Sedgwick and Frank’s (1995) uptake of Sylvan Tomkins to describe affect(s) as eight (or ‘sometimes nine’) ‘feelings’. This is not to say that these are the earliest discussions of affect, but rather that they have fed forward into heritages that are still legible in affect studies today. For instance, some scholars use the term ‘affect’ as synonymous with human sensation or emotion (e.g. Ahmed, 2004; Cvetkovich, 2012; Goodley et al., 2018; Ngai, 2007; Sedgwick, 2003). Others emphasise how affective capacities—i.e. the capacity

¹⁶ Parsing my discussion of affect out from the rest of the methodological resources in the previous chapter is a bizarre gesture, but one which I hope makes approaching so many concepts less intimidating for the reader: it certainly made it less intimidating to write about!

to affect and be affected—are narrated and taxonomised, and how these doxas go on to create marginalisation (e.g. Chen, 2012; Ngai, 2007; Palmer, 2017, 2020; Schuller, 2018). Still others consider affect as circulating within a more-than-human network, ‘felt’ by each body(mind)¹⁷ within its own capacity to do so: as emotion, as sensation, as impression (e.g. Chen, 2012; Keeling, 2019; Yusoff, 2018). Of course, and like much of my thinking around affect, trying to delineate or neatly parse affect theorists or theories like this is entirely artificial and ultimately impossible: each of these scholars adopts *all* of these perspectives to greater or lesser extents throughout their projects. I parse them here not to imply opposition, but rather to indicate some of the capaciousness of the concept and as a way into writing about that capaciousness. As I indicated in the previous chapter, affect is “inimical to conceptualisation, subjective intention or linguistic transcription” (Brewes, 2018, p. 317): in other words, it’s necessary to parse affect to say anything about it. Having summarised some affect theories, I now offer my own understanding of affect.

I understand theories of affect as pertaining to the passage of intensities or forces in such a way that modulates a body(mind)’s capacities to affect other body(mind)s. Or, put another way, I understand an affect as anything that reconfigures the ability of those body(mind)s it encounters to be affected by other body(mind)s. Or, put another way, I understand affect’s articulation as the ‘system’ of systemic whiteness, ableism, and cis-hetero-sexism. Or, put another way, I understand affect as attending to how emotion is a material force. Or, put another way, I understand *emotion* as the human-facing, cognised aspect of affect. Important to my understanding of affect here is that *affect does not exist*. By which I mean that, in theorizing affect, I’m not describing some force or entity

¹⁷ As I stated in previous chapters, my stylised writing of body(mind) is intended to refer to a more-than-human bodies—humans, non-human animals, non-animal life, and non-living matter—as well as their relation.

that pre-exists my engagement with it. This is because, for Spinoza, a 'body' is "what it can do as it goes along" (Massumi, 2015, p. 4). Like all bodies, then, the question is not "what is *affect*?" but rather "what does an affect *theory* do as you work it?" As Massumi (2015) writes, "Rather than a definition, what you have is a *proposition*" (p. 5, italics mine). I continue my discussion through five themes (or propositions): Deleuze's *l'affect*, augmentation/diminution, emotion, subjectivity, and sound.

Deleuze's *L'affect*.

As I have already explored in the methodology chapter, my understanding of affect is inspired by Whitehead's description of prehension, whereby occasions and potentials combine to shape the continued unfolding of body(mind)s. My understanding is further inspired by Deleuze and Guattari's reading of Spinoza's *affectus* as *l'affect* in *A Thousand Plateaus*, translated by Massumi as 'affect' (Deleuze & Guattari, 1987: abbreviated hereafter as ATP). *L'affect* is defined by Massumi in the introduction to *A Thousand Plateaus* as: "a prepersonal intensity corresponding to the passage from one experiential state of the body to another implying an augmentation or diminution in that body's capacity to act" (ATP, p. xv). The related concept of *affection* is an "encounter between the affected body and a second, affecting, body" (ATP, p. xv). To explicate *l'affect*, Deleuze (1978) gives the example of the sun, which in the moment of *affection*—or encounter—can harden clay but also melt wax. This passage between 'states of the body' depends on the capacities to affect and be affected of those bodies, which in turn depends on their relations to further bodies. It is this moment of affection that Ahmed (2004) calls impression: of body(mind)s pressing against one another and, in so doing, forcing their 'surface'—the point of encounter between body(mind)s—to change shape. This in turn *modulates* how that body(mind) impresses and is impressed upon (or affects

and is affected by) other body(mind)s. Ahmed's theorisation of affect is one that emphasises human experience of emotion rather than the more-than-human theorisation I'm reaching for here. At the same time, I appreciate Ahmed's theorisation for its emphasis on how body(mind)s accumulate impressions and so become historied, and how that accumulation explains material processes of marginalisation. I attend to this more later in this chapter. In the next section, I problematise the processes of 'augmentation' and 'diminution' Massumi describes, and explain my own preference for the word 'modulate'.

Affect and augmentation/diminution.

Above, I defined theories of affect as pertaining to the passage of intensities or forces in such a way that *modulate* a body(mind)'s capacity to affect other body(mind)s. My use of 'modulate' here is deliberate and informed by the music theory understanding of 'modulation', which implies a subtle but significant departure from Massumi's 'augmentation' and 'diminution'.

In music theory, a modulation is a change in mode (or key centre). Examples of modulation include: the slick key change at 2:52 in Michael Jackson's *Man in the Mirror*, the triumphant appearance of the title card at 0:40 in Danny Elfman's 1989 theme for *Batman*, and the inspirational final chorus in any Celine Dion power ballad (e.g. *All By Myself* at 3:19).¹⁸ These are examples of very obvious modulations, designed to force a specific frisson. However, modulation is a routine and far more subtle part of many genres of music. For instance, Bill Evan's (1962) standard *Time Remembered* is based on a series of modulations. I include the first eight bars below as Figure 1. In order to

¹⁸ Playlists for these examples can be found by clicking on the following link for [Spotify](#).

understand what this teaches us about affect, I have to delve into music theory a little bit more.

A diatonic composition that does not modulate would include the same seven notes in both the harmony and the accompaniment, just arranged in different ways: for instance, the notes B, C-sharp, D, E, F-sharp, G, and A would be diatonic to the Bminor9 in bar 1. However, almost every change in *Time Remembered* is a modulation. For instance:

- from the Bminor9 in bar 1, which includes a C-sharp and an F-sharp (i.e., diatonic to the key of B natural minor);
- to the Cmaj7 #11 in bar 2, which includes a C-*natural* and an F-sharp (i.e., diatonic to the key of E natural minor);
- to the Fmaj7 #11 in bar 3, which includes a C-*natural* and an F-*natural* (i.e., diatonic to the key of A natural minor).

Thus, the composition does not rest for long in any one key centre. Rather, Evans makes each change an exploration of a specific modality. For instance, these modulations allow the melody line to include a sharp-4 (i.e., #11) over each major chords: an F-sharp rather than an F-natural in bar 2, a B-natural rather than a B-flat in bar 3, an A-natural rather than an A-flat in bar 7, and a D-natural rather than a D-flat in bar 8. I have circled this note in red in the excerpt in Figure 1 below.

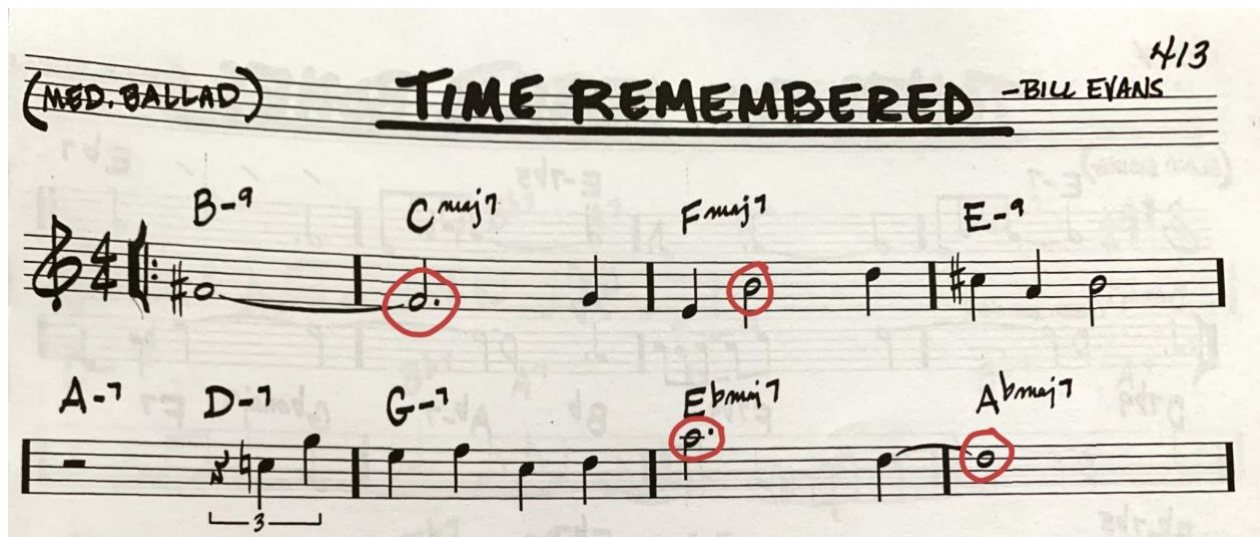


Figure 1. The first eight measures of Time Remembered by Bill Evans. Reproduced by permission of TRO Essex Music Group: see Appendix J.

The sharpening of these circled notes leads the melody to imply a Lydian mode. As I now illustrate, my use of the term ‘modulate’ and this extensive explanation of modal harmony is essential to the politics of my uptake of affect theory as part of a critical disability studies methodology.

Modulation rejects the ethics of augmentation and diminution as described by Deleuze, Guattari, and Massumi, because no singular ‘mode’ is preferable to any other. For instance, the Lydian (major scale with a sharp-4) mode described above is not objectively better or worse than the Ionian (major scale) mode. Rather, each mode offers different affordances and resonances, and interacts differently with different instrumental registers, but neither is inherently ‘more capable’ or ‘less capable’. Yet, in describing *l’affect* as ‘augmenting’ and ‘diminishing’, Massumi, Deleuze and Guattari imply that one state is preferential to another: that one set of impressions expands capacity, while the other reduces it. This calls after Spinoza’s (1677/2014) discussion of the ethics of affection in the first and second Definitions in *Of Human Bondage* (the fourth part of *Ethics*). Spinoza defines ‘good’ and ‘evil’ as follows:

- I. By good I mean that which we certainly know to be useful to us.

- II. By evil I mean that which we certainly know to be a hindrance to us in the attainment of any good. (p. 65)

For Spinoza, then, an increase in capacity might be considered ‘good’ and a decrease in capacity might be considered ‘bad’. Yet, writing at the intersection of a crip-neuroqueer perspective on A/autisms that seeks to defamiliarise normative notions of ability and disability, particularly from my own positionality of cis-abled white privilege—and avoiding ‘damage-centred research’ (Tuck, 2009, as cited in Ware, 2017) that reinscribes particular body(mind)s as the sites of pathology and tragedy—I need to be careful of determining what capacity and debility might look like in any given encounter. My preference for modulation, then, is not to suggest that the passage of affect is always favourable, or to deny the material reality of disability and racism.¹⁹ Rather, I move away from augmentation/diminution to resist damage-centred research that *only* writes disabled and racialised lives as tragedy, pathology and lack. This is important for researching with racially-, linguistically- and neuro-diverse communities, such as that of my research site. Later in this section, I think about how body(mind)s—which, for Spinoza, are what they can *do* as they go along—emerge from out of this modulation of capacity. Before doing so, I want to turn to one of the key debates surrounding affect: its relationship with human emotion.

Affect and emotion.

The relationship between affect and emotion is often understood as something of a sticking point in affect theory. Massumi (2015) is clear that Deleuze’s affect—*l’affect*—does not ‘denote a personal feeling’. Rather, emotion is ‘qualified intensity’ while affect is

¹⁹ I argue in chapter 7 that affects are always ‘articulated’ in their capacitating or debilitating passage, reproducing histories of marginalisation, oppression and violence (Ahmed, 2004; Weheliye, 2014).

unqualified (Massumi, 1995, 2002): There is “no correspondence or conformity between quality and intensity” (Massumi, 1995, p. 85). Instead, affect is ‘visceral perception’ (Massumi, 2002), while “Emotion is a very partial expression of affect” (Massumi, 2015, p. 2). In other words, for Deleuze and Massumi, emotion is how some affects are experienced by some humans as their capacities are modulated. Or as Kara Keeling (2019) writes: ““Feelings,” not yet “emotions,” are simply matter’s capacity to be affected” (loc. 184). Thus, affection (as understood by Deleuze) resembles prehension: It is a moment of modulation that is experienced by something (within its own capacity to do so), that materialises one set of potentials over another. Affects, then, might be registered non-consciously by a non-conscious entity, or unconsciously by a conscious one. By way of a contrast, application of affect theories *as* emotion situates affect and emotion—as well as ‘bodily sensation’ and ‘thought’—on the same continuum of experience (Ahmed, 2004). Yet, unlike some scholars who have sought to use the terms interchangeably (e.g. Goodley et al., 2018), I think there is analytical merit in keeping some—frictional—distinction between the two. Sianne Ngai (2007) describes the difference between affect and emotion as ‘modal’: one of “intensity or degree, rather than a formal difference of quality or kind” (p. 27): I agree with Ngai that experiencing emotion is one possible experiencing of affect among many (although I am not sure she had in mind that ‘intensity or degree’ might include Deleuze’s distinctly non-human examples of the wax and clay). At the same time, as I now argue, it’s important not to conflate the reception of this modulation with the force doing the modulating.

As already described in chapter 3, Colebrook (2014) argues against conflating the moment of affection—of affecting-being-affected—with affect-itself.²⁰ Colebrook's argument is shaped by her concern for what affect theory might be or do in a chronologically post-human time: or what she terms the *inhuman*. Note that this is different to the queer inhumanisms introduced in chapter 3: the *queer* inhumanisms propose alternatives for Euro humanism from the perspectives of those most commonly denied their humanity but without giving up on it completely, while Colebrook is speculating on how theory will happen after human extinction. For Colebrook, then, affect and its theorisation should not be thought of as relying on the presence of a living, theorizing *human* body(mind), but rather as something that might continue to be experienced, lived and theorised by 'life after the organism', by the 'inorganic or incorporeal' (p. 93). As Colebrook writes:

Affect can be thought of not as the influx of sensation that prompts response or engagement, for it is in the not acting, or in the receptivity without responsiveness or relation that affect occurs. (p. 88-89)

Colebrook here indicates that once affect has been cognised even enough to be understood as sensation it is no longer affect but something different: sensation, feeling, emotion, or proposition. Concomitantly, Ahmed (2004) suggests that to make a "distinction between sensation and emotion can only be analytic" (p. 6): the point then is what analytical utility does it offer? Although I find Colebrook's argument interesting, I am left to wonder what analytical utility a concept might have when any perceiving of it is enough to ruin it. Moreover, Ahmed (2010) argues we must take great care when parsing

²⁰ Note that I use 'affect-itself' as distinct from Clough et al.'s (2007) thinking. Clough et al. consider affect-itself as a way of considering how affectivity might be a means of 'measuring value'. I am using 'affect-itself' to think about affect before its experiencing.

affect's autonomy from its reception as emotion, as doing so limits the experience of emotion (and so of *oppression*) to the 'subjective'. It is for this reason that I emphasise human affection in this thesis.

So far in this section, I have theorised affect as a way of conceptualising any force that modulates a body(mind)'s capacities, including that body(mind)'s capacities to be further affected. Affections (or impressions) are accrued over time, with further implications for how future affects are registered. Like Whitehead's description of the ingression of a proposition, the subjective feeling of how an affect lands might be one of emotion, cognition, proposition, or unconscious registration. Regardless, each affection changes in some way or another the potentials of that body(mind) in ways that are conditioned by its history of affections. This is essential for how I think about music composition as research-creation in this chapter, because if the experience of sound is conceptualised through affect theory, then 'audition' is shaped by factors beyond the individual auditory system of a discrete human subject. I attend to this notion of the subject the next section.

Affect and subjectivity.

I'm trying to stay away from discussing more overtly political theories of affect until a later chapter, but a brief dalliance is necessary here to establish how I understand affect in relation to the formation of the human subject. Some applications of affect have been critiqued for ignoring patterns of marginalisation such as racism (e.g. King, 2019; Weheliye, 2014). And certainly, for a time, it appeared that the more critical body of scholarship understood affect as more closely aligned with emotion than a Deleuzian immanence (see, for instance, Palmer, 2017). However, I think the key debate here is not

so much the tension between emotion and immanence, but rather how each conceptualises the human subject.

As a “prepersonal intensity” (Massumi, in ATP, p. xv), affect circulates before the total constitution of any subject, human or non-human. Thus, for Spinoza, a body(mind) is “what it can do as it goes along” (Massumi, 2015, p. 4). In other words, the capacities of one body(mind)—‘what it can do’—as it interacts with other body(mind)s—‘goes along’—constitute *both* body(mind)s. Consequently, affect theorists have considered how body(mind)s, including humans, non-human animals, non-animal life, and non-living matter, emerge through affection. Affects’ ‘doubling’—*affection*, or affecting-being-affected—is not a description of an encounter between separately constituted entities but rather of co-constitution. Dernikos et al. (2020) write:

A body then is a processual “event” constantly being re/modulated through affects, rather than a static and self-contained entity being acted on from without; a body is defined not by what it is, but by what it does and can do. (p. 5)

Thus, affect is the “indication of bodies forming in the transmission of force or intensity” (Clough, 2010, p. 224), and so the ‘body(mind)’ might best be thought of as what Manning and Massumi (2014) call a ‘bodying-forth’, or as processes “of circulation, engagement, and assemblage” (Lara et al., 2017, p. 34). In other words, I understand the body(mind) as emergent: “a changeable assemblage that is highly responsive to context” (Hickey-Moody, 2013, p. 81).

My understanding of the emergence of body(mind)s through affection is informed by feminist quantum theorist Barad’s (2007) concept of intra-action, which I explained in chapter 3 as challenging representational logics. For Barad, intra-action “*signifies the mutual constitution of entangled agencies*” (p. 33, italics in original). She writes: “the primary ontological units are not “things” but phenomena—dynamic topological

reconfigurings/ entanglements/ relationalities/ (re)articulations of the world” (p. 141). Rather than discrete individual entities, ‘things’ are actually moments of encounter, affection, or impression. For Barad, ‘interaction’ (between you and me, me and the table, or the table and Neptune) implies an encounter between separately constituted entities (me, the table, Neptune). As already described in the methodology chapter, this would include the representational relationship between objective (individual) ‘researcher’ and the discrete (individual) ‘researched’. Conversely, Barad theorises encounter as a material *intra*-action between mutually co-constituting components, by which the appearance of separation is illusory. Thus, rather than describe the interaction of “separate individual agencies that precede their interaction” (p. 33), Barad suggests that encounter is actually an *intra*-action between aspects of an entangled whole with itself. Similarly, then, affect theorists have looked to how entities and subjectivities emerge in the moment of affection, through a process of differentiation from the undifferentiated whole. This is what Massumi (2015) means when he describes ‘affecting’ as being opened up to be affected, and vice versa: “Affect is transindividual,” whether in “its primary constitution, or its re-emergence and reconstitution” (Massumi, 2015, p. 52). Thus, theories of affect conceptualise individual ‘things’ as emerging through their encounter with other things: or, as Schaefer (2019) summarises, bodies are “coalitions of affective drivers pulling us in different directions, but loosely affiliated into a single social organism” (p. 3). Similarly, Manning (2013) describes the emergence of an individual as a “force taking form rather than simply a form” (p. 31), or a process of ‘individuation’. These encounters, from which human body(mind)s emerge, are not limited to encounters between human body(mind)s but rather are a “co-operative trans-species effort” (Braidotti, 2019, p. 33).

I adopt this emergent understanding of subjectivity in this chapter to think about how a more-than-human nexus of actants shapes thought and composition in the

moment. At the same time, when doing disability-affirmative, anti-racist praxis, I am cautious of the notion that *absolutely everything* emerges in encounter: Critical race and disability scholars have long expressed concern for how marginalising structures such as racism and ableism might be elided through a totally emergent theory of subjectivity; likewise, emergent theories of subjectivity have been understood as promising to dissolve the subjectivities and political identities of those populations already denied a political voice (King, 2017, 2019; Weheliye, 2014). These critiques of the emergence of body(mind)s are essential to how I theorise affect in my discussion of my in-school project: I explain how this shapes my affect theory at greater length in chapter 7, although it is important to clarify here that some things must pre-exist the encounter. Notably, in Deleuze's (1978) example of the wax and the clay, the sun can harden clay and melt wax but not melt clay and harden wax. Thus, if a body(mind) *is* what it can do as it goes along, then what a body(mind) *is* must be articulated by tendencies: both 'its' own and those of the milieu in which it finds itself. This pre-body(mind)ing is essential to the politics of doing research in schools. This discussion, of how subjectivity emerges and is impinged-upon during an articulated affective encounter is essential to how I conceptualise 'pedagogy' through affect in the next chapter.

In the next section of this chapter, I continue thinking about affective modulation, but turn specifically to how sound has been formulated as affect. This is a prelude to a more comprehensive discussion of sound *studies* later in the chapter.

Affect and/as sound.

In this section, I think about what affect theory does to our understanding of sound, as well as what sound can do for our understanding of affect. Lots of theorists have already thought about sound with theories of affect, and particularly immanent affect theories as

I've traced them through Deleuze, Spinoza and Massumi (e.g. Gallagher, 2016; Gershon, 2013; Keller, 2019; Thompson & Biddle, 2013). Thompson and Biddle (2013) contend that sound is "resistant to semantic or semiotic interpretation, [and so] would seem like an obvious place to look for examples of affectivity (p. 10). Here, Thompson and Biddle indicate that sound is useful for thinking about affect because of its non-representational properties that cannot be effectively described in language: or, as Fred Moten (2003) puts it, to attend to where "words don't go" (p. 40). However, I also follow sound studies scholars such as Michael Gallagher (2016) in considering sound not just as an effective way for thinking *about* affect, but instead how sound itself *is* affective. In other words, not a metaphorical exploration of how affect is *like* sound, but rather a consideration of how sounds change the capacities of matter at all levels as they ripple indiscriminately across a milieu. Thus, the materiality of sound is useful for thinking about the more-than-human properties of affect.

Sound is both motion in an elastic medium and the "auditory sensation produced through the ear" by that motion (Olson, 1967, p. 2). Thinking about sound as affect is commonly conceptualised using terms such as: vibration (Gallagher, 2015a, 2016; Goodman, 2010; Henriques, 2010; Wargo, 2018b); resonance (Gershon, 2013); or reverberation (Evens, 2005). Each intimates how sound is *moving*, in every sense of the word: Sound moves matter as it moves; sound shatters glass here and loosens fillings there; sound moves us to dance, or to cower, or to tears. This 'movement' hints at how any given milieu is an "ecology of affects in which bodies and technologies, all functioning as transducers of energy and movement from one mode to another, are submerged" (Goodman, 2010, p. 27): in other words, a unity from which individuals are individuated. Again, this is not metaphorical but rather a literal description of how the materiality of one body(mind) both emerges from and contours its other through movement. For

instance, Aden Evens (2005) conceptualises the passage and dispersal of a sound wave as an ever-expanding reverberation of bodies materially affecting other bodies. Similarly, Deborah Kapchan (2015) considers how sound is always sounding through, and in the process further sounding, other bodies. She writes: “the sound of the body is the sound of the other but it is also the sound of the same” (p. 33). In other words, Evens and Kapchan describe how the material dispersal of sound waves affects other bodies by both (1) sounding (or affecting) them and (2) causing them to sound (or further affect others). Thus, Steph Ceraso (2018) considers the rhetorical ‘agency’ or rhetorical authorship of sound as dispersed across a nexus of body(mind)s: sound is indiscriminate in what it affects, but equally indiscriminate is how the affected body(mind) affects the initial sound (or affect). In other words, affection doesn’t just modulate the affected and affecting body(mind)s but also modulates the affect itself. Think, for instance, of music heard underwater, or drilling heard through ear defenders: for Ceraso, attributing the agency of any sound to any ‘individual’ sounding body(mind)—the drill, the driller, the ear defenders, the air—is impossible, just as attributing authorship of an affect to any individual body(mind) would be impossible. Rather, sounds/affects are modulated or impressed upon as they impress upon other body(mind)s. Similarly to how Ceraso theorises the dispersal of the ‘sounder’, Anahid Kassabian (2013) describes how her listening is constantly modulated by her intersecting identity markers as they interact with different spatio-temporal and cultural factors. Thus, she theorises listening as belonging to a: “nonindividual subjectivity[...] over which power is distributed unevenly and unpredictably,[...] and across which information flows” (p. xxv). Similarly, Ceraso (2018) describes listening as ‘embodied’, in that sound is perceived through all of the senses. Thus, listening is “the practice of attending to the sensory, contextual, and material aspects of a sonic event” (Ceraso, 2018, loc. 328). Thus, sound theorists have

considered how generation and reception of sound is modulated and, so, experienced through a more-than-human network. The idea of a distributed, multimodal sonic authorship and listening is important to how I conceptualise what music composition does differently to other sound methods. Further, and as I explore in chapter 7, this understanding of authorship and listening complicates classroom practice, wherein pre-subjective doxa shape the reception and generation of ability and disability. Moreover, it complicates the ethics of doing sound-based research (or any research for that matter) because any present body(mind) can be argued to be sounding even if it doesn't actively participate. In preparation for these discussions, I want to complicate the frequent theorisation of sound affects as 'vibrations' to consider the ethical implications of sounding.

So far, I have discussed sound (as) affect using the language of 'vibration'. To reiterate, this notion of sound as a material vibration is not supposed to be metaphorical. And yet, describing sound as something that resonates, reverberates or vibrates before innocently dispersing is problematic, as well as being based on a misconception about what sound actually *is*. I conclude my discussion of sound affect by delving further into these two problematics. Firstly, the vibratory conceptualisation of sound is not innocent: it is unstoppable, colonising, and tied to European notions of transcendence and the unaffectedness of whiteness. For instance, Jessica Schwartz (2019) contrasts the Euro-western understanding of sound as something dispersing outwards from a single sounding point with Indigenous Marshallese understandings of sound as an ongoing relation that *bridges* both geo-spatial depth (bathymetrically) and temporal depth (by maintaining ancestral connections). Similarly, Gavin Steingo (2019) contrasts the transcendent innocence of 'cloud' streaming services with their consequent environmental impact as a way of complicating the innocence of sonic metaphor.

Likewise, Robin James (2019) problematises what she calls the sonic episteme, which is the idea that sound metaphors can be used to disguise otherwise disturbing socio-material structures (for instance, using symphonic metaphors to explain big data and population-level probabilistic statistics). In the next paragraph, I describe a similar (what I might term) ‘sound-washing’ in the non-metaphorical terminology of ‘vibrate’, ‘resonate’ and ‘reverberate’ deployed in affective sound studies.

Vibrate, resonate and reverberate all describe matter as *oscillating* around an equilibrium point when affected by sound. Essential to the idea of oscillation is that matter ultimately returns to its pre-sounded (or pre-affected) state. This is not how affect works. Nor is it how sound works. Both sound and affect modulate the capacities of the affected body(mind) through transforming the affecting/affected surface of the body(mind). Thus, neither sound nor affect are vibrations because they do not restore the affected matter to a pre-affection state. Moreover, sound waves are not a vibratory up-and-down ‘wobbling’, but rather a forced metamorphosis caused by alternating patterns of high and low pressure. Acoustic engineer Harry Olson (1967) describes sound waves not just as movement, but as “a pulse of pressure... consisting of a condensation or high-pressure pulse followed by rarefaction or low-pressure pulse” (p. 4). In this way—and aligned with how James addresses the non-innocence of sonic metaphors such as resonance—sound and affect are not the vibration of anything, but rather a material contortion: a squeezing/stretching which changes the properties of whatever it is that’s affected. Again, my thinking here is not metaphorical. Sound as affect *literally* distorts the surface of body(mind)s and leaves them changed, with no possibility of them swinging back to their pre-affection state. In this way, it resembles how Colebrook (2013) argues that in any affective encounter there is no ‘pure touch’: she contends that in any encounter between affecting and affected body(mind)s one *must* subsume the other.

These ideas are important for thinking about the politics of affective sound studies in this chapter, as well as how I conceptualise pedagogy in chapter 5, and how I think about the ethics of (sound) arts-based educational research in chapter 6.

Section summary.

In this section, I summarised my understanding of affect theories. I conceptualised an affect theory as something that attends to how forces and intensities—such as emotion, sound, gravity, phlegm, humidity, humiliation, viral vectors, homophobia, and wrong notes—modulate what a body(mind) can do. In the next section, I use theories of affect to problematise sound studies.

Sound studies: Citational legacies and methodological inheritances.

In this section, I summarise key debates in the interdisciplinary field of sound studies. I then use affect theories to problematise the field into six propositions.

In recent years, there has been a rapid proliferation of humanities and social science research that investigates sound (Ceraso, 2018). Concomitantly, an increasing number of educational researchers are becoming interested in sound study and sound methods (e.g. C. J. Brownell, 2019; Daza & Gershon, 2015; Dernikos, 2020a, 2020b; Gallagher, 2008; Gallagher et al., 2018; Gershon, 2017; Gershon & Appelbaum, 2018; Wargo, 2018c, 2018a, 2018b). Scholars in education are interested in sound methods for their potential to disrupt Euro-Western sensory taxonomies that prioritise visual perception (Daza & Gershon, 2015; Gershon, 2017), as well as how the mobilisation or investigation of sound might unsettle developmental paradigms (Gallagher et al., 2018), problematise or resist classroom power structures (C. J. Brownell, 2019; Dernikos, 2020a; Gallagher, 2011), formulate post-structural praxes (B. Davies, 2018; Shannon & Truman,

2020), or be utilised as part of queer-feminist (Wargo, 2018a), queer-crip (Shannon, 2020) and anti-racism pedagogies (Black & Bohlman, 2017; R. N. Brown et al., 2018; Gershon, 2017). Furthermore, the relative popularity of sound methods has legitimised sensory epistemologies (e.g. Feld, 1996; Pink, 2009; Springgay, 2011a). Moreover, cultural theorists have investigated how attention to sound might unsettle or reinforce (purportedly) ocular processes of marginalisation. For instance, there has been extensive theorisation in Black sound studies of how the reception of sound reinforces racializing logics, or the *sonic color line* (Stoever, 2016). Jennifer Lynn Stoever (2016) conceptualises the *sonic color line* as a racializing filter that sorts sounds based on its perceived proximity to whiteness: for instance, “*music/ noise..., word/ sound, sense/ nonsense...,*” (p. 13, italics in original). This discussion—of what might be termed, after Stoever (2016), the “*music/ noise*” binary (p. 13, italics in original)—hints at how audition is just as culpable in the formation of oppressive structures as vision. Black sound studies has yielded valuable conversations regarding the sonic raciality of such diverse fields as: spatio-racial politics (Bradley, 2014; de Souza, 2018), technologies of the voice (Chude-Sokei, 2016; Eidsheim, 2011, 2019), and music as a site of activism or resistance (Brar, 2015; Eidsheim, 2015; Moten, 2003; Weheliye, 2005). Gender has been extensively theorised in similar ways (e.g. Thompson, 2017a). However, disability has not been theorised through sound to the same extent, and doing so is one of the contributions this thesis makes.

Despite its recent popularity, sound studies often continues to be described as an ‘emerging field.’ Michele Hilmes (2005) contends that this ‘emerging’ is due to sound studies’ permanent resistance to, and inability to escape from, vision’s dominance in sensory and corporeal hierarchies: hierarchies that (neuro)typically situate the ocular as their apex and default. Thus, sound studies is “always emerging, never emerged” (Hilmes, 2005, p. 249). Qualitative research has traditionally adopted this ocular-centric hierarchy,

wherein vision is considered superior because of its association with objectivity, distance and reason (Springgay, 2008; Sterne, 2012): the qualities associated with Wynter's Man. Similarly, Steingo and Sykes (2019) contend that the impoverishment of 'sound' is in part due to its association with the global south, with 'non-whiteness', and with embodiment and presence.²¹ As such, we can think about sound study as always 'emerging' because it's always mapped against the qualities associated with the ideal European figuration of the human: white, rational and *seeing*. Thus, sound studies has been thought of as producing particular and unique insights because of its continuous resistance to dominant sensory hierarchies: in other words, because sound "gets to places where sight cannot" (Schafer, 1994, p. 24). Part of this 'getting to places where sight cannot' is often understood as being due to sound method's non-representational properties. In the previous chapter, I explained representation as distancing, asynchronous and stultifying. Sterne (2003) summarises this non-representational potential as owing to the fact that "hearing is a sense that immerses us in the world, while vision removes us from it" (p. 15). Although Sterne's litany is intended to be tongue-in-cheek, this is how sound methods frequently get taken-up: as though they are better situated to overcome the representational distancing between phonographer and phonographed.

²¹ I don't entirely buy into this argument. I think it would be hard to argue that there's anything impoverished, 'southern' or 'non-white' about the Brandenburg concerto or the Queen of the Night's aria from *The Magic Flute* (i.e., the bonnet song). As such—and while a great deal of sound study has focused on redressing the ocular imbalance by situating audition as equal to (or even superior to) vision—we shouldn't forget that sound is still often considered higher than the unsanitary proximal senses of touch, taste and smell, and the pathologised internal proprioceptive and vestibular senses (as I've already argued in chapter 2). In other words, we shouldn't feel too sorry for sound. Moreover, the vision/audition dyad centred in discussion of sight's impoverishment of sound ignores the question of what role other bodily registers—including *sight*—might play in auditory perception, which is a question I take up at length in this chapter.

However, I think we need to be careful of assuming sound methods *inherently* do this or that. Indeed, it would be very easy to take up sound methods with the same procedural, essentialist, extractive, oppressive, and representational logics that the turn to sound is supposed to liberate us from. My argument in this chapter is that this due to the methodological activation of certain ocular-centric logics that come with the sound studies canon. Sound studies has been extensively problematised for its white, masculine, and anthologising epistemological emphasis (Pinto, 2016; Vazquez, 2013), which is inherited with its uncritical citational legacy drawing predominantly from white men in the global north (Nyong'o, 2014; Steingo & Sykes, 2019; Thompson, 2017b; Vazquez, 2013). The citational legacy is further troubled by its centring of Euro-Western understandings of sound (Schwartz, 2019), its fetishising of sound technology (Gershon & Appelbaum, 2018; Meintjes, 2019; Sykes, 2019), its generalisation of findings from European societal and cultural frames (Silverstein, 2019; Steingo, 2019), and its colonial orientation between *phonographer* (the one who records or 'writes' the sound) and the thing they're recording.²² This citational emphasis reproduces many of the representational problematics of the ocular in application of sound methods. In other words, the citational legacy saps sound study of its unique analytical potential and re-inscribes representational, ocular orientations to sound methods by adopting the same extractive and procedural logics as ocular inquiry: in effect, silencing sound. I call these logics *ocular methodological inheritances*. In the next section, I detail these inheritances in more detail.

²² Nowhere is this more clearly illustrated than in the recent congealing of the 'canon' by Routledge into the four volume *Sound Studies*, which comprising 72 chapters, of which 52 are written by men, and none mention Africa or Asia. So, to return to Hilmes' claim for a moment, while it may be true that sound study is 'always emerging', it's also true that some sound study has emerged more fully than others.

The ocular methodological inheritances of sound studies: Propositions for silencing sound.

In theorising these ocular methodological inheritances, I draw from Julietta Singh's (2018) concept of 'mastery'. Singh is careful to avoid modelling the exact mastery she problematises by 'owning' the concept enough to define it. Instead, she offers three common features of mastery (in lieu of a definition): mastery (1) installs boundaries, for (2) the purpose of subordinating one side of that boundary (3) over an extended period of time. In sound studies, this is an epistemological boundarying process that boundaries the researching subject, the researched object, and 'sound'. Thus, sound studies and the sonic researcher are led to *master* the sonic field by establishing epistemological boundaries that reproduce representational (ocular) orientations to the research encounter.

To unsettle canons (i.e., dominant citational legacies), Ahmed (2017) calls for a politics of citation, by which scholars invested in feminist, anti-racist and anti-ableist politics should cite minoritised voices; in other words, Ahmed suggests we cite the version of the academy we want to proliferate. However, Kathrine McKittrick (2021) argues that simply citing a more 'diverse' range of scholars doesn't change the methodological underpinnings of inquiry: or, how "referential beginnings and referential scaffoldings shape conclusions" (p. 23). Thus, simply citing absented voices or absenting the 'canon' is not enough to change how the canon comes to be activated methodologically. Similarly, Springgay and Truman (2018b) contend that we do not need new (or 'emerging') methods to challenge representational logics, but rather to explicitly undo the "*logic of procedure and extraction*" through which they are applied (p. 203, italics in original). They argue that robust application of critical methodologies creates an ethico-political (*in*)tension to the research methods. What is needed, then, is to challenge

the *methodological inheritances* that the canon proliferates through reading and citational practices that we then hold (in)tension with the research methods. Similarly, Barad (2007) considers the co-constitution of matter and meaning in research through her description of the physical process of diffraction. Diffraction is the physical process that happens to light when it passes through a pair of holes in a filter. The two streams of light interact as they emerge from the filter: cancelling each other out in some places and amplifying each other elsewhere. This is called an *interference pattern*. The type of interference pattern differs based on how the experiment is set up. Setting-up the experiment to materialise the particle-like properties of light simultaneously prevents the materialisation of its wave-like properties. Conversely, setting-up the experiment to materialise the wave-like properties of light prevents the materialisation of its particle-like properties. In other words, Barad contends that the theoretical orientation to the research apparatus partially constitutes that apparatus. In describing diffraction as a methodological tool, Barad is not writing metaphorically: the theoretical orientation of the researcher to the research encounter literally materialises one interference pattern, while simultaneously preventing the materialisation of any other. Thus, the methodological orientation to (sound) method materially constitutes what that method will then discover: orientations *matter*. In short, using sound methods is just as capable of being non-immersive, essentialist, representational, extractational and Europhallic as using ocular methods, and claims of sound's immersiveness rely on an (in)tension to method that is incommensurate with the 'canon'. This is an essential point in this chapter, as my argument here is that research methods (the microphone/the electrodermal gizmo) inherit epistemological emphases and so are shaped by certain (ocular, ableist) methodological inheritances that are very apparent in how those methods come to be deployed.

The attention to affect of music composition research-creation is important because it makes us approach sound methods differently. The politics of this approach reveals certain methodological inheritances, or how a method comes to be shaped by the methodological orientation typically applied to it. (This is a useful notion for thinking about sound method but is also something I come to think about more in chapter 8, where I apply it to the electrodermal gizmos.) In other words, as a queering of the canon, the attention to affect of music research-creation problematises the representational logics of sound method into the following contingent and overlapping inheritances: that sound methods (1) *separate* the phonographer from the sonic environment, (2) *essentialise* sounds as being *of* that environment or of particular body(mind)s, (3) *naturalise* the sonic researcher's auditory perception and so elide marginalisation, (4) *extract* sounds from a place, (5) *decontextualise* sounds by removing them from the more-than-sonic features of sonority, and (6) anthologically *compile* those sounds. It is my argument here that these inheritances reproduce representational ocular centric logics in the application of sound methods, or what I'm terming *ocular methodological inheritances*. I now attend to each of these critiques in turn, written as a series of propositions.

1. Sound study separates.

The ocular methodological inheritances of sound method lead the phonographer to *separate* themselves from the sonic environment. Sound studies has long attended to the sonic features of place. R. Murray Schafer (1977/1994) describes the sonic features of place as consisting of: soundscapes (the overall sounds of place), sound marks (intensities of particular sounds to mark a particular place), and keynotes (sounds that move into and out of focus). Different places have different soundscapes, and one place might have

different soundscapes at different times of the day, or in different conditions. However, attention to these features do not consider how the phonographic researcher is themselves a sounding body in that soundscape. Thus, the ocular methodological inheritance of ‘separation’ requires the phonographer to use a microphone to *extract* sounds from one location and reproduce them elsewhere. However, the phonographer themselves is usually absent in these recordings (Gallagher, 2015a; Wright, 2017b): indeed, the audible presence of the phonographer is often considered a failure to pristinely *extract, decontextualise* and accurately *represent a compilation* of the *essentialised* sounds of that space. In other words, the phonographer is deliberately silenced in their own phonography and so must have been constituted as a sufficiently separate entity to be silenced. I have already attended to the problematic attempt at separation (or asynchrony) found in representational logics in chapters 2 and 3. Representationalism constitutes phonographer and phonographed as separate entities. As I now go on to indicate, approaching sound methods with affect theory problematises this representational relationship.

Affect theory, as I understand it, constitutes each actant as emerging in the moment of affection (Lara et al., 2017), or, in the “web of interrelations [that] mark the contemporary subject’s relationship to their multiple ecologies” (Braidotti, 2013, p. 98). In other words, thinking with affect, the phonographer (and their sounds) are deeply imbricated with the sound of whatever it is they’re recording. Thus, the sonic milieu is constituted by body(mind)s affecting and sounding other body(mind)s (Evens, 2005), including that of the phonographer. Or, as Kapchan (2015) writes, “the sound of the body is the sound of the other but it is also the sound of the same” (p. 33). Moreover, as I have already described, sonic authorship is distributed across this milieu (Ceraso, 2018): this is ordinarily taken up to argue the importance of thinking about non-human agency,

however, I think it's also important to attend to how the sounding imbrication of phonographer with phonographed is also part of that sonic authorship. Thus, the phonographer and the soundscape are inextricably entangled. Moreover, there is a political problematic to separating the phonographer from what they phonograph: returning to my theorisation of sound affect again, the vibratory or oscillatory understanding of affect's transmission relies on an epistemic whiteness that understands body(mind)s as fundamentally unaffected: in other words, that the phonographer's sounding/affectation of the phonographed body(mind) will always spring back to its pre-affectation state (and so its pre-affectation capacities), which belies the negative impacts sonic researchers can have on environments and populations (e.g. Wright, 2017a): in other words, the idea that the sound of the space is not changed by the presence of the man with a microphone is problematic.

And yet, there is a problem of how to go about making the sounding researcher audible in the mix without relying on technological gimmicks (e.g., binaural microphones) or reductively including 'sonic selfies' (such as carefully miced and mixed-in boot crunches: Wright, 2017a). I argue later in this chapter that creating songs as research is one way of *immersing* the phonographer into the soundscape, rather than separating them from it.

2. Sound study essentialises.

By separating the researcher from the sonic environment, the ocular methodological inheritances of sound methods *essentialise* sounds as pre-existing the research encounter (and so imagining sounds as being of that place or of particular body(mind)s). Nina Sun Eidsheim (2019) contends that sound is a “vibrational *practice*, a practice that is materially *dependent and contingent*” (loc. 870, emphasis mine). In other words, sound has no essential properties: instead, it is a ‘thick event’ that includes the initial sounding, and the ways in which the sounding is shaped as it passes through a socio-material milieu.

Moreover, Samantha Pinto (2016) argues that approaching a soundscape as sufficiently (and innocently) separate from the phonographer to have essential properties relies on masculinist, colonial logics. Instead, Pinto thinks-with Alexandra Vazquez’s (2013) proposition to ‘listen in detail’ to a smaller assortment of sounds by way *resisting* what Vazquez calls the settler-colonial “anthological impulse” (p. 59). This resistance is essential to how I approach sound in this thesis. As I have already described in chapter 3, I seek to draw “as much as possible out of what seems to be a tiny little event,” offering “a better chance to see all the singularities” (Olsson, 2009, p. 120). By way of a contrast, the anthological impulse seeks to collect as much of the soundscape as possible. It is this citational legacy that informs what Lashua (2006) calls ‘phonographic flaneurism’.

Essentializing sound in this way is incommensurate with theories of affect because it does not account for how sound and listener constitute one another. Under the previous proposition, I discussed how theories of affect describe the phonographer and what they are recording as co-constitutive. In other words, neither the phonographer nor the soundscape pre-exist their constitution in the research encounter (Manning, 2016b; Massumi, 2002). However, understanding the phonographer as separate from the soundscape *essentialises* sound. This essentialism inscribes those sounds as having

properties that pre-exist their registering by the phonographer. This is problematic, because it misses how non-auditory properties are impressed onto the ear (i.e. the point of affection) and so performatively shape how future sounds are heard. For sound scholars such as Regina Bradley (2014), Eidsheim (2011, 2019), Jennifer Lynn Stoever (2016), or Marie Thompson (2016), this essentialism lends itself to inscribing particular patterns of marginalisation on the receptive surface, thereby “invest[ing] [those patterns] with capacity” (Dernikos, 2020a, p. 419). Essentialising sound, then, by understanding the environment as pre-existing the sonic interaction, extends inessential marginalising assemblages from the eye and onto the ear: thus, race, gender and ability/disability come to be audible. I argue in this chapter that songwriting doesn’t essentialise sound by assuming a sonic environment that pre-exists the arrival of the researcher, but rather *complicates* its co-constitution *with* the researcher.

3. Sound study neutralises/naturalises.

Essentialising the sounds of a place as pre-existing their hearing by the objective white phonographic researcher assumes that the researcher’s ears are also capable of hearing those sounds. Or, to put it another way, *essentialising* a sound—as both (1) pre-existing the researcher’s arrival and (2) belonging to a particular milieu—*neutralises* it as non-political (i.e. “That’s what it *sounds like!*”) and *naturalises* the phonographer’s audition as objective (i.e. “That’s what it *is!*”). This overreliance on a listening subject capable of neutrally/naturally hearing the sounds of a place has been extensively problematised in sound studies, as what Sterne calls its “creeping normalism” (p. 73; see also, for instance, Chandola, 2012). For instance, scholars of Black sound studies have argued that white people consistently assume our audition as neutral and so capable of hearing a ‘true’ account of the sonic milieu (e.g. Stoever, 2016). Moreover, Poppy De Souza (2018)

describes the continuous refusal of “white ears” to attend to the “acoustic violence of racism” (p. 464). In other words, white ears are narrated as capable of neutrally perceiving whatever the thing listened to sounds like: this naturalises non-auditory marginalising assemblages as though they are ‘natural’ features of the marginalised body(mind). Similarly, Vazquez (2013) problematises the ‘anthological impulse’ often found in sound studies, which conceptualises the phonographer as having a particular set of capacities to master and collect the whole wide sonic milieu from a position of being able to hear it neutrally and objectively from the outside (i.e., anthologise). Cam Scott (2018) describes this as the “silence, vacancy, or isolation” that settler sound scholars assume of the sonic *terra nullius*. While turning to affect theories should offer methodological potential to unsettle this mode of audition by thinking phonographer and phonographed as a co-constitutive body(mind)ing in the encounter—and so too the highly situated nature of the sonic researcher’s audition—there is a risk that theories of affect might be used to amplify (rather than unsettle) this inheritance: as Marie Thompson (2017b) argues, conceptually flattening the sonic field in a desire to decentre the organising listening human subject can unwittingly reinscribe white audition as capable of hearing such a field. This epistemological emphasis has particular implications for how sound studies is ethically and politically situated because, as many sound scholars have theorised, oppression works in part through “not hearing certain kinds of expressions from certain kinds of people” (Bickford, 1996, p. 129; see also Shannon, 2019b; Tchumkam, 2019).

4. Sound study extracts.

The ocular methodological inheritances of sound methods lead the sonic researcher to *extract* the separated, essentialised and naturalised sounds from a place. In other words,

essentialising sound inspires some scholars to indulge in a phono-technological fetishism, whereby a sufficiently sophisticated microphone would be able to accurately *extract* and preserve the essentialised sound. Black sound studies scholar Julian Henriques (2011) describes sounds as “transitory event[s] in time, rather than an often more permanent mark on a visual surface” (loc. 200). In this way, Alexander Weheliye (2005) contends that the purpose of *phonographic* practices is to bring some degree of permanency to that impermanent sound. Thus, phonographic practices suspend the temporary sonorous event to extract it: the phonographer enters the field intent on quelling motion and extracting sound to fulfil the colonial ‘anthological impulse’ (Drever, 1999; Vazquez, 2013; Wright, 2017a). The need to extract the sound means also getting a hold of as much as possible of that sound: this can drive the phonographer to fetishise the ‘fidelity’ or ‘accuracy’ of the equipment (Drever, 2002; Gallagher & Prior, 2014). In other words, the more sophisticated the microphone, the more of the *essentialised* sound it can extract.²³ Yet, and as I’ve already argued, it is necessary to faithfully re-materialise the phonographic environment even while unfaithfully dematerialising the (*separated*) phonographer. This logic is flawed for two reasons. First, nothing is extracted: the sound has been traced, not removed. Second, what has been extracted (or traced) is itself still highly contingent. “The coal is not the mountain” (Shannon & Truman, 2020, p. 5). By extracting from the milieu, what is extracted is also fundamentally changed. Natalie Loveless (2019) contends that aims for fidelity are ultimately doomed to fail: she writes, this is not a failure that “adequate perspective—the capacity to somehow *see [or hear] better*—might correct” (p. 26, emphasis in original). Thus, Joshua Glasgow (2007) argues that phonographic “[t]ransparency is *impossible*, irrespective of technological

²³ This is heavily wedded to a perspective on sound studies that is rooted in the global north where such technological provision is—for the time being, at least—more readily available.

achievement” (p. 163): in other words, regardless of how accurately the microphone traces the sounds of the space they still won’t really sound like the space (Drever, 2002; Glasgow, 2007).

Being able to extract sounds from a place relies on the inheritances already described: that it’s possible to separate the phonographer, that the sounds essentially existed in the space before the researcher, and that the phonographer is capable of neutral audition. In many ways, this extraction relies on the same emptying of space that shapes *terra nullius*, making space available for colonisation (Scott, 2018; Tahmahkera, 2017). Under the next proposition, I argue that this extraction *decontextualises* the sound by stripping out the more-than-sonic aspects of sound: Thus, it removes much of what that event ‘sounded like’.

5. Sound study decontextualises.

Sound studies separates the phonographer from the sound they record, *essentialising* it as of a particular milieu and then *extracting* it with phonographic technology: this process *decontextualises* the sound, by stripping it of the more-than-sonic properties that shaped the original sonic experience. In describing these contextual properties, Steph Ceraso (2018) describes listening as ‘embodied’, in that it is the perception through all of the senses. Thus, for Ceraso, listening is “the practice of attending to the sensory, contextual, and material aspects of a sonic event” (loc. 328). Similarly, sound studies scholars have described how non-auditory experience shapes what can be heard at any given moment (Messina, 2019; Tchumkam, 2019). In this way, decontextualising sound takes away many of the features that shaped what that place or thing sounded like to begin with. It is this, Marinos Koutsomichalis (2013) contends, that means *extracted* and *decontextualised* sounds are of dubious representational worth as they can’t “preserve the original

semantics and subliminal significances of someone’s encounter with an acoustic environment” (para. 11)—what I’ve been calling sound’s *more-than-sonic* properties. By way of an example, Michael Quintero (2019) contends that the Afro-Colombian practice of playing music at ear-splitting—‘in the red’—volumes is a “counterrepertoire to spoken language” (loc. 516), “a stopgap measure” (loc. 3456) in the face of state oppression of a community “placed at the limits of speech” (loc. 3458). This notion of *noise* as resistance is important to this thesis. Quintero’s theorisation of a noisy counterrepertoire complicates the experiencing of the sound in that event in ways that can’t be registered phonographically: Thus, it doubles the inaudibility already done through naturalising. In other words, “*That which exceeds audition is constitutive of auditory experience*” (Steingo & Sykes, 2019a, loc. 503, emphasis in original). Likewise, Monique Charles (2018) describes the non-musical features that shape musical genre as a ‘constellation’ of intersectional histories, doxa and soundscapes mediated by technological and socio-political factors. The *naturalising* of audition, then, is further compounded by disregarding the more-than-sonic aspects of sonority: “this inaudibility, which is beyond the capacity of even the most sophisticated phonographic technology to register in the soundscape, remains audible” (Shannon, 2019, p. 101).

6. Sound study compiles.

The representational logics of the ocular methodological inheritances of sound methods lead the sonic researcher to anthologise the field by compiling and merging disparate sounds. This ‘anthological impulse’ (Pinto, 2016) of sound study seeks to create a comprehensive knowledge of a place by incorporating the widest possible sonic milieu, and in so doing relies on a version of the phonographic researcher who is sufficiently

masterful to—after Singh (2018)—epistemologically border what constitutes ‘the sounds of the place’ and what doesn’t. In so doing, they uphold the rest of the inheritances.

Section summary.

In this section, I have argued that sound study (1) separates, (2) essentialises, (3) neutralises/naturalises, (4) extracts, (5) decontextualises, and (6) compiles. By way of a contrast, in the next section I offer counter-propositions for what music composition research-creation does: namely that it (1) immerses rather than separates, (2) complicates rather than essentialises, (3) provokes rather than naturalises, (4) techicalises rather than relies on technology to extract, (5) contextualises rather than decontextualises, and (6) queerly compos(t)es rather than compiles.

Propositions for a noisy sound studies.

In the previous section, I used affect theory to problematise sound method. In this section, I consider how music composition research-creation is an ‘extreme explication’ (Shannon & Truman, 2020) of what bringing affect to sound study should do but often can’t, because of its methodological inheritances. In this section, I extend my problematising of sound studies into six propositions from the previous section. These extensions propose how music composition research-creation helps us do a more sound-y sound study. My argument here is not that everybody should do songwriting from now on, but that songwriting—when taken as sound method—is an extreme explication of what needs to happen to sound study for it to properly take up theories of affect. I

pepper my explication here with other examples of non-musical sound study that also do this.²⁴

1. Stop separating: Immerse!

The proposition to immerse problematises sound studies' separation of the phonographer from what they're recording, and so their silencing of the phonographer. *Oblique Curiosities* comically side-steps this inheritance: by singing and playing musical instruments, we are *hyper*-audible in all the audio recordings. Thus, the project fails to pristinely *extract, decontextualise* and accurately *represent* the *essentialised* sounds of a space and instead renders us as an incredibly audible part of the soundscape. A similar point, as to the audible presence of the phonographer in their environment, has been made in much more subtle ways. For instance, Owen Chapman (2015) contends that the audible presence of the phonographer is apparent in their choices: where to put the microphone, which microphone to use, and what to record. Chapman also describes the production techniques as a kind of audibility: the decisions as to what gets centred and what gets elided. While I agree in principle, I'm not sure it is often adequately theorised. Hildegard Westerkamp hilariously illustrates this in her phonographic walk, *Kits Beach Soundwalk* (1989) by narrating the production choices she makes, thereby accentuating the editorial process. Similarly, sound scholar Allie Martin (2019) uses two microphones to record the changing soundscape of a gentrifying community: she contends that the 'neutral' positioning of a roof-top, fixed-position microphone is no less non-neutral than the highly subjective positioning of a microphone she carries around with her, in that she made the choice of where to situate both (and even that she *should* situate both). Like

²⁴ As in chapter 3, I have written these propositions in two parts: as (1) a statement that can be judged as true or false, accompanied by (2) an imperative that activates that statement.

music composition, then, these techniques make the phonographer flamboyantly obvious in the mix and so immerse phonographers in the soundscape rather than separate them from it.

2. Stop essentialising: Complicate!

Understanding sounds as essential to a milieu belies the ways in which the phonographer constitutes that milieu, and so reifies the sonic aspects of racializing, gendering and disabling assemblages. I think about this ‘more than the ears’ of listening—the ‘thick event’ of sound (Eidsheim, 2019)—as strata. Strata, here, refer to “different registers of audibility and inaudibility layered on top of one another” (Shannon & Truman, 2020, p. 7). Rather than trying to essentialise a single stratum—i.e., the aspect of sonic experience that can be phonographically registered with the microphone—as though it is *all* of the sound, I consider the thick event of sound through multiple layers of experience. In complicating—rather than essentialising—the thick event, music composition as research-creation taps multiple parts of sonic experience.

The song *Dreary Feary Queery* includes audio recordings of river splooshes, foot crunches, and pub people yelling ‘hum hum hey’ created during the walk. It combines these with musical instruments recorded later in the studio, including a honky tonk piano, theremin, and sung vocals. Similarly, [*Cruel Bliss \(Sweet Pain\)*](#) and *It’s okay to say “no”* both incorporate recordings of beer glass chinks and camera shutter closings alongside a sampled pop kit and glass shattering, electronic drums, digital distortions, and an assortment of taiko drums, and both at an ever so slightly faster than comfortable walking pace. The use of samples is, in part, a play on Wright’s (2017a) ‘sonic selfie’. But it’s also a speculative stratification that includes both these audible aspects of experience alongside other levels of experience: haste, humour, hauntings and ham strings.

Moreover, [*Cruel Bliss \(Sweet Pain\)*](#) includes a melodic line fashioned after the magnificent haunting wail of a flock of sealions. This pushes the complication even further, doing away with the heard strata of sonic experience, and instead just composing with the affective impression. Thus, rather than assume a set of sounds that pre-exist their hearing, the songs produced as part of *Oblique Curiosities* are all impression, entirely filtered through the subjective listening ear.

Artistic forms of sound research such as music composition research-creation might seem uniquely suited to this sort of complication. Yet, other sound studies scholars attend to stratification in their own research. For instance, Michael Reiley McDermott's (2019) *Echozoo* speculates on the sounds of extinct species at the intersection of cryptozoology, sound design, and field recordings, making species that have been inaudible for centuries speculatively audible once more.

3. Stop naturalising: Provoke!

Oblique Curiosities deliberately foregrounds a politics of queer speculation. In so doing, it audibly provokes the wider socio-political milieu into the sonic field (which is, of course, where it already was the whole time). For instance, [*3 Black Military Helicopters*](#) juxtaposes descriptions of English heritage sites, images of militarism, and aching solitude with a heady (and increasingly dissonant) melange of classical instruments, juddering arpeggiators and otherworldly voices. [*Wouldn't that be Sexy?*](#) hints at the monstrous cross-temporal relations embedded within ancient hillsides (and our fishy kin buried beneath them), narrated by a shrilly over-enthusiastic tour guide, wide synths, distorted percussion and a series of increasingly inhuman screams. [*Buttermoon*](#) invokes waiting and landscapes turned violent. These highly speculative accounts of the landscape provoke the complex violence of Britain's ongoing colonial history into the audio recordings.

Speculation then, Manning (2008) writes, “is a technique for the invention of new *textures* of knowledge” (p. 15, emphasis mine). As a more-than-sonic sounding of long-distance walking (or the classroom), music composition provokes a *complex* and *immersive* texture of space and event: I consider the pedagogical implications of this texturing more in chapter 7.

None of this discussion is to say that *Oblique Curiosities* or music composition research-creation is somehow the answer to the white audition of sound studies: I (we) remain white and abled, and so benefit from multiple layers of privilege that condition our aurality in particular ways. [3 Black Military Helicopters](#) describes encounters with unexpected things, including a racist Brexiteer and a flock of military helicopters. While I think about the value of the unexpected more in the next chapter, I do want to attend to the specific sonority of the Brexiteer: their words could have featured on a phonographic recording. What couldn't have featured was the affective hangover that followed us out onto the hills, and its mingling with a further unexpected encounter: a lingering dog shit smell, which followed for miles. The etymological origin of 'noise' lies in nausea (Novak, 2015) and can be easily associated with disgust and the performative urge to expel. As described in chapters 2 and 3, Ahmed (2004) understands disgust as the affect experienced in rejecting an invading object. Drawing from Judith Butler (1999), who conceptualises gender as a performance of wider, pre-subjective logics, Ahmed (2004) theorises the affect disgust as performative. Thus, the reception of an expression as noise is a being-performed-by logics that saturate an object with 'sticky' affects. The revulsion of noise, then, might be considered the fear of contamination (i.e. modulation of capacities) by this stickiness at the point of contact between two surfaces (i.e. the moment of affection). In later chapters, I'll think about how disgust enacts racializing and disabling in the classroom. For right now though, as a data point that glows (MacLure,

2013b), or a dog shit smell that stinks, the encounter with the Brexiteer lingered for the whole day, conditioning experience and the reception of further affect for far longer than the few seconds I talked to them for.

But similar provocations have been enacted by other scholars. Martin (2019) employs phonographic field recordings to explore the gentrification of Washington, DC. She contends that the expansion of white-targetting entertainment facilities makes familiar places “louder”, even while racist noise abatement policies silence Black people. Simultaneously, her recordings trace her attempts to stay safe as a Black woman walking alone. While adopting commonplace sound methods, Martin provokes consideration of how sound is always generated in, and heard through, oppression and white supremacy. Similarly, Paola Messina (2019) explores how the microphone elides gender, race, and queerness through her phonographic walking project, and so the naturalising and neutralising of the performance of “sonic citizenship.” Messina contends that the more-than-sonic experience of gender, race, and queerness and their “complication” through “fear, segregation, and vigilance” condition sonority (para. 2) cannot be registered through a microphone: While these experiences are “quite inconspicuous” on her completed audio recordings (para. 14), Messina’s commentary and choices as a phonographer provoke these politics into the audio recording as a way of ‘bridging’ their uneven sonic citizenships. Meanwhile, the *Oblique Curiosities*’ songs [Alpha Centauri](#) and [Cosmic Beavers of Revelation](#) seek to provoke different sonic future-pasts by drawing on the (re)surgence of queer and trans-antagonism, and public debates on what counts as history, to speculate on the audibility of a queer-affirmative temporalities.

4. Stop extracting: Technicalise!

The extractive logics of sound studies fetishise the quality of the phonographic technology. By way of a contrast, and although highly speculative and situated, my argument in this chapter is that the *Oblique Curiosities* songs still ‘sound like’ the walk, despite rejecting the logics of sonic extraction and concomitant fetishisation of sound technology. Or, at the very least, they sound no less like the walk than recordings of 120 hours of wind and bickering. This is true of those songs that include recordings from the original walk (as a *complication* of sonic essentialism) or those that are shaped entirely by impression (as a *provocation* rather than sonic naturalism). Thus, rather than emphasise technological phonographic fidelity that might more accurately extract sounds, the project emphasises technique. Louise Meintjes (2019) takes up the northern African female vocal technique ululation as a way to problematise the notion of sound technology; in so doing, she notes how sound studies’ overemphasis of sound *technology* is an elision of gendered *technicity*. Attending to technicity, she writes, “makes explicit the requirement that sound studies be gendered; its discourse racialised; its relationality recognised; and its sounds heard as particular” (loc. 1561). Thus, the attention to the technicity of music composition in the *Oblique Curiosities* project—rather than the accuracy of the sound technology—engenders the particularity and relationality of the phonographic encounter (even while remaining embedded in our whiteness and cis-genders).

5. Stop decontextualising: Contextualise!

Attending to audible ‘sound’ as one strata of sonic experience allows us to consider the ‘thick event’. However, incorporating multiple other non-audible strata into an audio recording *contextualises* the sound. I want to pay particular attention to our ‘choice’ not just to write songs about mountains, nature and walking—which would have been quite a

representational practice—but instead to ‘drag our baggage along with us’. Dragging our baggage calls after what Manning (2009) calls “improvising with the already-felts” (p. 30). That said I’m not sure how much of a ‘choice’ it actually was: If affections accrue as impressions on the affected surface of the body(mind), improvising with the already-felts is an explicit attention to the impressions the phonographer brings to the encounter. In other words, improvising with the already-felts is an example of how the phonographer cannot separate themselves from the phonographed environment. Examples of our already-felts include:

- A recycled melody in [Cruel bliss, Sweet pain.](#)
- A sad lyric Sarah once heard in Chinese in a grocery store (不爱就是不爱).
- *Doctor Who* quotations (“Wouldn’t that be sexy?” “I waited for you.”
Theremins.)
- A terrible ex-boyfriend (“It’s okay to say ‘no’ to what isn’t working out.”)
- A theremin virtual instrument I once used to score a horror movie.

These examples makes clear how the reception of sound is contextualised by other non-audible features of experience that get brought along with us.

Oblique Curiosities’ songs are extreme examples of including context: indeed, in the songs, context ‘takes over’: sensation, already-felts and the inaudible dominate the recordings, and what was physically audible is reduced, modified heavily, or absented entirely. Thus, *Oblique Curiosities* might be thought of as ‘all context’ (or ‘all impression’). However, other sound researchers combine traditional phonography with other methods to contextualise that sound. For instance, Lashua (2006) conducted phonographic walks with teenaged Indigenous Canadians: the young people contextualised their recordings of the soundscapes by recording rapped lyrics over the top, which recount each participant’s experiences of racism and homelessness. Thus, like Messina’s (2019) provocation of sonic

citizenships that complicate what space ‘sounds like’, incorporating context in this way undoes the elision of what shapes sonic experience but isn’t audible.

6. Stop compiling: Queerly compose(t)!

I hope it’s already clear that these six propositions are not trying to describe what the songs *mean* or what we *meant* in putting them together (over tens of thousands of hours and miles). That isn’t the point of research-creation (although it might be the point of other representational approaches to data or sound method). Indeed, I barely know what we meant with half the things we’ve done. The point here, then, isn’t to think about the songs as representing the walk but rather what they do for thought. In this chapter, I’ve thought about them as giving us propositions for sound methods.

The product of research-creation, then, is always a proposition for further thinking. Rather than statically compile sound, *Oblique Curiosities* composes. And, in composing, it composts. I like composting as a way of thinking about how *Oblique Curiosities* resists the anthological impulse of sound studies and instead gives us ‘food for thought’. Rather than collect complete static archival sonic representations, they revel in an unabashed epistemological incompleteness that attends to a few tiny little aspects of the milieu, but that then gets cross-contaminated by the stinging nettles and lingering dog shit smells, and proliferate off until they become something else. This is because, as I already argued in chapter 3, research-creation is: “No deliverable. All process.” (Massumi, 2015, p. 73). What composition does for sound methods, then, is akin to what Kim Hall (2015) calls a crip metaphysics of compost: permanently “coming into being... and decomposition or loss... hesitation, tentativeness, and “excessive dawdling”” (p. 190). Thus, compos(t)ition resists the anthological—the completion of the compilation—and

instead hints at leakiness and an unsettling of accumulative linearity: the condescended 'art' is instantly cannibalised in the further articulation of its sequel (Manning, 2008).

I want to think about the song *Alpha Centauri* as one such proliferation. The song *Alpha Centauri* is about a character from *Doctor Who*. The character enjoys a convoluted onscreen chronology, appearing out of order and decades apart. I chose *Alpha Centauri* because its connection to the previous songs is less obvious: It's not like *Captive Access*, which takes up the anti-Blackness hinted at in *3BM*, or *Needles (A Day Dream)*, which is a further queering of the imbrication of nature and nation in *Wouldn't that be Sexy?* and *Buttermoon*. Rather, *Alpha Centauri* is a speculative exploration of a future queer galactic confederacy. However, it also hints at what is queer about music composition as a sound method.

Muñoz (2009, 2015) considers the most utopic understanding of queerness as in a state of permanent deferral: Queerness is always in the future, and can't be tied down to specific formulations. Instead, it looms on the horizon, in excess of the capacity to be defined. Just like his utopic queerness, quite what Muñoz means when he invokes 'the future' is tricky to pin down. His future draws from the past to unsettle the present, while also reaching forward toward an ever-moving horizon. I took up Muñoz's understanding of 'queer' as having methodological implications. Research-creation traces different pasts (i.e. 'already felts') to unsettle the present as a way of building better futures. In the next paragraph, I apply this idea of a methodological queer futurity to *Alpha Centauri* and particularly its use of the Theremin.

I conceptualise the Theremin as a distinctly queer instrument. The Theremin is an electronic instrument often associated with the scores for science-fiction movies of the 1950s, such as Bernard Hermann's (1951) *The Day the Earth Stood Still* or Dimitri Tiomkin's (1951) *The Thing from Another World*. It is frequently used to evoke these

sensibilities in contemporary media, such as in Danny Elfman’s score for *Mars Attacks* (1997), Howard Shore’s score for *Ed Wood* (1995), or my own score for *Filmworker* (2018). It also features in nearly every *Oblique Curiosities* song. The theremin is at its most overtly sci-fi in *Alpha Centauri*. At the same time, its use in the other songs—and so speculative presence in the countryside—resemble what Kathleen Stewart (2007) calls an ordinary affect, in that it “provoke[s] attention to the forces that come into view as habit or shock, resonance or impact” (p. 1). Thus, it calls after Ahmed’s (2010) understanding of the ‘affect alien’ as one who experiences some “gap between the promise of happiness” and their affection (i.e., their affecting-being-affected) “by objects that promise happiness” (p. 42). On *Queer the Landscape*, the Theremin invokes the other-worldly and alien into the habitual narration of the outdoors and nature as pastoral places of calm and health. Thus, the Theremin is a queerly utopic instrument: it evokes ‘ephemeral traces’ and ‘flickering illuminations’ by eerily haunting the present with the spectre of a 1950s B-Movie. Simultaneously, its sci-fi aesthetic hints at a futurity that is always out of reach, always on the horizon—even while we catch-up to the futures some of its earliest source material envisaged. The Theremin, then, is always “still unrealised potential” (Muñoz, 2009, p. 28). This is the kind of crip, inhuman futurity that Kafer (2013) considers: one in which a new normativity cannot sediment, occupied by an (in)human subject who is never subject to a new ablenationalism.

Chapter summary.

In this chapter, I used affect theory to problematise sound studies by way of music composition research-creation. I suggested that problematising sound method in this way prompts us to think about the ways sound-based research is often conditioned by ocular methodological inheritances, which reinscribe representational orientations to method. I

have proposed how music composition research-creation attends to these problematics by working with the *more-than-sonic* aspects of auditory experience. These properties of sonic experience wouldn't be recorded by a microphone but still constitute auditory experience. Composing music, as a way of doing research, makes these inaudible, more-than-sonic aspects of experience (re)audible. Thus, this chapter attended to my second research question and its first sub-question ('How do theories of affect problematise the use of sound methods in educational research?'). Moreover, it attended to the first sub-question from my first research question by sketching how music composition research-creation problematises (neuro)typical sensory and representational logics.

As a problematising of sound method, *Oblique Curiosities* is ridiculous. It pushes an argument about sound method to breaking point. The argument here, then, is not that all sound scholarship should be done as music composition research-creation. Indeed, this is impossible due to the enormous privilege inherent to the practice of music as research-creation (e.g. training, time, money to invest in bushels of music equipment, and being ridiculous enough to drag that equipment across the countryside). Rather, I'm trying to stretch my argument about sound study to its most extreme manifestation as a way of thinking about how research technology develops as part of a material-semiotic milieu. Inherited ocular orientations to method come to be registered as material features of that method: in this case, sound recording technology as deployed in sound studies. In other words, sound methods, when co-opted as research methods in the social sciences and humanities, morph into alignment with the inherited ocular-centric methodological framework that continues the representational relationship between phonographer and phonographed. I return to this notion of methodological inheritance in chapter 8, where I consider how certain orientations towards A/autisms and disability

materialise the research encounter: I do so with a particular attention to the electrodermal gizmos.

Music composition research-creation is the research practice I do in this thesis. There are numerous methodological similarities between *Oblique Curiosities* (the project described in this chapter) and *Neuroqueer(ing) Noise* (the in-school research project I introduce in the next chapter). In both projects, I composed music with other people in response to and alongside various propositions (including place, other pieces of music, spoken prompts, and the unique affordances of different kinds of instruments). In both projects, this process of composing (and then further composing with that composition) is also the process of doing research. That said, there are also differences between the two projects. For one thing, *Oblique Curiosities* is research done *with* an equally privileged (abled, white, cis) and equally well-trained fellow artist-academic. Meanwhile, *Neuroqueer(ing) Noise* is research done with five- and six-year olds by an adult man. Moreover, the in-school project was accompanied by supplementary empirical methods, including field notes: in chapter 6, I detail the empirical process of conducting *Neuroqueer(ing) Noise*, including attending to how that process differs to what was done as *Oblique Curiosities*. My discussion of the differences between the practices will include discussion of the ethics and consent processes. I also pay particular attention to the unique ethics of doing arts-based research with disabled participants. Moreover, translating music composition research-creation into the early childhood classroom necessitated numerous compromises, including the power disparity that rapidly emerged as I became ‘our music teacher today’.

In the next chapter, I continue to think with *Oblique Curiosities* to trace how I understand the term ‘pedagogy’.

5. Towards a more-than-sonic pedagogy: Ethics, difference & publics.

Preamble: Defamiliarisation as pedagogy.

One of my earliest thoughts around my doctoral in-school research came in 2016, while I was a Special Educational Needs Co-ordinator (SENCo) struggling to secure funding for young people with SEN in my own school. In times of global austerity, I wondered what ‘inclusive’ pedagogical practice might do where it wasn’t reduced to an economic consideration of hours and instead was always and already ‘inclusive’. I wondered what role music and composition might play in such a pedagogy.

Springgay (2020a) contends that research-creation in schools “events a line of inquiry regarding the intersections between social practice art and pedagogy” (p. 149). In this chapter, I follow this ‘line of inquiry’ to consider how music composition as research-creation praxis intervenes in neurotypical, humanising formulations of pedagogy: I do this by continuing to think with my ongoing research-creation project, *Oblique Curiosities*. This is important because *Neuroqueer(ing) Noise* took over a classroom for an hour a week, for 14 months: I need to account for *what* was learned (which I do in the next chapter), but also *how* learning happened (which I do here).

Sound has been theorised as a kind of educational experience, in that it shapes how people relate to place (e.g. Gallagher et al., 2017; Gershon, 2011; Iscen, 2014). Similarly, sensory ethnographers have considered how the proximal senses convey embodied knowledge of a place (Ellsworth, 2005; Springgay, 2011a, 2011b), while art has been considered as a way of conveying this sensory knowing (Hickey-Moody, 2013;

Springgay, 2011a). However, less has been written about the ways that sonic experience can be *curated* to mobilise sensation as a way of formulating, disseminating, and intervening-in knowledge. In this chapter, I argue that ‘curating’ affect might make space to intervene in habitual sonic understandings of place, *defamiliarising* audition through non-auditory sensory experience.

Defamiliarisation is an important concept in this thesis, as it is how I theorise research-creation’s *praxis*. By *praxis*, I refer to the term’s common take-up in critical theory, wherein *theory as activity enacts emancipatory changes* (Buchanan, 2018). Defamiliarisation, Braidotti (2013) writes, “...involves the loss of familiar habits of thought and representation to pave the way for creative alternatives” (p. 88-89). I conceptualise ‘praxis’ and ‘defamiliarisation’ through Whitehead’s (P&R) articulation of propositions as “determinant[s] of definiteness” (p. 257). In chapter 3 (from page 51), I explained Whitehead’s concept of propositions as limiting potential to a particular material arrangement. This alters the flow of relevance, or what Whitehead calls ‘definiteness’, which determines how much each past event shapes each future event. In other words, the proposition intervenes in how the universe unfolds by luring a particular feeling, which determines the relevance of each prior event to the novel event. Thus, feeling (including human feeling and the feeling of being human) is ontologically—sociogenetically—significant: a topological reconfiguring (Barad, 2007), by which research-creation praxis intervenes in habitual patterns of feeling, thinking, listening, and *matter*. I refer to this intervention as defamiliarisation: defamiliarisation redirects the typical flow of relevance, in such a way that habitual (racializing, abling/disabling, gendering) patterns of ‘listening’ come to be momentarily unsettled. This defamiliarisation has implications for how we formulate *ethics*, *publics*, and *difference* in the pedagogic encounter.

In this chapter, I consider how *Oblique Curiosities'* soundwalking composition project, *Queer the Landscape!* mobilised defamiliarisation, pedagogically unsettling 'familiar habits' of audition. Specifically, I argue that this defamiliarisation intervenes in: *ethics* (what intentions drive the pedagogic encounter), *publics* (who is encompassed within the pedagogic encounter), and *difference* (how divergence is figured by/in the pedagogic encounter). Moreover, this has implications for how I understand the notion of 'causality' in the in-school research. Thus, my thinking in this thesis isn't just about how classrooms have sound in them, or how sound might be used to teach about something, but how sonic experience might be affectively curated to disrupt neuro-normative approaches to classroom practice. In chapters 6, 7 and 8, I apply this line of inquiry to my in-school research-creation study to problematise: how neurodivergence comes to configure—and be configured in—the pedagogical encounter; how we might reconfigure pedagogy to affirm neurodivergence; and what opportunities pedagogy offers to defamiliarise notions of typicality and divergence.

In the next section, I offer an overview of the rest of the chapter. Before this, I want to briefly attend to the politics of 'place'. Place is important to the work of this chapter because soundwalking happens *somewhere*. Scholars of place have argued that place should be thought as relational (Ingold, 2000), more-than-human (Massey, 2005), and imbricated in settler-colonial (Tuck & McKenzie, 2015) and abling/disabling logics (Kafer, 2013). Although I am aware of these valuable critiques, there isn't space to expand upon them in this chapter except implicitly.

Chapter overview.

In the next section of this chapter, I discuss how I conceptualise the term 'pedagogy': I think with theories of affect to consider how dominant modes of pedagogy reproduce

ablenationalist minimum capacities through curating humanising impressions. I then explore how soundwalking has been deployed as an artistic and research method: I include this review to situate the soundwalking projects I discuss here and elsewhere within the existing soundwalking scholarship. I argue that soundwalking must deliberately attend to defamiliarisation through curation of the event if it is to 'reorient' the listening-walker to the sonic features of place. Then, I attend to the implications of defamiliarisation as pedagogical strategy, specifically as it relates to: ethics, publics, and difference.

Pedagogies and soundwalking: A literature.

This section consists of two parts: a theorisation of the term pedagogy through theories of affect, and a problematising of soundwalking using the notion of defamiliarisation.

Pedagogy and affect.

Pedagogy is often thought of as relating to teaching methods, or as the method of teaching a curriculum: curriculum is the *what*, while pedagogy is the *how*. Conceptually, however, pedagogy is something of a 'moving target', in that it is often used in fairly unspecific ways to refer to any kind of experience in which somebody learns something (Gaztambide-Fernández & Matute, 2013). In this section, I discuss dominant modes of pedagogy in three ways: as affection, as humanising reproduction, and as animated by paranoia.

Gaztambide-Fernández and Matute (2013) distinguish between curriculum as "educational experience" and pedagogy as "having to do with educational relationships" (p. 57). For Gaztambide-Fernández and Matute, this 'educational relationship' is intentional, with one subject intending: "to "push against," ... another's subjectivity" (p. 56). In 'pushing against,' the pedagogue intends to modify the capacities of the student

(the one pushed against). Gaztambide-Fernández and Matute (2013) describe learning in similar terms to Ahmed's (2004) description of affects as leaving 'impressions' on the surface of the affected body(mind). In other words, the pedagogical encounter is an impressing-upon that modifies the capacities of the impressed upon body(mind). These impressions alter the trajectory of future affections, and so the capacities that the affected body(mind) impresses upon others. Pedagogy, then, is fundamentally about relation: the question of how to do pedagogy is "of how to intentionally enter into relations premised on the ethical imperative of the encounter" (Gaztambide-Fernández & Matute, 2013, p. 54). And, often, for dominant forms of pedagogy, the ethical imperative of this impressing-upon is to imprint ablenationalist minimum capacities: the capacities most commonly associated with European Man.

Consequently, Henry Giroux (2020) defines dominant forms of pedagogy as modes of "social, political, and cultural *reproduction*" (p. 3; see also Dahlberg & Moss, 2005; Moss, 2019). Dominant modes of reproductive pedagogy (in)tend to emphasise "economic growth, job training, and mathematical utility" (Giroux, 2020, p. 3), and so reproduce ablenationalist minimum capacities. Thus, dominant pedagogies reproduce the overrepresented Euro-western definition of the human (Wynter, 2003), as well as what it 'feels like' to be that human (Wynter, 2001). Thus, curriculum theorist Nathan Snaza (2019) describes education as a "humanizing assemblage" that emphasises "nation-state projects of producing responsible citizens, efficient workers and good consumers" (p. 2). Similarly, critical autism scholar Anne McGuire (2016) traces the path of developmentalism that eventually led to the development of the concept 'autism.' McGuire contends that the identification of idealised 'well developed' or 'good' human traits made "humanness... teachable, and *necessarily so*" (p. 76, italics mine). In other words, the idea that humanness could be taught, necessitated that it *should* be taught. In

this vein, Kyla Schuller (2018) describes how public education set about impressing particular sets of tendencies onto the least impressible populations. She calls this *biophilanthropy*. Schuller writes:

Biophilanthropy works via the steady accumulation of impressions that redirect a class or race from foreordained death and force it to persist, as a newly proletarianized group, for the economic and moral health of the settler colonial project. (loc. 3178)

Schuller's biophilanthropically-salvaged body(mind) is a "mode of incremental life" (loc. 601), gradually rehabilitated into a degree of inclusion within capitalism by achieving some ablenationalist 'minimum capacity'. Thus, populations understood as less impressible might have tendencies impressed onto them and so be saved from biopolitical uselessness (even if only in very specific ways).

Reproductive logics have been extensively problematised by queer theorists. Lee Edelman (2004) contends that society's emphasis on the child places queers out of time: the inconceivability of queer reproductivity means the future has always-already refused queers, and so they should refuse it back. However, this capacity to 'opt-out' of the future is only possible for sufficiently capacitated (abled, male, white) queer subjects (Kafer, 2013; Keeling, 2019; Muñoz, 2009). Moreover, Puar (2007) problematises Edelman's refusal of the future for centring heterosexual reproduction and ignoring homonationalist modes of reproduction: She contends that it is not "whether [queers] can or cannot reproduce children, but on what capacities they can and cannot regenerate" (p. 211).

Similarly, Muñoz (2009) writes:

The only futurity promised is that of reproductive majoritarian heterosexuality, the spectacle of the state refurbishing its ranks through overt and subsidized acts of reproduction. (p. 22)

I understand humanising pedagogies as ‘subsidised acts of reproduction.’ Through humanising pedagogies, the reproduction of cis-heterosexism, ability and whiteness is untethered from hetero, abled, white people creating more hetero, abled, white people: instead, the ethical imperative of the pedagogical encounter is to reproduce ablenationalist minimum capacities of whiteness, cis-heteronormativity and ability. Thus, in ensuring this reproduction, humanising pedagogy might be understood as animated by paranoia: Eve Sedgwick (2003) contends that paranoia adopts a “distinctively rigid relation to temporality, at once anticipatory and retroactive, averse above all to *surprise*” (p. 146, emphasis mine). Thus, the impulse to reproduce abled, white, hetero capacity stems from a paranoia of what might otherwise emerge, and so wards off unexpected deviation. I consider this notion of the unexpected or surprising deviant in chapter 8, where I write about how autism emerged as “marker[s] of children who did not fit pre-existing categories of the “unfit”” (Gibson & Douglas, 2018, p. 7).

In summary, pedagogy functions by modifying the affective capacities of the student, leaving impressions on the affected-affecting surface of the body(mind) that determine how future affects ‘land’—or what I understand as Wynter’s (2003) ‘feels like’ of being human. These modifications bring the student closer to approximating the capacities of the idealised human subject—i.e., Wynter’s Man. Where the affecting-affected surface is considered less pliable, dominant forms of pedagogy impress a specific group of capacities to salvage something of that subject. In the next section, I explore how art enacts the same relational ‘pushing-against’, and so might be thought of as ‘pedagogical’.

Affect and (pedagogy-as-)art.

If pedagogy is a moment of pushing-against—that modulates affective capacities of the pushed-against student—then art might also be thought of as pedagogical, in that it also pushes against and modulates the capacities of the participant. Colebrook (2002) suggests that, while art may have ‘meanings or messages’, it is not meanings or messages that make it ‘art’: Rather, “what makes it art is not its content but its affect, the sensible force or style through which it produces content” (p. 25). Here, Colebrook is drawing from Deleuze and Guattari’s writing in *What is Philosophy?* (2009: hereafter abbreviated as WIP). Deleuze and Guattari describe art as registering and conveying affect, through the artist’s deployment of affect and *percepts*: “the thing or the work of art—is a *bloc of sensations, that is to say, a compound of percepts and affects*” (p. 164, italics in original). For Deleuze and Guattari (1994), percepts are sensations: however, they are “not perceptions referring to an object (reference)” (p. 166). Rather, percepts are material fragments of the worlds speculated upon in the artwork, whereby sensation and material come to overlap: “it is difficult to say where in fact the material ends and sensation begins” (WIP, p. 166). The work, then, circulates and recirculates affects, and in so doing “confides to the ear of the future the persistent sensations that embody the event” (p. 177). In other words, the work embodies an affective life-world that is specific to that work of art. Thus, art is a combination of feeling and technique that combine to mobilise a curated nexus of affect(ion)s. Colebrook (2013) argues that there is no ‘pure touch’, but rather in any affective encounter one *must* body(mind) impinge upon the other. Thus, art is a kind of pedagogy, in that it necessarily impinges on the subjectivity of the participant. Or, as Anna Hickey-Moody (2013) writes: “aesthetics teach us by changing how we feel” (p. 79). In a later section (beginning on page 155), I will describe how this aesthetic pedagogy relates to *Queer the Landscape!* However, in the next section, I consider how it unfolds in the artistic and research method of soundwalking.

Soundwalking pedagogy.

Queer the Landscape!—the *Oblique Curiosities* project I explore in this chapter—is a soundwalking composition project. In chapter 7, I will explore another example of a soundwalk from my in-school study. Thus, it is necessary here to situate both projects within the field of soundwalking.

Soundwalking has a long history as a method of artistic and research practice, and often straddles both art *and* research (Paquette & McCartney, 2012). Broadly, soundwalks are mobile engagements that take note of the sonic features of ‘place’. Hildegard Westerkamp (1974/2001) defines soundwalking as “any excursion whose main purpose is listening to the environment” (n.p.). Many examples of soundwalking that I discuss here are legible as pedagogical activities because of how they inform participants/listeners of the sonic features of a place. Yet, how pedagogy *happens* during the soundwalk—or sound study more broadly—is often under-theorised (Gershon, 2021), particularly when compared to other aspects of writing about sound (Black & Bohlman, 2017; Gershon, 2017).

R. Murray Schafer (1977/1994) coined the term ‘soundwalk’ in the 1970s, although soundwalks have been popular as artistic and research methods since the 1960s (Drever, 2009), and are quite commonplace in primary school music lessons. Yet, soundwalking is frequently taken-up as new or inherently transformative in qualitative research. Similarly, walking is often instrumentalised in education settings for its ability to inspire creativity, as well as for its purported health benefits and conviviality (Springgay & Truman, 2019a). Moreover, while recent engagements with theories of affect (Gallagher, 2016; Henriques, 2010; Thompson, 2017a) and the material distribution of sonic agency (Ceraso, 2018; Goodman, 2010) have attended to the sociality of sound, some soundwalking scholarship fails to account for its own reliance on a white, abled

body(mind) that is sufficiently capacitated to walk and sound freely abroad (Shannon, 2020; Springgay & Truman, 2018a; Sterne, 2015), as well as the supposed neutrality of that subject's audition (Chapman, 2015; Stoeber, 2016; Thompson, 2017b). Moreover, the term soundwalking is often used in inexact and overlapping ways, as well as interchangeably with other terms such as sonic walks or audio walks.

In this section, I build on these valuable critiques to problematise soundwalking into four contiguous techniques: First, I discuss *listening walks* and *sound(ing)walks*, wherein listeners ambulate with attention to sound. Second, I introduce what I'm calling *phonographic walks*, wherein listeners create an electroacoustic audio composition during, alongside or in response to their walk. Third, I discuss *audio walks*, wherein listeners walk while listening to a pre-recorded audio composition. Importantly, and despite claims that soundwalking 'reorients' listener-participants to their sonic environment, I argue that each of these techniques *must attend to how it actively defamiliarises the relationship between listener and place* if it is to avoid reinscribing (white, able, hetero) normative orientations to place.

Sound(ing)walks & listening walks

Some of the earliest examples of walking with attention to sound might include those of European, and especially British, composers such as Beethoven, Elgar and Satie, who are frequently described as undertaking long listening walks in the countryside as part of their composition practice. Moreover, their compositions are often attributed *to nature*, sedimenting a link between 'nature' and the European ear. Schafer (1997/1994), who first coined the term soundwalk, distinguishes between: the *listening walk*, which is the practice of walking with attention to the sounds of a space; and the *soundwalk*, which is typically scored and involves activities that activate both listening and sounding (and

which I call a sound(ing)walk for clarity). Several listening walk projects were developed during the 1960s, inspired by John Cage's *4'33"* and its rejection of institutional art, and the Dadaists' 'visits-excursions' (Drever, 2009). One such listening walk is Ben Patterson's 1963 *Tour*, which calls for listener-participants to be blindfolded and led through a space by a guide, emphasising non-visual sensory experience. Similarly, Philip Corner and Max Neuhaus curated walking projects that attended to sound: Neuhaus stamped the instruction "*LISTEN*" onto participants' hands before leading them on a listening walk across New York, while Corner instructed participants to walk while listening "as if at a concert" (Corner, 1980, p. 7, as cited in Drever, 2009). Westerkamp (1974/2001) argues that soundwalking reorients someone to the sounds of the space through intensive listening, and, so, participants in these artistic projects ambulate whilst bringing attention to how they relate to space through sound. Consequently, listening walks and sound(ing)walks are also popular as research methods: researchers consider listening walks and soundwalks immersive and multisensory (M. Adams et al., 2008; Gallagher et al., 2017), adaptive (Paquette & McCartney, 2012), and creative and improvisatory (McCartney, 2016).

However, I think understanding soundwalking as *inherently* capable of 'reorienting' participants to place risks shaping listening as something neutral and not always-already filtered: indeed, Amanda Black and Andrea Bohlman (2017) argue that it is very hard to rewrite someone's deeply-rooted sonic understanding of a place because of the way that prior understandings filter listening. Similarly, Barry Truax (2001, as cited in Iscen, 2014) describes 'soundscape competence' as an acquired and intransigent familiarity with a space's sounds. In other words, these scholars problematise the assumption that what is heard while walking through a space is what that space 'sounds like', and not the summation of a more-than-sonic 'embodied listening'. Thus,

Westerkamp's description of soundwalking as 'reorienting' assumes auditory capacity is unaffected—or what Cefai (2018) might describe as affectively neutral. Similarly, Stoever (2016) and Robinson (2020) argue listening is filtered in racializing ways, even while white people understand our ears as capable of hearing "universal, objective truth" (Stoever, 2016, loc. 379). Consequently, Black and Bohlman (2017) contend that listening walks (which attend to those sounds already 'in' a place rather than generating new sounds) are unable to address sonic histories of oppression. However, sound(ing)walks, (wherein participants *generate* new sounds), *might* defamiliarise the auditory relationship with place—depending of course on what is sounded. For instance, Black, Bohlman and their students composed the sound(ing)walk, *Beyond the Belltower*. Consisting of nine walking scores, each inspired by archival accounts of institutional racism, *Beyond the Belltower* instructs participants to re-enact archival fragments, making accounts of "race, access, and violence within institutional history" audible (p. 18). Thus, these soundwalking projects intervene in what can be audibly heard to defamiliarise place through attention to its more-than-sonic features. In the next section, I discuss *phonographic walks*, which are sound(ing)walks and listening walks that use audio recording technology to 'write' sound.

Phonographic walks

While sound(ing)walks and listening walks attend to the transitory soundscape, phonographic walks employ portable audio recording equipment to permanently inscribe soundscapes. Thus, phonographic walks can be subject to the same epistemic reliance on technology and mastery as the broader field of sound studies discussed in chapter 4. In such scholarship, higher-end microphones are considered more capable of accurately inscribing a representation of space (Drever, 2002; Glasgow, 2007). Frequently, this leads

to attempts to trim out the editorial and compositional processes, including the sounds of the recording individual (Wright, 2017b) to inscribe the neutrality of (white) researcher aurality: or, what Lashua (2006) equates with the “objective, privileged, masculinist way of seeing and knowing” of the phonographic flaneur (p. 397). Moreover, the compositional element of a phonographic walk is very much apparent in the production and compositional choices required to edit a lengthy recording down to a listenable length. Westerkamp illustrates this in her composition, *Kits Beach Soundwalk*: originally conducted as a phonographic walk, Westerkamp playfully inserts spoken descriptions of the EQing and editing choices she applies, which accentuates the composition and production processes. Yet, the compositional element of a phonographic walk—or indeed a soundwalk or listening walk—is also very much apparent in the choice of walking route and recording technique as much as in the edits and production tweaks (Chapman, 2015; Martin, 2019).

As also described in chapter 4, Hill (2013) critiques the notion of the soundscape for how it ignores the auditory backgrounding and foregrounding of different populations. Similarly, writing on the Parisian *banlieue*, Hervé Tchumkam (2019) argues that the debilitation of populations takes place through sonically backgrounding invisible populations, rendering them inaudible. Yet this inaudibility, which is not recordable by even the most sophisticated phonographic technology, remains *audible*; or as Steingo and Sykes (2019) contend: “*That which exceeds audition is constitutive of auditory experience*” (loc. 503, italics in original). Consequently, some phonographic walks have used compositional processes to specifically emphasise the experiences of backgrounded, inaudible populations, thereby defamiliarising habitual patterns of perception. Ozegun Eylul Iscen (2014) uses a phonographic walk to explore how recent migrants make sense of new soundscapes through the sensory understandings from their prior homes. Iscen

takes up Truax's notion of 'soundscape competence' through participant's recordings of what Truax (1978/1999) might term 'sound signals.' Similarly, Lashua (2006) conducted phonographic walks with Indigenous Canadian teenagers, who then complicated the recordings by including rapped lyrics that recount experiences of racism and homelessness. Finally, Allie Martin (2019) explores sonic gentrification in her phonographic walking project to record changes in a gentrifying city's soundscape. Martin contends that the recordings made using handheld microphones are no less 'objective' than fixed position microphones would be. Indeed, Martin argues that the supposedly neutral placement of the roof-top mic is "as partial and positioned as the recordings of [her] footsteps as [she] move around the neighborhood" (para. 15). Martin goes on to argue that, rather than 'tainting' the methodology of what is often understood as 'neutral' method, her Black womanhood actually transfigures the method into a black feminist one. Thus, the method composes through her black feminism. These soundwalks use editing and curation/composition to make normally *inaudible* soundscape features of place *audible*, and so to defamiliarise "familiar habits of thought and representation" (Braidotti, 2013, pp. 89).

Audio walks

The development of portable media devices, such as the personal stereo, gave rise to another type of soundwalking: the *audio walk*. Audio walks follow a pre-determined path, during which participants listen to a pre-recorded electroacoustic composition (Gallagher, 2015b; Springgay & Truman, 2018a). Audio walks are typically taken up as part of *archival* approaches to place (for instance, walking tours) that don't attend to imperialist and colonial approaches to land and population (Springgay & Truman, 2019b). However, some academics and artists have used audio walks to complicate the fixity of place by

deliberately attending to how sounds already in the place combine with the recorded audio (M. Myers, 2011; A. Saunders & Moles, 2016). For instance, Rebecca Conroy's *Walking to the Laundromat* (as cited in Springgay & Truman, 2017) guides listeners through a full laundry cycle, while exploring themes of consumerism, climate catastrophe, gendered labour, and embodied precarity. Sometimes, a phonographic walk is later repeated as an audio walk, with listeners listening back to the original walk's electroacoustic composition. For instance, Michael Gallagher (2015b) directed participants to complete a phonographic walk before mixing the sounds into the electroacoustic composition, *Kilmahew Audio Drift No.1*. Participants then repeated the walk as an audio walk, listening to the completed work and "fold[ing] the sounds of a place back into that same place" (p. 468). Janet Cardiff (as cited in Paquette & McCartney, 2012) narrates other sensory properties for listeners to listen to as they walk, complicating the experience of 'hearing' as a single mode of experience. These projects mobilise listening and relistening—both through the microphone and into the ear *via* the earphones, and through the walk and into the ear *past* the earphones—to change the walk each time it is performed, also generating a new public each time, defamiliarising neuro-normative understandings of the sonic permanence of place and how body(mind)s auditorily relate to place.

Summary.

In this section, I have problematised soundwalking scholarship into four methods:

(1) listening walks, (2) sound(ing)walks, (3) phonographic walks and (4) audio walks.

These are contiguous categories: in other words, it's impossible for a phonographic walk to not also be a sound(ing)walk and a listening walk to some extent, although the degree to which this is explicit differs from walk to walk. As I've also demonstrated, some

soundwalks deliberately combine one or more methods. Finally, the methodological inheritances of sound study raised in chapter 4 are essential to my problematising of soundwalking: particularly, the assumption that hearing is neutral enough to hear ‘what things really sound like’, and so the disregarding of more-than-sonic experience. This has implications for how soundwalking reproduces or interferes with ethics, difference and publics.

In the next sections of this chapter, I attend to how *Queer the Landscape!* mobilises defamiliarisation. I do so to explore how soundwalking might be ethically situated (rather than claim neutrality), curate difference (rather than elide it), and responsibly materialise new publics (rather than reproduce old ones). The project attends to these issues by defamiliarising the relationship between listener and place. In other words, I consider how *Queer the Landscape!* mobilises these four soundwalking methods as praxis, defamiliarising ‘familiar habits’ of audition by making more-than-sonic inaudible aspects of place *audible*.

A pedagogy of the unexpected: Ethics, publics, difference.

In this section, I draw from *Queer the Landscape!* to consider how attention to the more-than-sonic aspects of sonic experience complicates how *ethics, difference* and *publics* unfold in the pedagogic encounter, defamiliarising habitual patterns of audition.

However, before I can argue that composition can curate an affective intervention in this way, I first need to demonstrate how composition *curates* affect. I do so by framing *Queer the Landscape* as a phonographic walk.

Although very few of *Oblique Curiosities*’ songs include any audio samples or recordings from the walk itself, I still think of *Queer the Landscape!* as a phonographic walk. This is because the songs still ‘sound like’ the walk. Below, I attend to how the songs

'sound like' the walk: first, with regards to *audio samples* recorded during the walk, and second with regards to melodic lines that composed with the *affective impressions* registered during the walk. Writing about these processes helps me explain how the songs phonographically recirculate the affects that impressed upon us in their composition.

*Cruel Bliss (Sweet Pain)*²⁵

<https://soundcloud.com/oblique-curiosities/4-cruel-bliss-sweet-pain>

*Dreary, Feary, Queery*²⁶

<https://soundcloud.com/oblique-curiosities/dreary-feary-deary>

Both *Cruel Bliss* and *Dreary* include phonographic recordings made during the walk: glass chinks in *Cruel Bliss*, and water splashes, river bubbles and gravel crunches in *Dreary*. Recording samples from the site of a walk is how lots of phonographic walks operate. However, this also assumes that the microphone and ear are capable of recording what a space 'sounds like,' which misses out on how sound is conditioned more-than-sonically.

²⁵ AUDIO DESCRIPTION: *Cruel Bliss (Sweet Pain)* opens with a painful "I waited for you." This is run through a ring modulator to make it sound like a Cyberman. The song combines multiple incongruent instruments: several synthesisers (some including pattern gates to create rhythms, or arpeggiators to create lines that run up and down scales), an electric guitar, a drum kit, taiko drums, and sampled strings and a Yamaha C7. It also includes samples of glasses chinking, recorded during the walk and then distorted and duplicated into a percussive rhythm. In between the two verses, time-stretched echoes of the other lyrics can be heard. The final chorus is accompanied by a large, sampled strings ensemble. The song is mawkish and mournful.

²⁶ AUDIO DESCRIPTION: *Dreary, Feary, Queery* opens with samples of foot crunches and river splashes recorded during the walk. Instruments include a sampled fiddle, a tuba, a honky-tonk piano, a theremin, tambourines, synthesisers with a pattern gate, and a chorus of pub folk. The coda (from 1:07) is marked by a significant change in timbre and tone. The coda's lyrics is performed falsetto, repeating the lyric: "Salty tears quenching great thirst." This line is pitch-adjusted to create an impossibly low-high voice.

As such, this method cannot complicate the experience of place. Moreover, the recordings can't really sound very much like the walk.

On the other hand, melodic lines and harmonic features that compose with impressions registered during the walk *do* have potential to sonically defamiliarise place. For example, the second part of each verse line of *Cruel Bliss* is accompanied by a countermelody on a breathy synthesiser. This countermelody was composed with our impression of an unrecordable, magnificent haunting wail of seals heard while traversing an ocean floor causeway at low tide: our impression of the seals sounds a lot more like the seals actually sounded than a wind-swept recording ever could. Its eery melancholy is rendered here more-than-sonically, composed with(in) the encounter without just trying to sound 'like' something. In other words, the magnificent haunting wail of the seal can be felt in the finished composition, composed through its impression upon us, even though the original wail was and could never be registered in any material way. On the other hand, the heavily modified glass chinks and crunch-splashes *were* registered during the walk with our microphone. My point here is that the seal melody, which was composed after the walk, sounds no less *like* the walk than the clink/splashes composed during the walk. This indicates how art functions as what Springgay (2011a) calls a 'sensorial pedagogy': she considers how art might engage different senses to generate impressions: activating thought through experience, affect, and materiality, rather than representational dissemination (Springgay & Rotas, 2015). Having illustrated *how* the songs function pedagogically, I now address how this process defamiliarises familiar patterns of audition in relation to my three themes for this chapter: *ethics, difference* and *publics*.

1. Ethics

In this section, I consider the implications of a pedagogical commitment to defamiliarisation for ethics, or for what intentions drive the pedagogic encounter. I have already sketched quite a detailed overview of the ethics of dominant or ‘humanising’ modes of pedagogy earlier in this chapter. I defined pedagogy as the question “of how to intentionally enter into relations premised on the *ethical imperative* of the encounter” (Gaztambide-Fernández & Matute, 2013, p. 54, emphasis mine). In the humanising pedagogical encounter, this is premised on bringing the student closer to approximating the capacities of the idealised human. Schuller (2018) calls this ‘biophilanthropic.’

It has been my experience that practitioners tend to double-down on biophilanthropic practices in schools that serve young people whose capacities are narrated as furthest away from those of Man: too poor, too Black(ened), or too disabled to pass otherwise. Educational practitioners in these settings often figure the young person as *tabula rasa*—or the ‘empty child’—an approach that Martin Haberman (1991) calls the ‘pedagogy of poverty’. Practitioners, then, understand themselves as having an ethical responsibility to humanise or civilise the young person through impressing new tendencies: in other words, the ‘ethical imperative of the encounter’ is to biophilanthropically salvage some aspect of the divergent body(mind). By way of a contrast, Giroux (2020) contends that it is the role of *critical* pedagogy to attend to that relational situatedness: to struggles specific to context, communities and resources.

In accounting for this situatedness, I follow Ahmed (2014) in contending that “[t]he pedagogic encounter is full of angles” (para. 5): each listener arrives at the encounter through a set of experiences that change the trajectory of that encounter. She writes: “Bodies do not arrive in neutral” (para. 3). I understood these ‘angles’ as shaped by racializing, gendering, classed and abling/disabling assemblages, as well as myriad

other human *and* more-than-human ephemera that feed into the pedagogical encounter. The pedagogical encounter events in the moment (Ellsworth, 2005), enablingly-constrained by the angles of approach of teacher and students. Thus, the pedagogical encounter as a moment of affection is always cross-pollinated through the angles at which the other participants arrived. As I come to demonstrate, this has implications for how I understand defamiliarisation, but also the notion of ‘causality’ in what comes to be impressed.

The ethical imperative, Gaztambide-Fernández and Matute suggest, is driven by a teaching subject. This subject is presumably a teacher, as Gaztambide-Fernández and Matute also contend that the absence of such a subject in some *public* pedagogies makes them more like ‘curriculum’ than pedagogy. However, thinking pedagogy as a moment of affection would preclude the possibility of an entirely pre-formed pedagogist who intends. Rethinking the role of the intending pedagogist as a trajectory, or ‘angle of approach’, might enable us to consider how ethics emerges in the encounter, constituted by participants who don’t fully emerge until they’re already in that encounter. It’s worth clarifying here that I am not using ‘trajectory’ in reference to deterministic, progress-centric approaches to curriculum followed in the USA, whereby (given appropriate scaffolding) students “exhibit predictable ranges of behaviours, including their responses to the tasks and their ways of speaking about or explaining their reasoning” (Confrey et al., 2014, p. 721). Instead, I am using the word trajectory to indicate that students approach the pedagogical encounter in situated ways. In this case, the ‘ethical imperative’ must also emerge in that encounter. Thus, the ethics of pedagogy that attends to this situated emergence might best be thought of as:

mak[ing] an ethical commitment to learning to become affected... borne of the claim that we can never determine in advance the kinds of relational matrices of which bodies are capable of becoming involved. (McCormack, 2008, p. 9)

In the next section, I think about this ethics as a pedagogical commitment to the unexpected.

An ethics of the unexpected.

The role of the unexpected—or surprise, or dissonance—in pedagogy has a rich literature. For instance, scholars have explored the importance of leaving part of the pedagogical encounter open so that unplanned somethings might take place (Hussey, 2018). My use of ‘unexpected’ is not about leaving space for the unknown or unplanned—as this wouldn’t be very good teaching or research-creation—but rather the deliberate curation of a frisson. Thus, it is similar to how ‘cognitive dissonance’ has been thought, whereby events unfold “*contrary to one’s expectations, not merely unexpected*” (Adler, 2008, italics in original). In this section, I think about this unexpected as a kind of disparity.

Undercutting, or scoring against the most obvious affect of a scene is a common practice in film music: through deliberately composing *against* the contents of a scene, audiences can be manipulated into ‘knowing’ something about a character or sequence of events that isn’t explicitly conveyed. Examples might include Jo Yeong-wook’s use of cheery chamber music to underscore scenes of Young-goon murdering half a hospital with her machine gun fingers in *I’m a Cyborg but that’s Okay*;²⁷ Danny Elfman’s use of a grand Viennese waltz to score the final fight scene in *Batman*,²⁸ or my own use of a

²⁷ 싸이|보그 영군 - <https://youtu.be/CzZck8xqx2g?t=115>

²⁸ *Waltz to the Death* - <https://youtu.be/FyAlkbpYk-l?t=50>

ragtime piano in the documentary *Filmworker* (Zierra, 2018),²⁹ which brought a playful and satirical eccentricity to what might otherwise have been quite a sinister scene. The music in these scenes doesn't convey knowledge about the scene or characters in a descriptive way, through dialogue or images: it neither 'shows' nor 'tells'. Instead, the music curates affect to in(tro)duce humour and unexpected frissons that complicate rather than complement what vision and speech might convey. Ultimately, the music defamiliarises viewers' assumptions about their own relation to the characters and events. This curation of affect is an important part of research-creation pedagogy.

Massumi (2014) describes the disparity between images as how we experience 'depth': Depth is an "emergent property possessed by neither of the images conditioning its appearance" (p. 63). Thus, 'depth perception' relies on a pair: the relation—or what Massumi calls 'offset'—between the two different perspectives being what indicates depth. The offset creates a "tension—the binocular disparity of two images that do not coincide" (p. 63). In other words, depth isn't just two images put together, but what is produced in the tension between those two images. The changes between chords are a kind of depth. Two chords might carry particular affects, but those affects might be altered by stringing the chords together. Sometimes I find that the changes are implied by the melody. Sometimes they're implied by the lyrics, which in turn go on to imply the melody. Other times, I force an interesting set of chord changes onto a song as a proposition: an enabling constraint to 'see what sticks' that obtusely forces the song in a different direction, or else out of sync with itself. Changes from one chord to another, as with the other percepts, curate affect in particular ways. This is apparent in *Three Black Helicopters*:

²⁹ *How about?* - <https://soundcloud.com/davidbenshannon/a-dying-cat>

*Three Black Military Helicopters*³⁰

<https://soundcloud.com/oblique-curiosities/3bm>

Anna Hickey-Moody (2013) considers how art as blocs of sensation might be mobilised to “change people, cultures, politics” (p. 91). A sensory curriculum affords “the possibility for individuals to interrogate their habitual responses to the world” as a way to reorient towards knowledge and experience (Springgay, 2011a, p. 640). Assembling these components is a kind of *affective curation*, which composes with a series of sudden disorientations:

- the unexpected entrance of three black military helicopters on top of Wide Open Hill,
- a breakfast with a racist Brexiteer that mingled with a subsequent lingering dog shit smell,

³⁰ AUDIO DESCRIPTION: The song is accompanied by a string trio (violin, piano and cello: instruments ordinarily associated with the class tradition), and electronic instruments, including a juddering arpeggiator. The changes in the verse are: C major, A-flat major, B-flat major, G-flat major. The song doesn't have a clear diatonic key centre. Each of these chords is a major ('happy') triad. Major chords are made up of three notes: the tonic, the note four semi-tones above the tonic (the 'third') and the fifth. However, the melody line in the fifth bar introduces an E-flat: this is only three semi-tones above the tonic (C), which creates a disorienting effect: a blueness, or simultaneous major/minor (or happysad). This also harmonically accents certain lyrics: for instance, the word 'puncture' in the phrase: "Three Black Military Helicopters puncture the solitude." The chorus of the song switches from the 4/4 (common time) measure heard in the verse to a 3/4 (waltz-time). It also moves even further away from the key centre (if the song can be said to have one), while still remaining in major chords. Meanwhile the voices are pitched-up to impossibly high pitches, to accompany the lyrics: "Whiteness ascends, Whiteness ascends, imperialism!" or "lost in heather, lost in heather, landscaping queers." The song is a disorienting collation of unexpected elements: harmony, lyrics and instrumentation.

- and the sudden appearance of a proper walker while I was in a cocktail dress for a photo opportunity (and the hornet’s nest I stumbled upon while trying to escape from him).

Ramzi Fawaz (2016) calls affective curation a mode of pedagogy by which an instructor might “intentionally *trigger* a range of unexpected and perhaps difficult emotional responses in students” (p. 761, emphasis mine). While all pedagogical encounters could be described as curating affect, Fawaz’s definition of affective curation is different because it *deliberately engages the unexpected*. As a kind of affective curation, composing with the arrival of the helicopters, the walker, the Brexiteer and the dog shit smell attends to the shock and disorientation at their sudden injection into the countryside (which of course is where they were all along). One of the reviewers of a version of these songs when they were published alongside an article for *Capacious* noted that they ‘didn’t expect’ the songs to be so electronic. This may have been because of the frequent association between ‘nature’ and certain pastoral music compositions described earlier in the chapter. Indeed, as Carolyn Knowles (2008) suggests, the British countryside “stands for more than it is” (p. 170): she contends that it is imbricated in nationalism, and ongoing-colonialism and slavery. Thus, feeling surprise at the presence of the helicopters reminds me of what Tavia Nyong’o (2019) calls “malignant imperialist nostalgia and white supremacist fantasy” (p. 44). The affective curation of percepts—such as changes, orchestration, and shrill auto-tune—conveys something of the delirium, the unexpected, and the disorientation of that encounter.

Before I go on, I am not trying to suggest that every chord or change would be heard in the same way by everyone, which Fawaz’s use of ‘trigger’ might imply. For one thing, it would be difficult to argue that something ‘triggered’ could ever be ‘unexpected’ (as getting ‘what I want’ hardly seems ‘unexpected’). Moreover, ‘triggering’ would seem

to engender the same reproduction I already associate with normative modes of pedagogy. Firstly, we must note that the reception of a chord or chord change is conditioned by what impressions are already on the surface of the body(mind). Studying harmony as a musician leaves particular impressions that ‘feel me’ chords in ways that are different to someone that didn’t study harmony (or even studied different harmony). At the same time however, I don’t think that every chord and every change are a harmonic free-for-all: Certain intervals and chords are universal to all harmonic structures. George Russel (2008) contends that this universalism is due to the overtone series. He argues that the first interval produced in the overtone series is that of the octave, followed by the fifth, and then the fourth, and so on, becoming increasingly dissonant until the interval of the minor 2nd is reached (just a semi-tone apart). I might suggest, then, that just as certain aspects of harmony might be universally felt as more consonant or dissonant, so might certain aspects of affective encounter. I don’t think that this is a point of inconsistency with how I reject the idea of affect modulating rather than augmenting or diminishing (see chapter 2). Rather, I think it speaks to the illegibility of capacity: whether on a human or harmonic body.

Secondly, I want to attend to the relationship of the affects that curated the genesis of the work—such as helicopters, dogshit, Brexit, and doilies—and the affect invoked in the listeners. Again, the notion of ‘triggering’ or ‘causing’ is too linear for what I’m trying to describe here, in part because (as I already sketched in the previous paragraph) it cannot be wholly determined how the work will interact with the impressions already accumulated on the listener. This presumably isn’t (about) dogshit or cocktail dresses. Rather, it generates further affective ‘series’ in the listeners: series which express the ‘unexpected’, perhaps at a virtual level, but play out/play on *differently*. Thus,

it resembles how Deleuze sketches 'quasi-causality' in *The Logic of Sense* (2015).³¹

Deleuze draws from Stoic philosophy to consider how events “are not causes of one another, but rather enter into relations of quasi-causality, an unreal and ghostly causality” (Deleuze, 2015, p. 33). Deleuze’s contention here is that material things can establish causal relationships, but that events while belonging together, do not cause one another. He gives the example of older and younger, whereby the two are related without causing each other: “It is neither at the same time, nor in relation to the same thing, that I am younger or older, but it is at the same time and by the same relation that I become so” (Deleuze, 2015, p. 33). Thus, the bloc of sensation mobilised by composition interacts with those affections already imprinted on the surface of the listener’s subjectivity, but the relation between that subjectivity going forward and the work is such that each makes sense of the other without *causing* the other. (Nonetheless, causal approaches to pedagogy are common in educational provision, and are something I return to in later chapters.) Jonathan Roffe (2017) likens this to how the “the arm cut by the scalpel now expresses this incorporeal attribute, in its having been cut”: in other words, “the relationship between events and bodies is an expressive one” (p. 282). If the songs make an impression and that impression is angled based on the trajectory of each listener, then the song is, in effect, rewritten in each listening. That rewriting is an expression of the affective potential of the work, but it is not caused by the work. Rather, it is rewritten and added to by the impressions on the listening body(mind) of whatever came before it.

Three Black Military Helicopters is quite an obvious example of affective curation which, after Fawaz, engages the unexpected to ‘impress’ a series of emotional responses

³¹ How I take-up the ‘quasi-cause’ here is quite different to how Deleuze frames it with Guattari in *Anti-Oedipus*.

in the audience: it's an 'obvious' example because the emotional response we wanted to trigger was that of encountering something unexpected! However other songs similarly curate affect to *activate through* the unexpected without necessarily being *about* the unexpected.

*Wouldn't that be sexy*³²

<https://soundcloud.com/oblique-curiosities/3-wouldnt-that-be-sexy>

It's hard to say what is unexpected about a work when you're the one who wrote the work. The scream at the end of *Wouldn't That be Sexy* might be an exception. Every time I listen to this song it catches me slightly off guard. The association of nature with repetition and horror in the song's conclusion is startling, yet simultaneously undercut by a syncopated woodwind quartet playing quartal staccato lines, which maps against the flowing lyricism of the woodwind-centric pentatonic opening to Grieg's *Peer Gynt*. I go on now to think more about how the works unsettle the notion of 'publics'.

2. *Publics.*

In this section, I consider the implications of a pedagogical commitment to defamiliarisation for publics, or for who is encompassed within the pedagogic encounter. *Oblique Curiosities'* songs are freely available online and, as of December 2020, have racked-up over 3,300 plays. They have also been shared at academic conferences on five continents. Thus, they are examples of *public pedagogies*. I want to think about public

³² AUDIO DESCRIPTION: *Wouldn't that be sexy* is based around a series of propositions. For instance: Build capacity.

Kinds of kin and kindness all touching back (all touching back): *Wouldn't that be sexy? Wouldn't that?* The song is quirky, electronic and upbeat. It ends with a scream, echoed for over thirty seconds, passed through a ring modulator so becoming increasingly distorted and monstrous as it does so.

pedagogies in two ways: firstly, as non-reproducible spaces of dis-identification and secondly as a kind of anarchiving practice.

The term ‘public pedagogies’ might be used to describe any pedagogical process that isn’t part of formal school-based learning. Giroux (2004) contends that public pedagogies have potential to be both “regulatory and emancipatory” (p. 62), depending on who is intending—doing the ‘pushing against’—in the encounter. Public pedagogies operate through popular culture: movies, architecture, and art installations are examples of public pedagogies, as are songs, adverts, and memes (Giroux, 2009, 2020; Sandlin et al., 2011). Earlier in this chapter, I suggested that dominant, humanising modes of pedagogy take reproduction as their ‘ethical imperative’. The problem of public pedagogy—and arguably even *critical* public pedagogy, which seeks to use popular culture as a platform for unsettling marginalising doxa (Sandlin et al., 2011)—is that whether they intend to ‘regulate’ or to ‘emancipate’ they still rely on the presence of someone to push or impress. Thus, emancipation through public pedagogy is actually quite regulatory: it’s still a kind of reproduction. *Queer the Landscape!* definitely reproduces things. It reproduces:

- cocktail dresses,
- catastrophes, and
- unexpected helicopters.

However, the public in which the compositions event is not reproducible. The ethics of a pedagogical encounter emerge within that encounter. Thus, what intention is brought to that pedagogy—to the act of impressing—is also emergent.

For instance, *Queer the Landscape!* has been used as an audio walk. Gallagher (2015b) describes how relistening to sounds recorded in a space as an audio walk while navigating that same space “fold[s] the sounds of a landscape back into it” (p. 317).

Gallagher writes that this generates “uncanny affects of ambiguity, haunting and hallucination” (Gallagher, 2015c, p. 468) and so has the “power to move us in unpredictable ways” (p. 479). Thus, the publics become “spaces of collective *defamiliarisation*” (Springgay & Truman, 2019, p. 5, my italics). Pedagogy that takes up an intention to ‘learning to become affected’ as a practice of dis-identification reorients the assumed relationship between listener and place in a way that listening walks and sound(ing)walks cannot.

Anarchiving as pedagogy

Audio walks are often used as a kind of regulatory public pedagogy. They disseminate dominant or state-sanctioned information about a place, such as museum or gallery tours. Thus, audio walks might be described as ‘archival’, in that they document, label and represent something that is distinctly ‘finished’ and parsable from the listening subject. Thus, they are highly representational artifacts.

By way of a contrast, the *Oblique Curiosities* songs are anarchival. Andrew Murphie (2016) contends that anarchives resist processes of documentation and interpretation in favour of registering affect and materiality. The anarchival is also never conceptually ‘finished’ as, once sealed, it would become archival: “dead to what it could still have become” (Manning, 2008, p. 20). The compositions are anarchival in two ways. Most obviously, they’re anarchival because they’re never finished. Digital music production techniques mean that (much like this thesis) I have been able to tinker and tamper endlessly. The mode of distribution (*SoundCloud*) allows me to replace the mp3 file ‘behind-the-scenes’ to edit out wibbles, re-record vocal lines, swap-out instruments, or shift things along. For instance, *Icepick in my eye!* originally featured a synthesiser during the instrumental between each verse. This was briefly replaced with a horn

quartet until Sarah found out. This might seem like a flippant example, but it's a very real part of the composition process: as the music feels me differently, I change it. Thus, it's a response to the proposition that music research-creation should 'cannibalise concreated products.'

The songs are also anarchival in that they're rewritten in each listening. If the songs make an impression and that impression is angled—based on the trajectory of each listener—then the song is, in effect, rewritten in each listening. It is added to by the impressions of whatever came before it. Fawaz (2019) also describes the affective pedagogical encounter as unfolding along a temporal contour, or perhaps following what Bertelsen and Murphie (2010) call the tendency of affects to unfold 'like a smile'. Fawaz (2019) describes this as a "circuit of affective exchange from an intensely felt initial sensation... that occasions an array of other interested affects and practices" (p. 26). In so doing, the listening rewrites the composition and the initial moment *of* composition. Thus, Bertelsen and Murphie (2010) write that affect is 'cross-temporal', in that it affects across futures, pasts, and alternate presents: moving experience "into the future" while simultaneously "into the past, as memory" (p. 146). Thus, building up impressions of the compositions changes the reception of the song and modulates the public receiving that song. It is this anarchival building-up of impressions that I turn to in my final theme.

3. Difference.

In this section, I consider the implications of a pedagogical commitment to defamiliarisation for difference, or for how is divergence figured by the pedagogic encounter. Public pedagogies can be just as 'regulatory' as dominant, humanising modes of pedagogy (Giroux, 2020). Carla Rice and her colleagues (2018) offer the term

biopedagogies to describe public pedagogies that configure normative notions of ability and disability. They define biopedagogies as a:

loose collection of moralised information, advice, and instructions about bodies, minds, and health that works to control people by using praise and shame alongside ‘expert knowledge’ to urge conformity to physical and mental norms (p. 666-667)

Biopedagogies operate through The Stare: the representational mode introduced in chapter 3 that figures abled people as unable to look away from disabled people, whether in media, in medicine, or in everyday life. Rice et al. suggest that, through The Stare, abled people are conditioned (or ‘educated’) as to what ‘normal’ em-body(mind)-ment is and can do. Biopedagogies teach through The Stare to sort body(mind)s into those that might have their divergence corrected, and those that must be set aside.

Rice et al. (2018) contend that biopedagogy is primarily a consequence of our ocular-centric society. However, I think that biopedagogies can probably exist just as easily across other senses: audition, taste, smell, touch, and the vestibular and proprioceptive senses are just as able to be ‘pushed against’ and so just as implicated in sensing/creating difference. There is, however, a surprising lack of attention in the literature to how disability is constructed aurally: I address this in later chapters. For right now though, I want to briefly touch on how noise—loosely defined for the time being as ‘unwelcome’ or ‘nauseating’ sound—might become apparent on a soundwalk.

Kafer (2013) begins to point towards how what counts as ‘noise’ determines what constitutes ‘natural’ when walking on a nature trail: she recounts arguments that disabled people are often figured as unwelcome in nature because the sounds of wheelchairs and mobility aids would be noisy and likely to ‘scare away birds’. Truman and Shannon (2018) extend her argument, writing: “The sound of footfalls or majority enunciations of English

would perhaps seem more ‘natural,’ than alternative movement habits (such as automatic wheelchairs), or diverse speech patterns in the countryside” (p. 60). This is just one brief example of biopedagogy. It illustrates the ways in which public pedagogies regulate ‘physical and mental norms’ (Rice et al., 2018). I think much more extensively with how this regulation operates through sound and noise in later chapters.

Thus, Springgay and Rotas (2015) suggest that ‘learning from the offset’ “potentializes *likeness as difference*” (p. 562, italics in original). Rather than eliding difference, Magrit Shildrick (2015) contends that we need to keep hold of difference to unsettle inclusion-as-rehabilitation: Shildrick argues that we need to “figur[e] difference in a nonbinary sense”, *affirming* difference in all body(mind) configurations—abled and disabled—as “embodied absences, displacements, and prosthetic additions... [that] both limit and extend the performativity of the self” (p. 14). Similarly, Carla Rice (2015) contrasts ‘biopedagogies’—as ways of instructing what normal em-body-(mind)-ment is—with ‘becoming pedagogies’ that explore the unique affordances of non-typical body(mind) configurations. ‘Becoming’ is taken up in relation to the feminist materialisms, wherein the body(mind) is thought as a part of an agential more-than-human network, or what Manning (2015) describes as “an ecology in the making” (p. 63). Thus, the body(mind) is neither abled nor disabled in itself, but rather is shaped through intensities and flows that are ever-shifting.

Affirming difference is a tricky proposition. Affirmation is not being positive about awful things. Sedgwick (2003) considers the practice of reparative reading through the preposition “beside” (p. 8). Rather than behind or beyond, which indicate origin or telos, Sedgwick understands a reparative reading as one that problematises through alongsideness: seeking to rupture before it repairs, continuing to problematise as it seeks to form a new suture across the ‘underlying unity’ (Berlant & Edelman, 2019). For

instance, Muñoz (2019) undertakes a reparative reading of Gary Fisher's *Gary in your Pocket* in the vein of Sedgwick. He summarises this project as seeking to "reconstruct partial or dangerously incomplete objects that structure our reality into a workable sense of wholeness" (loc. 4028): in other words, as seeking to glean something from the incommensurate. I read reparative reading practices, then, as maintaining refusal and critique but, then—to use Sedgwick's example—turn bad karma into good. By which she means you can't repair something that you haven't first ripped apart: rather, repair 'resurrects rupture' (Edelman, in Berlant & Edelman, 2019). In chapters 2 and 3, I introduced the *queer inhumanisms*. These are perspectives collated from queer, Black, and crip figurations of the human that seek to 'resurrect rupture' by creating new versions of the human while simultaneously holding onto the category of the human and the violence inherent within that category. Queer inhumanisms are important to my own concept of A/autisms. I want to elucidate two particular aspects of the queer inhumanisms: that of genre, and of identification.

Genre as an affirmation of difference.

Wynter (in McKittrick, 2015) uses the term 'genre' to refer to different versions of the human. Man as the present-day overrepresented version of the human is one such genre. Genres are shaped sociogenetically, in that social structures are ontogenically significant. Thus, there near infinite genres of the human. Thus, while 'post'-human thought is sometimes treated with suspicion for seeking to impose a new universal way of thinking about the human that elides difference, Luciano and Chen (2015) seek to keep hold of the tension between "universalizing and locating impulses" (p. 192): what version of the human can be imposed that unsettles the dominant Man-as-human while holding onto the specificity of experience.

Rather than understand difference—disability, gender race—as something that should be ‘fixed’ by the pedagogue, an anarchival pedagogy that takes ‘learning to become affected’ as its ethical proposition attends to how these things come to be formulated moment-by-moment in the classroom. The diversity of genres explored in this chapter, when thought through a perception of depth, curates difference: 70s Disco (*ADA!*), queer anthems (*Alpha Centauri*), minimalism (*Hurry Up*), and love songs with Taiko drums (*Cruel Bliss, Sweet Pain*). It’s a way of thinking about the ever-shifting assemblage that happened on the walk. Re-treading the same walk today might not cue up the same sensations. Moreover, re-treading the memories also rewrites them. The unexpected transition of the songs, from rowdy pub fisherman song to falsetto disharmony; robot cyber-voice to taikos and ensemble; between different chords and parts of the song. Listening to a pair of works—across two (or more songs) on the *Queer the Landscape!* album, but also across *Queer the Landscape!* to the other *Oblique Curiosities* songs and across these with the in-school project—innovates each work to “[become] a variation of what it is” (Springgay & Rotas, 2015, p. 562). In other words, the trajectory through the works unfolds in difference, changing how each comes to be impressed. Thus, the projects discussed in this chapter curate difference.

Chapter summary.

In this chapter, I have discussed how music composition is a kind of pedagogical practice. This addressed the second part of my second research question—To what extent do research-creation and *sound art pedagogies* allow the analysis of learning experiences in the classroom?—by exploring how music composition research-creation functions pedagogically. I have called this a more-than-sonic pedagogy. I suggested that pedagogical encounters are affection: a moment of affecting-affected. Unlike dominant,

reproductive modes of pedagogy, which seek to regulate, and critical pedagogy, which seek to emancipate from regulation (through further regulation), a pedagogical encounter that takes ‘learning to be affected’ as its ethics of encounter disorients the learner, unsettling “familiar habits of thought” and audition (Braidotti, 2013, p. 88). Each disorientation is pedagogical in that, after Kathleen Stewart (2020), it “stretche[s] the conceptual skin between an inside self and whatever was taking place outside it, pushing and pulling the subject into contingent, morphing shapes” (p. 33). The compositions discussed here generated new publics, both in their initial composing (on a hill, in the classroom, in the studio) and in their re-composing in each anarchival re-listening, and that unfolds (in) difference rather than seeks to induce sameness.

It’s important to note here though that I’m not necessarily criticising humanising modes of pedagogy. Dwelling in the non-human—or ‘monstrous’ (Burdick & Sandlin, 2013)—as a way to unsettle the humanism of pedagogy is all well and good for those populations always-already rendered as least monstrous: white, abled, wealthy, English-speaking etc. As José Muñoz (1999) contends: “dis-identification is not an appropriate strategy for all minoritarian subjects all of the time” (loc. 3307), and in this vein I am not arguing that teaching shouldn’t humanise. What I am suggesting, here is that pedagogical commitment to defamiliarisation might—for a few moments at a time—unsettle that human.

In the remaining three chapters, I consider how a pedagogical commitment to defamiliarisation unsettles the neuro-centrism of the early childhood curriculum. I think about the ways that neurodivergence shapes and is shaped by the classroom, specifically thinking more with the possibility of the pedagogical encounter as a moment of affection and what Rice and her colleagues (2018) call biopedagogies to explore how neurodivergence is shaped in the classroom. I argue that, in attending to the more-than-

sonic aspects of pedagogical encounter, we (momentarily, multiple-y) accommodate, dispel, and revel in neurodivergence. Thus, I'm reaching for an affective ethics of encounter that, following Bertelsen & Murphie (2010), "signals a constant innovation" in how we configure ethics: an innovation that requires us to "develop a creative responsibility for modes of living *as they come into being*" (p. 141, italics in original).

6. Neuroqueer(ing) Method: Ethics, art & pedagogy.

Preamble: Introducing *Neuroqueer(ing) Noise*.

In this chapter, I describe the context of my empirical in-school study and outline the research design. While the main goal of this chapter is to provide transparency about the research process, I also begin to touch on some of the wider tensions that animate much of this thesis, such as: the ethical complexity of ‘representing’ disability in the classroom; the tension between (1) *categorising* an individual young person as disabled and (2) *erasing* that experience, particularly where those young people are not yet claiming the term for themselves; the impact of my own positionality on the young people and the adults; and all the while thinking about how body(mind)s don’t arrive fully pre-constituted to the classroom and research encounter. These tensions, “between universalizing and locating impulses” (Luciano & Chen, 2015, p. 192) animate much of this thesis.

Chapter overview.

I begin with a brief summary of the research study and the research context. Please note that all school and participant names are anonymised. I then discuss the methods I used and how, through those methods, I selected artefacts for inclusion in this thesis. I then describe the pilot study. I puncture this description with discussion of the ethical complexity of gaining informed consent, both with parents who speak a home language other than English and/or who have poor reading skills, and with very young children.

Moreover, I attend to the ethical complexity of doing arts-based educational research with disabled participants, which I attend to by situating the activation of the methods within the methodological orientation of critical disability studies. I conclude this chapter with a brief description of the five mini-projects that we worked on throughout the longer research-creation study.

Specifics of the in-school study.

The in-school study was a fourteen-month artist residency that took place at Kingfisher Academy in Leeds. It was a collaboration between a single class of thirty young people, their classroom teacher, their support adults, and me. The class was in Year 1 (aged 5-6) during the pilot study in June and July 2018, and in Year 2 (aged 6-7) during the main study, from September 2018 to July 2019. The research-creation was enacted as a series of one-hour music composition episodes. These took place on Tuesday or Thursday afternoons, every week between June 2018 and July 2019, usually at 12:30pm. I called the study *Neuroqueer(ing) Noise*. *Neuroqueer(ing) Noise* explores the relationship between music composition and the instability of 'neurotypicality'. It does so specifically at the intersection of racialisation, Anglo-centrism, and dis/ability. In chapter 8, I attend specifically to how neurodivergence is shaped in the classroom, including a review of the literature on disability studies in education. Following that, in chapter 8, I come to argue that this instability is at its most disruptive—or what Muñoz (2009) might call 'utopic'—when held in fabulous, frictional presupposition with: A/autistic cultural and counter-identitarian practice, the reality of A/autistic dis/ability, and the social-cultural contingency of 'autism' itself. I hold onto this tension with my stylised writing of *A/autisms*.

In chapter 3, I explained what research-creation is. In chapter 4, I demonstrated how research-creation works in my own composition practice. However, research-creation is a little different when conducted as educational research in a classroom than when done in my own individual practice. Educational research-creation “events a line of inquiry regarding the intersections between social practice art and pedagogy” (Springgay, 2020a, p. 149). Social practice art is a medium of artistic process that doesn’t emphasise any one particular form. Instead, in social practice art, the process of artistic practice as an interaction between the participants is itself the ‘form’. Now, as you’ve probably noticed, the research described in this thesis *does* take a particular form: we composed music. This was due to my own participation: In the classroom, I was the researcher and the facilitator/artist/pedagogue (or “our music teacher today” as I quickly became known). As such, my own artistic and research interests shaped each event, as did my own lack of ability to do anything else: music and teaching are the only things I can do. As social practice art, the in-school research-creation study I describe in this thesis is distinct from approaches to artistic practice that understand art as something that is ‘brought in’ from outside, whether as pre-formed techniques, canon or curricula. Instead, research-creation “resides in the speculative middle” (Springgay, 2020a, p. 150): I did not approach the classroom with a list of compositional techniques, canonical works, or curriculum statements in mind. However, this does not mean that I went in each day unprepared. Nor did I eschew technique, canon, or the curriculum. Rather, as I’ve already described, research-creation is oriented primarily by feminist praxis: the study was shaped by propositions, with technique, canon and curricula curated to better attune to different intensities and flows and with an always-deliberate attention to enact liberatory material changes. If this sounds a little ‘neurotypical white saviour’, then that’s because it is: I

problematise this more later in the chapter. In the next section, however, I describe the research context and how I negotiated access to the setting.

Research context: ‘Kingfisher Academy.’

Kingfisher Academy is part of a multi-academy trust. The trust is owned by a consumer co-operative and has schools in several regions across northern England, including Yorkshire, Manchester and Merseyside. It’s important to acknowledge at this point that my impression of the school is based upon my experiences in other schools: Thus, what Ahmed (2014) would call my ‘trajectory’ to the classroom was thoroughly ‘angled’ by prior experiences of teaching and leading in other primary schools. My first impression of Kingfisher Academy was that it was ‘nice’, in all that word’s insipid complexity. The young people are welcoming, cheerful and very interested in adult affection, such as hugs, kind words, and sharing stories: all very normal things in any early childhood setting but multiplied several times over. They also felt a lot younger than similarly aged children in my last school. Moreover, Kingfisher doesn’t have the more extreme disruptive behaviour I’d become used to in previous settings. Finally, the school’s accountability measures tended to emphasise the morning lessons (literacy, phonics and maths) and so the afternoons were a lot more relaxed and malleable than I was used to. The staff was incredibly generous, supporting me with resources, saving me when behaviours got away from me, and even managing the labour of the consent forms (more on that later). This all combined to make a school that just felt ‘nice’. At the same time, the incorporation of branding from the Trust’s sponsor across the school was a little eery, even though the academies are not run for profit. Indeed, the sponsor has strong social justice commitments, achieving widespread attention during the coronavirus pandemic for providing food parcels or vouchers to the young people in its care during school holidays

(although, as a massive consumer conglomerate whose many businesses include supermarkets, it's hard to imagine how they could *not* have provided food parcels or vouchers). At the same time, the corporatisation of the school was very apparent. The academy's reward system is based around tokens called coins, which are branded with the organisation's logo. The coins can be traded for rewards. Coins are given out for showing a behaviour that demonstrate the school's values, which, again, are named after the sponsor organisation and branded with its logo. Each of the values are highly inclusive and universalising: as a gay man working in early childhood education, my favourites are *Be yourself* and *Do what matters*, implying that all 'selves' are equally welcome and that 'what matters' is self-evident. Treating these two values as propositions—particularly when thinking through affect theories and how 'what comes to matter' is the result of patterns of marginalisation—has been very productive in writing this thesis. This combination of the material reinforcement of humanist ideals through corporate-branded tokens and the warmth and generosity of the young people and staff was immensely disorienting.

Kingfisher Academy's cohort is diverse: racially, linguistically and neurologically. Of the research class, 17% identify as Black African, 10% as Black British, 7% as Black Caribbean, 4% as Black European, 17% as Pakistani, 4% as Indian, 10% as East Asian, 20% as white Eastern European, and 13% as white British. Moreover, 70% of the cohort identify as speakers of one of forty-two different home languages. In the research cohort, this includes: Akan, Arabic, Chinese (Shandong and Lower-Yangzi Mandarins), Bengali, Czech, English, Finnish, Romanian, Polish, Spanish, Turkish and Urdu. Most year groups in the school are subject to extreme mobility, with approximately 25% of the cohort moving on each academic year: this is typically due to a combination of factors, including families moving (or being moved) to a different borough, families returning to their home country

for extended periods, rejection of asylum claims, rent increases forcing households to combine, section 47s, and the mobility of the Romaine and Traveller communities. 52% of young people in the ward live in poverty and the school's catchment area falls within the 5% most economically disadvantaged wards in the country. The setting is further complicated by the relative prosperity of a cluster of households bordering wealthier wards to the north-west. Like most (if not all) education settings in Britain, the class is neurodiverse: it includes neurodivergent young people with medical diagnoses of A/autisms, ADHD and dyslexia, but also young people who are included on the SEN register, but from whom diagnosis has been withheld, and young people who might be considered neurotypical (in that they haven't received a diagnosis and are not included on the SEN register). Consequently, the classroom environment is complex, with young people subjected to multiple overlapping patterns of marginalisation, and at the same time to the emancipatory moralism of corporate sponsors, universalising values, and (now) myself.

Negotiating access

I negotiated access to Kingfisher Academy through its headteacher, 'Moses'. Moses was the deputy head teacher at my former school in Tottenham, North London. I had broached the idea of researching in Moses's new school (Kingfisher) while still working under him: at that time, the study was quite ephemeral, and had something to do with special education practice (specifically related to A/autism), and music or sound. However, Moses was interested in building curriculum capacity in the non-core curriculum (including music) and in how inclusive practice might be better supported in mainstream provision due to the large number of young people named on Kingfisher's SEN register. For this reason, he issued me a partnership offer in July 2017, two months

before I began my PhD. As I will consider later, the corporatism of the school, and the nepotism by which I came to access it, accentuated some of the tensions often enacted in research with young people. Having described the school, and how I came to be researching in that school, I now discuss what I did in each workshop.

Basic workshop structure.

Unlike the discussion of *Oblique Curiosities* in the previous chapter (which I argued was an example of *public pedagogy*), *Neuroqueer(ing) Noise* is legible as a series of quite traditional pedagogical events. For instance, each workshop was broadly aligned with the curriculum topic at the time (with the exception of the pilot, which I designed myself in order to inform the young people's consent). Towards the beginning of each topic, I would ask the teachers what the next curriculum emphasis would be. I would then come up with some ideas and ask the teachers for feedback. I also made sure that the workshops correlated with the National Curriculum expectations for music.

During the workshops, I essentially took on the role of class teacher: I used my training and experience as a teacher to teach quite complex topics in age-appropriate ways; I set clear learning intentions and assessed for learning as I went along. Moreover, I had to do commonplace classroom things, such as: manage behaviour, gate-keep the toilet, fix sore knees and heads with wet paper towels, deal with the aftermath of fractious playground encounters, and every one of the billion other things that teachers must contend with in the moment. I also wrote detailed plans for myself in advance of each session, so I knew what I was going to *do* when I got into the room. This included using phonics to teach and recap keywords, as well as the accompanying Makaton signs.

Every workshop followed a similar structure. We began each workshop with a brief 'carpet time.' The music workshops took place straight after lunch, and so I usually

had to ‘settle’ the young people a little. This might involve asking questions about what happened since our last workshop, as well as addressing any frictions hanging over from lunchtime that hadn’t been resolved. Following this, I would state the broad topic for the workshop. For instance, “Today we’re going to carry on our project on electrodermal activity.” I accompanied this phrase with Makaton signs. Makaton is a communication tool derived from British Sign Language and designed to support and accompany development of spoken language.³³ I used Makaton across the study for three reasons: first, Kingfisher Academy is a Makaton school; second, both the research class and the non-research class include young people whose primary communication tool is Makaton; and, finally, Makaton makes new English language vocabulary clearer to speakers of home languages other than English. The Makaton signs for the phrase “Today we’re going to carry on our project on electrodermal activity” are illustrated in Figure 2 below as an example.

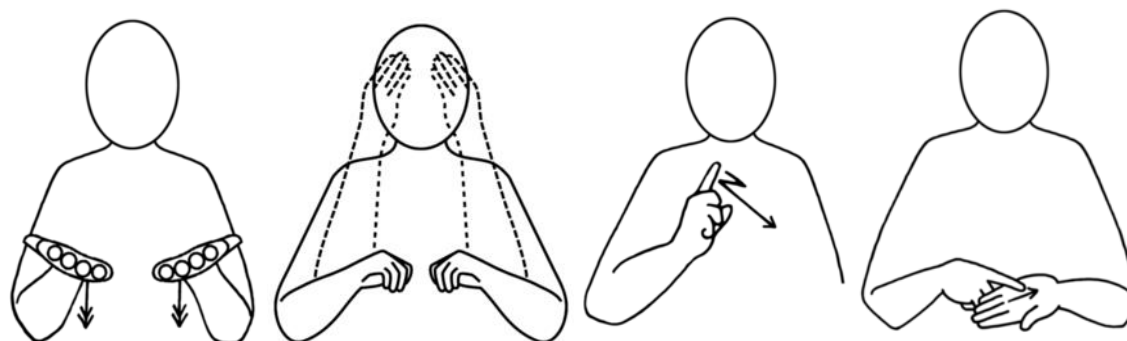


Figure 2. Line drawings of Makaton signs for ‘today,’ ‘learning,’ ‘electric,’ and ‘skin.’

Following this opening session, we would engage in some kind of warm-up activity. This would relate to whatever composition techniques I’d planned for that workshop, and we would usually complete them in a big circle on the floor (accompanied by the ‘circle song’). We would often repeat these warm-up activities for several weeks at a time, with

³³ It’s important here to clarify that Makaton is *not* a sign language: while the vocabulary is derived from British Sign Language, its syntax is derived entirely from English.

slight modifications or embellishments week-on-week. For instance, early on, I introduced the young people to the 'echo game'. A young person would choose an instrument and play a short pattern on it. They would then choose someone to copy that pattern. In later episodes, when we began exploring timbre and materials, the young people were tasked with not just copying the rhythm a young person had played, but the timbre with which they had played it: for instance, play a triangle so that it sounds like a rainmaker, a big bassy drum, or a whistle. We would also have a short listening episode in each workshop, whether before or after the warm-up, which would relate to the theme for that workshop. For instance, I played the young people a selection of sample-based music in a session on sampling. The warm-up game in that workshop built on the previous weeks by including an iPad running a PowerPoint: the PowerPoint showed different images, for instance a waterfall, a dog, an elephant and car. Pressing each image would trigger a sample of the corresponding sound (or, in future weeks, the wrong corresponding sound). I then had the young people play the echo game again, this time with one young person choosing a sound and the other trying to reproduce that sound on an instrument (e.g., copying a dog bark with clave). This was an important part of the composition process. Following this, I would introduce the composition activity for that day. Sometimes this was a continuation of a previous week's work. On other occasions, this was a new activity. The young people would then usually compose in groups of up to six for about twenty minutes. Following this, they would play their compositions: sometimes, this would just be for us to listen to. However, other times, I would record them in studio-like conditions (or at least as much as was possible in the classroom). I concluded each workshop with a plenary, which would recap the contents of that workshop, but also explore how the young people wanted to progress the ideas in the next workshop. I would then plan their ideas into the next workshop, by modifying what the teachers and I

had already planned, (or inserting new sessions if needs be).

As I have already explained, research-creation is animated by propositions. However, in the early (neuro- and linguistically diverse) childhood classroom, verbally stating a proposition would not have been enough. Consequently, I curated a combination of verbal statements, Makaton signing, listening activities, warm-up games and compositional techniques that brought that proposition to bear in the classroom. I explained this notion of the proposition to the young people using the language of 'enabling constraint.' Again, I accompanied this with gestures (although not Makaton signs), and reiterated to the young people over months and months that my curation of the enabling constraints was to do very small activities that let us think in really creative ways. In the next section, I describe which methods I used to collect data from these workshops.

Research methods.

Throughout this study, I collected data using three methods: audio recordings, which I recorded through each episode; field notes, usually typed into OneNote in the *Pret* at Leeds train station; a pair of *Empatica E4* biosensors, worn by the young people or myself; and, of course, the finished compositions. In this section, I describe each aspect of this data set in turn.

I recorded audio for the whole duration of each episode, resulting in the generation of one hour of audio for every workshop. Every audio recording includes my input, the proposition for that session, the warm-up game, the period of group rehearsal, and the final sharing of the work, as well as the fluff before and after each episode, me frantically trying to maintain order on windy days, and young people's ephemeral accounts of other things that had happened that day (e.g. "They're burning houses."). In

the pilot, I tried to record using the microphone in my iPad. However, very little was discernible from the audio due to the quality of the microphone. I also found myself constantly reminding the participants that the iPad was there and that it was recording. For the main study, I decided to use a pair of Shure SM58 microphones on boom microphone stands. They were positioned either side of the classroom's interactive white board and were connected to my laptop using standard XLR leads, via a Firewire audio interface. The microphones were very obvious, and the young people interacted with them in much more obvious way: for instance, Britney frequently monologued into them, Michael-James often told me that he liked them, and, during one, episode I noticed Nafiya and Lucinda saying 'hello' to one another and giggling into them). The microphones recorded audio into *Digital Performer*, which is the same Digital Audio Workstation (DAW) I use for composing and producing music. Sometimes, I also brought in a standard 49-key M-Audio MIDI keyboard: this connected-up to a sample library called *MachFive 2*, which I pre-programmed with samples of sound effects or recordings of the young people's own musical explorations of instruments or found objects. I write more about sound and the complexity of recording in the next chapter.

I also wrote field notes after each workshop. The field notes were quite perfunctory, consisting mostly of: brief descriptions from each episode to help me find events that I might want to listen back to more easily; descriptions of events that wouldn't otherwise be easily audible; as well as occasional notes about relevant theories, or how the next episode might take shape.

I also used a pair of *Empatica E4* wristbands, or what I'm calling 'electrodermal gizmos'. These gizmos generate electrodermal activity, which is a measure of the increase in the body(mind)'s state of arousal. The gizmos also detect heart rate, temperature, and movement. I employed the gizmos in the in-school study to map against three doxa in

A/autisms research: (1) the specific research interest into the atypical functioning of the A/autistic autonomic nervous system (particularly as measured by electrodermal activity); (2) the more general biocentrism through which A/autisms is commonly narrated; and (3) the linking of the A/autistic with the electrical or technological. I write more about these doxa in later chapters. Every week, we began the workshop by asking young people to raise their hands if they wanted to wear a gizmo, and hadn't already worn one: the gizmos were quite desirable, and so I made notes on who'd worn a gizmo on any given day to ensure that everyone had had an opportunity to wear one by the end of the study. Importantly, I never chose a young person and then asked them if they wanted to wear one. Most days, the same two young people wore a gizmo all the way through. However, by the end of the year, the novelty had worn off a little, and the temperature had risen, and so the increasingly moist gizmos began changing hands several times in each episode.

In the next section of this chapter, I explore the unique ethical considerations provoked by my use of these methods and my focus on disability. Before I turn to this, I want to attend to how I 'selected' the events that feature in this thesis. Spending an hour every week for 14 months with the research class generated a massive amount of data in the form of audio recordings, EDA data and field notes. Rather than try to analyse the entire dataset, I take up Vasquez's (2013) proposition to counter the anthologising impulse of sound studies by 'listening in detail' to a curated selection of smaller events, or what Olsson (2009) calls attending to *micro-events* that draw "as much as possible out of what seems to be a tiny little event" and so offers "a better chance to see all the singularities" (p. 120). I think about this curation as attending to what Maggie MacLure (2013a) might call the 'glow' of data. MacLure (2013a) discusses how, sometimes, the thinking and writing process can be hijacked by something "not-yet-articulated", effecting a "quantum leap that moves the writing-writer to somewhere unpredictable" (p. 661).

Important to this glow is that it is not the researcher consciously accentuating something in the data, or even the data unconsciously accentuating itself. Rather, “[o]n those occasions, agency feels distributed and undecidable, as if we have chosen something that has chosen us” (p. 661). MacLure calls this hijacking an encounter with data that seems to glow. Or, as I call it in chapter 4, with dog shit smells that stink. Glows and stinks hover alluringly, propositionally over particular pieces of data, pushing thinking and writing in particular directions. And yet, and while there were many events and avenues of thought that I could have focused on, my political attention to contesting how A/autisms are formulated in the classroom, while remaining responsible for what is produced and recirculated through the research-creation, undoubtedly shaped what seemed to glow (or stink). Thus, as Ahmed (2008) contends “there is a politics to how we distribute our attention” (p. 30). In the next section of this chapter, I explore how that political attention governed the ethics process.

Ethics and/in the pilot study.

In this section, I describe the pilot study. I begin by discussing some of the ethical complexities of researching in an early childhood classroom that mobilised how I enacted the pilot study. As I have already indicated in chapter 2, mainstream British schools follow an inclusive approach to disability provision. For this reason, and like *all* research conducted in British primary schools, the study described in this thesis is research done with disabled people. For the purposes of this chapter, I am taking quite a dyadic approach to disability and ability: this is not reflective of my uptake of critical disability studies in education across this thesis and contrasts with my writing in the previous chapter where I described disability as a moment-by-moment oscillation between debility and capacity. This dyadic understanding of an abled/disabled binary is also one that I

complicate significantly in chapters 7 and 8. However, it is important in sketching my approach to ethics in this chapter to note that some of my participants are ‘disabled’ in the word’s most normative sense, while some are ‘abled’ (again, in its most normative sense): this is to better attend to the ethical complexity of doing research with disabled participants. I return to this complex notion in the concluding remarks of this chapter on page 220. Moreover, the diversity of home languages other than English and low rates of literacy amongst the children’s grown-ups complicated how I approached the process of obtaining informed consent. This requires a particular ethical attention, which I attend to in this section where I situate the activation of the methods within the methodological orientation of critical disability studies.

Moses invited me to conduct my research study with Kingfisher Academy’s two-form Year 1 cohort, consisting of sixty 5–6-year-olds spread across Pigeons class and Peacocks class. Moses chose this cohort because it had a significant number of young people with Special Educational Needs. The pilot study ran through June and July 2018 and was preceded by an initial non-research music episode in May 2018 in which we made instruments: I did this to feel out which class I would research with and which class would participate in the non-research activity, while the choice to make instruments was dictated by the fact that the school didn’t have any (the instruments we made were very bad, so I later went on to purchase a collection of instruments).

With fourteen months of weekly contact, I got to know both classes very well. I found Pigeons class to be boisterous, intense, curious, hilarious, piercing, excitable, erudite, maniacal, sweet, exhausting and undulating: I chose them as the research-class because their teacher’s style was closer to my own, while I found Peacocks much more difficult to manage (despite them being narrated as the ‘easier’ class). Pigeons class also

included Elaine (Rei's 1:1 learning support assistant), Saadiya (the class teaching assistant), and the class teacher. None of the adults changed during the study.

Prior to the pilot study, I had volunteered at Kingfisher Academy on several occasions. When volunteering, I implemented a systematic synthetic phonics program I was familiar with; supported Year 2 teachers with preparing evidence for end-of-KS1 moderation; and volunteered with the Reception cohort. This meant that, amongst the staff at least, I was already a familiar face in the school. As a qualified teacher, I was given a great deal of autonomy and mostly left to run the episodes as I saw fit, while the adults took part in the activities every week and were very supportive. At the same time, it's important to acknowledge *how* I came to be at Kingfisher: it wasn't a secret that I was 'friends with the boss', which created a complex power relationship in the classroom that I couldn't really account for. In other words, some of the freedom I enjoyed may have been a result of having known the head teacher, compounding my classed, gendered and racial privilege as a white, cis-hetero, visiting 'expert'.

The pilot study consisted of six pilot research-creation episodes. Through this pilot, I intended to: develop relationships with the young people and learn the school routines and classroom management approaches. I also wanted to rehearse the planning and delivery of research-creation episodes: although there are lots of examples of people doing arts-based research in schools, there are no examples of music composition research-creation that happens with whole-classes of KS1 young people and so I had to explore how to translate the process described in chapter 4 in relation to *Oblique Curiosities* into the primary classroom: what did it mean to 'work propositionally' in that context? what did it mean to 'attend to different intensities and flows'? what did it mean for something to be 'all process no deliverable'? and, most concerningly, how can something in an early childhood classroom be 'emergent' without turning into a

migraine/disaster/bloodbath? I also wanted to use the pilot to inform the participants' consent and to explain the research methods, which is what I turn to in the next section.

Informed consent: Presuming (in)competence.

The process of obtaining informed consent from the young people's grown-ups (i.e., those with parental responsibility) was fraught with complexities. In this section, I think about these complexities with the disability studies concept of *presuming competence* and affect theory.

I created a written consent form for both the young people and their grown-ups to sign (see Appendix B). The consent form allowed the grown-ups to give different levels of consent. They could consent to allow anonymised audio recordings, field-notes and photographs. They could agree to their young person wearing a gizmo (described as a 'multisensory device' on the consent form, with more detail on the participant information letter: see Appendix E). They could also agree to their young person taking part without being formally part of the research (although possibly still being audio-recorded if they did). They could also consent to their young person being credited to the composition using their real name. I also included a box asking grown-ups to acknowledge that they had read the participant information sheet and had been offered time to ask questions. The participant information sheet could be taken home and studied further, although only five copies were taken away. The class teacher and support staff took charge of the consent forms and participant information sheet, explaining to each grown-up individually the contents of the document and how permission worked over the course of several days. I also offered a workshop to the grown-ups to further explain the research and the electrodermal gizmos: two grown-ups expressed an interest, although

they did not turn up. An episode to inform the young people's consent was incorporated into the pilot phase, which I describe later in this chapter.

I consider myself fortunate that all the grown-ups of young people in Pigeons class consented to their young person at least taking part in the research lessons, and featuring in audio recordings and field notes. This was a relief because, aside from the practicalities of keeping a check on who could and who couldn't participate, thinking about the research encounter using affect theories and from a critical disability studies perspective complicates what consent is and can mean. Firstly, affect theories understand all of the young people as imbricated in the compositional events: affecting and being affected as part of an intra-active whole. Truly separating out young people whose grown-ups had not consented on their behalf would have been impossible. At the same time, not all grown-ups agreed to their young people wearing electrodermal gizmos. Thinking about the complexity of EDA data as belonging to the environment rather than residing in an individual body(mind) (de Freitas, 2017), as I do later in this thesis, raises a similar concern. In other words, although I followed grown-ups' wishes not to physically put a device on some young people, their electrodermal activity was still recorded as part of the environmental sensibility. Moreover, the process of gaining parental consent indicates how parental voice is privileged above the young people's, reinscribing from the outset the very same animacy hierarchies that I'd set out to unsettle. I think about this privileging in the next paragraph.

Douglas Biklen (Biklen & Burke, 2006) suggests that we must 'presume competence' when neurodivergent people express an opinion or preference. Furthermore, Eunjung Kim (2015) argues that even 'presuming competence' relies on humanist notions that competence should be important in recognising the "ontology of a being" (p. 305). Now, the young people are not all 'neurodivergent' in the way we

typically understand it, but I do think they're narratable as situating further away from 'Man' because, as children, they are not neurologically 'developed', and so are subject to neurodiverging logics (I explore this in more detail in chapter 7 and 8). My point here, then, is that, even though I think getting parental consent was important, the notion of the grown-up's inherent competence to consent, and the children's inherent *incompetence*, reinforces the very same corporeal hierarchies and ablenationalist 'minimum capacities' that I set out to defamiliarise. In other words, the limitations of my study in contesting hierarchies of capacity were made very clear from the outset. It's for this reason that, throughout this thesis, I prefer the term 'momentary unsettling' to 'disrupting' or 'queering': Power structures don't topple just because you're doing music (and when they do, it's usually not for very long). As it stands, though, every young person gave written consent to participate and every participant's grown-up also gave written consent. Some of the young people signed the forms at home, while the rest signed in class. A few also agreed to have the young people use their real names: I eventually decided to anonymise *all* of the participants. I initially wanted to include real names because of the history of disabled people being sapped of intention (including authorial intent) and anonymised in textbooks (Mykitiuk et al., 2015). At the same time, given the linguistic complexity of the research context, I was concerned that consent to use a real name could be due to a misunderstanding and so decided to paternalistically anonymise everyone as a check against this—and, in so doing, presuming incompetence of both the young people and their grown-ups.

The head teacher, classroom teacher and support staff also gave consent: Again, their consent was striated to give different levels of consent (see Appendix C and D). All of the adults working in Pigeons class agreed to be audio-recorded, although the class teacher did not agree to wear a gimzo or to have their real name or a pseudonym used to

describe any musical contributions they made. School staff were also informed of the aims and objectives of the research, and what methods would be used using their own participant information letters (Appendix F and G).

The layout of the school building allowed me to offer an additional level of ongoing consent. Every classroom at Kingfisher Academy includes doors that lead to adjoining classrooms. This allowed me to facilitate ongoing consent by running each episode twice: once with the class in which I was conducting the research (Pigeons), and once with the cohort's other class (Peacocks). Young people in the research class could refuse to take part in the research by walking through the adjoining door into the cohort's second class, who would later participate in a 'research-free' but otherwise identical music episode. This also kept provision equitable across both classes in the year group. The other adjoining door led to the school's additional resourced provision (ARP), which included two young people from the research class: one ('CJ') who very occasionally decided to come into the research class, and another who never came in. Although CJ's grown-up consented to them participating in the research activities, they did not consent to their being audio recorded, and so their contributions are not discussed. While I was quite impressed with myself for thinking of the idea of 'ongoing consent', it's notable that not one single young person took advantage of it across the 14 months of research: not even for the novelty. It's very reasonable that children simply may not have wanted to leave their classrooms. They may also have been too well-trained not to. Despite this, on occasion, young people took themselves to the book corner when they didn't want to participate: this was already common practice in the classroom and so I began leaving a pair of ear defenders in there. Having considered the ethics of informed consent, in the next section I go on to think more robustly with the particular ethical concerns of doing arts-based research with disabled participants.

Ethics of arts-based research with disabled people.

In the previous chapter, I theorised how research-creation as I understand it is ethically and politically attuned: this attunement responds to what emerges in the encounter to enact a feminist praxis. As I intimated at the start of this section, all educational research done in a British school is research with disabled people: this is because of the ‘inclusive’ approach to education adopted in the UK since the 1970s (and elaborated upon in chapter 2). Yet, most educational research does not explicitly invest in the particular ethical complexity of researching with disabled people. Moreover, as I’ve already stated, this complexity is not displaced when doing research-creation: rather, arts-based research has the potential to amplify these inequalities. Mykitiuk et al. (2015) propose four “additional and complex ethical questions” for conducting arts-based research with disabled people (p. 377). These considerations require an attention to (1) the accessibility of the research process; (2) the ‘fuzzy’ boundaries between the facilitating artist and the participants (i.e., balancing aesthetic quality without the artist impinging on the agency of the non-artist participants, as well as the complexity of author accreditation); (3) the risk to audiences of creating a work that might describe experiences of institutionalisation and violence; and (4) the potential for the work to propagate further (mis)representations. These concerns animate my own engagement with the ethics process for *Neuroqueer(ing) Noise* (see Appendix H and I). I have already started to attend to the first and third of Mykitiuk et al.’s (2015) questions in previous sections, where I described how ear defenders and timeout were available and how I negotiated consent and accreditation. Each of these concerns are also very much embedded with issues of representation and so continue the discussion I began in chapter 3: there I described representationalism as an approach to research that relies on a particular figuration of the human that is temporally and geographically asynchronous to the events, and so

objective and free from the mess of the encounter. In the next section, I discuss how these logics relate to my study in more detail: this include a discussion of what Disability Art is, and how it relates to *Neuroqueer(ing) Noise*.

(how) Do I Stare? Issues of representation

The questions Mykitiuk and her colleagues (2015) raise pivot on the historical and ongoing problems of disability representation. Representations of disabled people are often created by or for abled people. This is true, in research encounters (such as in medical textbooks), educational or healthcare provision (such as Education Health and Care Plans), and in wider culture: each representation is typically created by or for an abled person who is fundamentally separate from the disabled person: in other words, misrepresented (McRuer, 2006), or else forced to self-misrepresent as disabled in the “right” way to gain support or provision (Mykitiuk et al., 2015). I have contributed to many such misrepresentations as a SENCo. Children and individuals with cognitive disabilities—who, for instance, may not use spoken language—are particularly subject to this ‘being (mis)represented for’ because of assumptions of their lesser competence: I describe some examples of this in chapter 8. Rosemarie Garland-Thomson (2002) writes that the history of disabled people in the West “is in part the history of being on display, of being visually conspicuous while politically and socially erased” (p. 2). In critical disability studies, this ‘being on display’ as a mode of representation is sometimes called ‘the Stare’ (Garland-Thomson, 2009). The Stare indicates the particular, perverse enthrallment that an abled person experiences when encountering a disabled person: a simultaneous desire to stare at and look away. Thus, I conceptualise the Stare as a vector of shame. According to Eve Sedgwick (2003), shame is individuating and contagious. She writes:

someone else's embarrassment, stigma, debility, bad smell, or strange behaviour, seemingly having nothing to do with me, can so readily flood me[... it] seems to delineate my precise individual outlines" (p. 37).

Thus, I think 'the Stare' is pollinated by shame: (1) abled people's assumption of the shame of the disabled person ('Aw what a shame'); (2) abled people's shame felt on behalf of the disabled person ('They must feel so ashamed'); and (3) abled people being shamed for Staring ('Don't stare!'). Moreover, this pollination is essential to the process of how disability shapes ability: it is through the experience of shame by abled people that the illusion of the abled's separateness from the disabled is individuated. At the same time, this dual function of the Stare—what might be thought of as the tension between individuation and contagion—is key to the subjugation of disabled body(mind): inspirationally or titillatingly 'displayed'—for instance, in medical literature, freak shows or charity advertising (Garland-Thomson, 2009; Kafer, 2013)—so that abled people can experience the shameful thrill of individuation, at the same time that they are 'concealed'—for instance, in hospitals, institutions and SEN/ARP units (Clare, 1999; Rice et al., 2015)—to save abled people from experiencing that same shame. Doing educational research with disabled participants, as all educational researchers inevitably must, requires attention to how the research fits within this history, especially when researching as an abled person. In other words: *(how) Do I Stare?*

In this thesis, I think about the Stare as an auditory mode of perception. This is in contrast to other scholarship that thinks about the Stare as operating through vision (e.g. Rice et al., 2018). In the coming chapters, I'll begin to propose how we might think about the Stare as operating non-visually, by considering which sounds are written off as 'noise'. For now, though, I want to consider how to intervene in the stare. I do so by thinking about my project's relationship with Disability Art.

Disability Art.

If the Stare is the process by which disabled people are sapped of agency, then Disability Art might be thought of as appropriating the Stare: By way of a definition, Disability Artist and curator Eliza Chandler and her colleagues (2018) write: “disability arts, produced by disabled people, disrupts thick cultural assumptions that disabled people are passive, non-agentive, and unified in [their] experiences” (p. 253). Thus, Disability Art takes the fact that abled people are already staring at disabled people, and defamiliarises that Stare through mobilising the same discomfort: what Garland-Thomson (2009) calls ‘visual activism’ (p. 193), or ‘Look at me!’ rather than ‘Don’t stare!’ So, what is Disability Art?

Defining Disability Art is tricky business. Disability Art is commonly defined as art produced by disabled people about disability (Jacobson & McMurphy, 2010, p. 1, as cited in Kelly & Orsini, 2016, p. 5). Some scholars (e.g., Hickey-Moody, 2021) differentiate between Disability Art as defined here, and art that is produced by disabled people but that isn’t ‘about’ disability. Yet, some Disability Artists have problematised the idea that Disabled Artists could so neatly parse the experience of disability from their artistic practice. As Disability Artist Catherine Frazee writes:

Not all of Disability Art is explicitly about the disability experience. But all of it, I would suggest, springs from disability experience, and to be fully appreciated, must be seen and heard with all of its historic and biographical resonances.

(Frazee, 2009, as cited in Chandler, 2018, p. 253)

Thus, Frazee argues that art created by disabled people is always shaped by the material reality of disability and so cannot be parsed *from* disability. D/deaf and Disability art has been considered as adopting McRuer and Johnson’s (2014) notion of *cripistemology*. Cripistemology is the unique onto-epistemological perspective experienced by disabled people. Disability Art is cripistemological, then, because it incorporates knowledges that

emerge from “transitory embodied and embedded experiences of those coded as morphologically and mentally different” (Chandler et al., 2019, p. 87). Star Ford (2010) and Rod Michalko (2002) have described the unique sensory insights afforded them by their A/autisms and blindness. Similarly, Manning and Massumi (2014) describe how ‘neurodiverse’ experience of environment differs from neurotypical experience.³⁴ While neurotypical experience is one of entrainment’ in which perception is tied to discerning individuals and their affordances, Manning and Massumi describe A/autistic experience as one of entertainment, which experiences the whole field before its individuation, and so has a “relational emphasis” (p. 18). This is part of the consideration of how disability is generative that I described in chapter 2. Similarly, a host of crip and Disability Artists have produced work that understands disability as culturally productive. Some of this work is effectively described in volumes and articles, but is not further detailed here (e.g. Chandler, Changfoot, Rice, LaMarre, & Mykitiuk, 2018; Douglas et al., 2019; Kelly & Orsini, 2016; Nelson, 2016). Thus, I understand Disability Art as art produced by disabled people from the unique vantage point of disabled experience (i.e., cripistemology) that subverts or appropriates the Stare. As an abled person, I am not capable of producing or curating Disability Art. Yet, in sharing an intention to defamiliarise the fixity of normative notions of body(mind) capacity, and in producing art with a neurodiverse group of collaborators, *Neuroqueer(ing) Noise* is indebted to the history and intentions of disabled artists, without claiming to be part of that canon. Thus, I understand *Neuroqueer(ing) Noise* as adjacent to Disability Art.

Yet, as I’ve already stated, the risks of doxically narrating A/autisms don’t go away just because we’re doing art. Doing art can also reinforce doxic representations/

³⁴ Note that Manning and Massumi use ‘neurodiverse’ as a subject description for neurodivergent people.

misrepresentations of disability, which is one of the key concerns of Mykitiuk et al. (2015), just as the Stare already does. One of these doxa is cripspiration, whereby the disabled person inspirationally overcomes the adversity posed by their impairments to succeed (almost) as well as an abled person (Kafer, 2013; Liddiard, 2014), or else to mobilise sympathy in charity advertising (Clare, 2017; Nelson, 2016). Another example might be the savant (or super-crip), whereby the disabled person has a particular set of hyper-normative skills, but that are always narrated through their impairment: for instance, prodigious musicianship (e.g. Evelyn Glennie and Nobuyuki Tsujii), skill in sports (e.g. Paralympics), or marvellous superpowers (e.g. Daredevil or Zatoichi). Regardless of the doxa deployed, these representations sap disabled people of agency through overdetermining what disabled people can do. Thus, it's important that we don't push participants into fulfilling one of these doxa: whether due to the ways that facilitating artist-researchers (as I was in *Neuroqueer(ing) Noise*) ultimately shape the participants due to the importance of aesthetics in arts-based research; or, due to the audience's interpretation of the finished work. Having described some of the background issues that relate to doing arts-based research, I now discuss my pilot project and how it attended to these concerns.

The pilot episodes.

In this section, I discuss the six pilot episodes. Along the way, I consider how the project activates Mykitiuk et al.'s (2015) four ethical questions for conducting arts-based research with disabled people. I summarise Mykitiuk et al.'s (2015) questions again here as attending to: (1) accessibility; (2) the tensions surrounding aesthetics, agency and accreditation; (3) more-than-representing violence; and (4) (mis)representing disabled

people. In the next section, I explicate how I attended to accessibility in the wider residency, through a discussion of the pilot's first few episodes.

Accessibility: Pilot episodes 1, 2 and 3.

In this section, I detail some of the practical accessibility measures I used in the classroom. In the first three pilot episodes, this included my use of Makaton signs and pictures to explain the concept of electrodermal activity (EDA) to the young people, and my use of ear defenders as an accommodation. I explain how I sought to employ these accommodations to make the project more accessible at the same time as crippling the notion of 'access': by this, I mean I am interested in how accommodations (in this case, the ear defenders) might be more accommodating and less normalising. Here, I am inspired by Disability Artist Chun-Shan Yi's work *Re-fuse Skin Set*. Made from the same stitching and plastics as braces or splints—which are designed to bend the disabled body back to 'normal'—*Re-fuse Skin Set* allows both of Yi's two fingers to rest in their most comfortable position: Thus, as an accommodation, it doesn't resist disability, but rather *accommodates* and extends it.

The first pilot episode in *Neuroqueer(ing) Noise* took place on 29th May 2018. I had not received consent from the young people's grown-ups yet, and so do not describe them here. I delivered the episode for both classes and used this episode to figure out which class I wanted to work with. As the school did not have any instruments, I decided that we would spend the first episode making and designing our own instruments. I brought along some empty plastic water bottles, and different kinds of pasta and lentils that we could use to make shakers. Much of this first episode was spent modelling classroom management routines, such as a wiggly-finger 'stop' sign that I used to make everyone in the room put their instrument down. These kinds of practicalities are very

important in a loud lesson with 5-year-olds, both (1) to keep everyone safe as well as (2) to make sure you can get anything done. It is also an important accessibility practice for accommodating those with Sensory Processing Differences: I'll return to this point shortly. We concluded the first pilot with every young person showing the instrument they'd built and indicating one way they could use it to make a sound.

By the second workshop, I had received consent from the young people's grown-ups. I planned to use the remaining pilot episodes to explain what EDA is. The second episode on 19th June 2018 focused on the idea of 'pulse'. I explained that we have a pulse because our heart beats, but also that music has a pulse. I taught the Makaton signs for the words: 'heart', 'excited', and 'calm' (the closest Makaton sign to 'relaxed'). The sign for 'heart' consists of a heart shape drawn using both index fingers in front of the chest. The sign for 'excited' is clawed hands rubbed vigorously over the body. The sign for 'calm' is of flat hands held vertically in front of the body and gently passed over one another. These signs are illustrated in Figure 3.

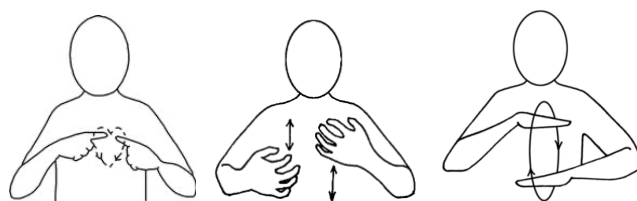


Figure 3. The Makaton signs for the words 'heart', 'excited' and 'relaxed'. The sign is presented as a line drawing of a person signing the words as described above.

After introducing the key vocabulary, I explained that music has a pulse just like we do. We tried to feel our heartbeat on our chests and then did some star jumps and felt it again. Then, I played two pieces of music: Festivo by Keiichi Suzuki and Erik Satie's Gymnopédie No. 1. We tried to dance to each piece of music and talked about how the different pieces made us feel. We talked about how one was faster than the other, and how this felt more exciting or more relaxing. Then, I introduced the electrodermal gizmos.

As I have already stated in brief, *Neuroqueer(ing) Noise* used electrodermal gizmos as part of the composition process. Electrodermal activity—sometimes known as Galvanic Skin Response—is a measure of decreases in the skin’s electrical ‘resistance’ (Betancourt et al., 2017; Westland, 2011), which is caused by the activation of sweat glands in response to stimuli (Boucsein et al., 2012; Filcikova & Mravec, 2016). Decreases in the skin’s resistance to this electrical current can imply an increase in the body(mind)’s state of arousal. This decrease is due to the body’s autonomic nervous system, which increases perspiration in response to heightened emotion or stress. This responsiveness is one aspect of the sympathetic nervous system (SNS), which operates in conjunction with the parasympathetic nervous system (PNS) to form the autonomic nervous system (ANS). As I’ve already stated, and as I explain in chapter 8, there is currently a significant research interest into how A/autistic and other neurodivergent people have atypical autonomic responses. This literature is driven by the epistemological rapture A/autisms holds on life scientists: I’ll talk about this more in chapter 8 too.

To inform children’s consent to wear one of the two electrodermal gizmos, I needed to explain what they do and what kind of data they produce. I needed to do this in such a way as to make such a complex topic as accessible as possible to young children, most of whom don’t speak English as a first language. For this reason, the pilot sessions formed a mini topic on ‘what is EDA?’ I explained that the electrodermal gizmos (i.e., the *Empatica E4* devices) sends tiny jolts of electricity over the skin. I used the same vocabulary of excited and relaxed to explain that, just like heart rate increases or decreases with the level of excitement, EDA changes depending on how relaxed or excited you’re feeling. Although it is a misconception to say that EDA data can measure

being 'relaxed',³⁵ I still used the word to try to make the data as clear as possible. I wore an E4 for the whole of the first workshop, which I paired with Empatica's *E4Realtime* iOS app via Bluetooth and then displayed from my phone onto the classroom's interactive whiteboard. I did so to demonstrate what EDA data was and looked like before asking the children to consent to wear one. I pointed out moments where the signal was higher, and moments where it was lower. I continued to project the signal onto the board and set the young people the tasks of making excited or relaxed music. At the end of the session, I took off the device, and pointed out how it had left an impression on the skin slightly and made it kind of damp. So far in this section, I have explained how I used classroom management strategies and Makaton signs to make artistic research accessible. In the next paragraphs, I explain how I used ear defenders, both to afford and complicate 'access.'

While I initially intended to use our home-made instruments for the whole residency, I realised during the very first episode that this was quite a bad idea as they weren't very good. For this reason, I bought some instruments shortly after the first episode. Our new instruments came in time for the third pilot episode on 26th June 2018. I also bought six pairs of ear defenders. Although Rei and Emma (who are both A/autistic) use them as part of their regular provision, the ear defenders were greeted with some bemusement at first by the rest of the class. Several young people put them on straight away and giggled or stared around in incredulity. Others seemed to think they would generate sound like Bluetooth headphones and got bored of them quickly. However, unperturbed, Dean-Damien pulled a guitar hero face and indulged in some silent shredding, while Britney, noticing how the change in audition made her own voice sound

³⁵ Electrodermal gizmos cannot measure becoming 'relaxed' because decreases in arousal just reduce the amount of sweat produced: the skin's conductance won't fall until the perspiration evaporates.

“really weird”, went back to her seat wagging her head from side-to-side and nee-nawing “la-la la-la.” While primarily an accommodation to enable accessibility, Britney’s ‘really weird’ head-wag and Dean-Damien’s air guitar solo were propositions for how we might approach accommodation differently in disability research, and investigate the normalising of auditory perception: I attend to both these points in the next two paragraphs.

First, Britney and Dean-Damien’s playful experimentations illustrate an untethering of accommodation from normative notions of access. Disability artists have long critiqued accommodation in this way. For instance, Lisa Bufano’s movement piece *One Breath is an Ocean for a Wooden Heart* is choreographed for one amputee and one abled person, wherein each uses four prostheses. Instead of ‘overcoming’ disability, the prostheses offer unique affordances and constraints, changing the ways that bodies come to touch and so, as Shildrick (2015) might suggest, “generat[ing]... its own specific possibilities that both limit and extend the performativity of the self” (p. 14). Similarly, Watson, Millei, and Petersen (2015) critique the exclusivity of ‘inclusive practice’ in an early childhood classroom. They contend that ‘special’ young people become bound to ‘special’ objects designated only for their use, such as the ear defenders, and so illustrating how purportedly inclusive practices lead to the disabled child being “contained, limited and positioned as in need of remediation” (pp. 275-276). By way of a contrast, Britney and Dean-Damien’s experimentations with the ear defenders illustrate an untethering of ‘special child’ from ‘special object’.

Secondly, and one of the tensions I’ll animate in the next chapter, Britney and Dean-Damien’s playful experimentations illustrate how auditory perception is normalised in sound studies. *Xwélméxw* artist and scholar Dylan Robinson (2020) ties this normalism to the spread of settler-colonial versions of the human (or what I theorised in chapters 2

and 3 as Man). Thus, the assumption that (1) hearing is normal and that (2) what is heard is neutral and essential to the sounding object are both defamiliarised by Britney and Dean-Damien's experimentation: rhetoric scholar Steph Ceraso (2018) cuts across the idea of listening as just being related to the ears, and instead contends that listening is embodied, in that sound impacts all parts of the body, but are also cut through with other kinds of sensory experience. Thus, both Britney's stymied 'weird' audition and Dean-Damien's speculative audition experimented with how limiting external audio changed their relationship with other aspects of sensory experience: Britney's vestibular head-wag, and Dean-Damien's proprioceptive shredding. The idea of the whole-body doing 'listening' is popular in schools. It's often thought of as a way of disciplining the body: typically, teachers ask young people to do 'whole-body' or 'active' listening by sitting up very straight, with their heads facing forwards, and their arms folded or in their lap. Thus, normative classroom references to whole-body listening are done to force bodily conformity in the hope of also causing mental conformity. I liked the idea of an embodied listening that challenges what a body hears rather than challenging it *to* hear. Thus, like *Re-fuse Skin Set*, Britney and Dean-Damien's experimentation with the affordances of the ear defenders crips the idea of 'accommodation' in two ways: first, by unsettling how ear defenders are often used to enforce conformity—for instance, by allowing neurodivergent people to be included/rehabilitated into an 'overwhelming' space; and, second, by unsettling the doxa by which neurodivergent people are more easily aroused. Instead of resisting disability, then, the young people criped the ear defenders as offering unique affordances and constraints, changing their mode of perception rather than reducing it. Thus, accessibility in this study isn't something that I want to do to reinforce perceptions of A/autists as needing to be kept calm through *limiting* sensory experience—indeed, it's worth noting that Rei and Emma never used their ear defenders

during the music workshops—but rather that accommodations are treated generatively as something that *produces* new experiences. Thus, it resembles what Rice, Bailey and Cook (2021) describe as ‘interference’ with the ‘forness of use’. They write that the research apparatus “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” (p. 4). In this way, accommodations and research tools such as the electrodermal gizmos, the microphones, and the ear defenders, came to be redefined and (re)appropriated by different actants throughout the research process.

In the next section of this discussion of the pilot episodes and how they navigated ethical questions of doing arts-based research with disabled people, I continue to discuss the third pilot episode to think about how I attended to aesthetics, agency, and accreditation.

Aesthetics, agency and accreditation: Pilot 3 and 4.

As a musician who trained at a popular music and jazz institution, my understanding of what constitutes ‘music’ is determined by Euro-western ideas of quality and aesthetics. I unsettle these ideals in relation to A/autisms in chapter 7, when I think about how vocal improvisations by Rei and Kwodwo might be thought of as ‘noisy’. For right now though, I want to consider more closely how notions of European art music aesthetics related to the instruments I bought and their use. I introduced the new instruments during our third pilot episode on 26th June 2018. The instruments included: two small ‘djembe’, five tambourines, a set of eight hollow plastic tubes tuned diatonically to the C major scale called boom whackers, ten brightly painted wooden maracas, metal triangles with metal beaters, three pairs of claves, two agogos with wooden beaters, four plastic egg shakers,

and a wooden thumb piano (which came as part of a 'percussion instruments from Indonesia' set in its own 'I love Bali' bag, and which broke *instantly*). I also bought six pairs of ear defenders. Most of the instruments are shown in Figure 4 below (minus the broken thumb piano), arranged on the 'Welcome to Pigeons' class carpet.



Figure 4. Instruments and ear defenders are arranged on a very large grey carpet. The carpet has a large green circle in the middle, with an illustration of a pigeon. The words 'Welcome to Pigeons' are written in black text around the circle. Photograph taken on 22nd November 2018. When I introduced the new instruments, I made a considerable effort to model the 'right way' to play each instrument. While I also offered opportunities to unsettle these playing techniques, as I also describe in later episodes, I very much took my own understanding of canon and technique as a jumping off point in these early sessions. On the one hand, this is problematic: I am conscious that the instruments used come from a diversity of traditions and were being infantilised and 'lumped in' together as they so often are in primary school music. I described the heritage of each instrument at different points throughout the residency, for instance, by comparing the shape of our small 'djembe' to

the Djembe used in West Africa (I also sometimes said “Nigeria and Ghana” in class, due to the number of Nigerian and Ghanaian students). On the other hand, by modelling the correct way to play each instrument I was trying to instil the same notions of care and skill as we would associate with European instruments. At the same time, the instruments I bought were of very poor quality: the djembe were particularly nasty. I spent £200 in total on all of them. This is quite a lot on a PhD stipend but, by way of a contrast, the 2010 MacbookPro and Firewire interface I used to record those instruments cost significantly more. I was quite literally situating colonised people’s music-making as the ‘poorer’ sibling of western art music. Moreover, using all these instruments alongside one another is another example of the same diversity logics I problematised regarding inclusion-as-rehabilitation in chapter 2. Robinson (2020) argues that the incorporation of colonised people’s musical practices into colonisers’ repertoire intends to “normalise the terms of engagement” (p. 7). In this way: “Logics of western art music performance not only set the parameters for collaboration but also reinforce a particular idea of what music is” (p. 8). My use of these instruments using the musical structures of my Western art training is one such reinforcement. For instance, in this third episode, the young people used the instruments to create rhythmic compositions. I created a 4x1 grid on pieces of A4 paper, and they drew in each box which instrument they would play or else wrote the name of the player. Thus, I was commodifying these instruments into a particular kind of rhythmic structure (although we shouldn’t pretend that 4/4 music is a solely Western style). I think more about these aesthetic issues in later chapters. For the time being, it’s enough to say that, as a musician, I have normative notions of what counts as ‘music’. And yet, I also wasn’t the only adult in the room, and so wasn’t the only one policing aesthetics. For instance, during episode four of the pilot, Kwodwo stilled repeatedly with bursts of three, short, aspirated whistles: “sh-sh-sh.” Each time, the

Teaching Assistant gently “shushed” him, and each time he would reply with a further three shushes: “sh-sh-sh.” In chapter 8, I think extensively with A/autistic practices such as stimming to consider how aesthetics were normalised and agency was trampled on through these kinds of encounters. What I won’t attend to there, however, is the issues of accreditation, which I turn to in the next paragraph.

Walking through Leeds on a Windy Day, the work I discuss in chapter 8, compose extensively with a vocal improvisation by a young person (Rei) and extends it in ways that rely on my own musical training. Again, I talk about this a lot more in chapter 7. I have already discussed how I decided to remove the young people’s real names from their work on page 190. Even though Rei’s grown-up gave permission for her real name or a pseudonym to be used, I decided to anonymise her contribution. Thus, her solo in *Walking through Leeds on a windy day* goes uncredited. My concern with using a real name was that she might change her mind in future years and be unable to expunge every reference to her contribution: given that I also discuss her neurodivergence, I was concerned that crediting her also risked irreversibly outing her. This is important to the next section of this discussion of the pilot episodes and their navigation of the ethics of doing arts-based research with disabled people: I discuss the potential of arts-based methods to recount experiences of violence.

Recounting violence.

Mykitiuk et al. (2015) warn of the ways that Disability Art might recirculate traumatic experiences of institutional violence. As a socio-material proposition for research, research-creation recirculates affects. For this reason, researcher-creators need to be responsible for what they recirculate, and so for how experiences of violence might be recirculated and “add (if ever so meagrely) to reality” (Massumi, 2002, p. 13). While I

don't think any of the young people in the project have been subjected to the degrees of institutional violence that Mykitiuk et al. (2015) allude to, I do describe examples of disabled people's agency being violated at several points in this thesis: for instance, the sh-sh-sh episode above. My inclusion of these instances is 'reparative'. I figure 'reparation' after Muñoz (2019) and Sedgwick (2003), whereby to repair is to "reconstruct partial or dangerously incomplete objects that structure our reality into a workable sense of wholeness" (Muñoz, 2019, loc. 4028): the point of this reparation is to maintain refusal and critique but, then—to use Sedgwick's example—turn bad karma into good by reappropriating those artifacts. Thus, I incorporate these instances to refuse and then reappropriate them. This reparative approach to recounting violence forms a significant part of my discussion in chapters 7 and 8, both as it relates to teaching practice and my study's use of EDA gizmos. In the final section of this discussion of Disability Art ethics in the pilot episodes, I discuss how the final two episodes attended to my study's potential to circulate commonplace (mis)representations of what it means to be disabled.

(mis)representation.

Bringing a critical disability studies lens to electrodermal activity gizmos brought with it particular tensions as to how these technologies are (neuro)typically mobilised in research, and of the methodological inheritances built into such devices. Attending to these is essential in attending to how the study (mis)represented disability. In chapter 4, I offered a thorough review of how methodological inheritances work in relation to the microphone. To recap, methodological inheritances are the ways that research devices—such as microphones or EDA gizmos—have been adapted over time by the methodological intention that the methodology brings to the research encounter. In other words, the pressure of a particular methodology, performed through a particular

method, accrues upon and comes to inform that method. Part of the work of my study is to, after Springgay and Truman (2018b), hold these inheritances and intentions *in tension*, whereby the research device—the microphone or the gizmo—is brought to the encounter in new ways that map against those inheritances. I elucidate the inheritances of electrodermal gizmos in more detail in chapter 8, but in brief, I argue that:

1. electrodermal gizmos take-up the same doxa found in research and popular media portrayals of A/autists as robotic, technologic, or machinic.
2. electrodermal gizmos narrate A/autists as puppet-like automatons;
3. electrodermal gizmos atemporalise disability.

Mapping against each of these doxa was an animating feature of the whole residency: in the next paragraph, I'll briefly illustrate how one episode mapped against these doxa.

In the pilot's fifth episode, I introduce *Walking Scoring Devices*. These consist of a short length of firm cardboard, approximately 40cm long and 17cm wide, a bulldog clip, a loop of string, and a toilet roll (see Figure 5). I first created the *Walking Scoring Devices* for a soundwalk at Manchester Metropolitan University as part of the Summer Institute in Qualitative Research in July 2017; I intended them as a critique of how narrow microphones' recording ability is (particularly their inability to record non-audible aspects of sonic experience), and so as a strategy of defamiliarising listeners' habitual patterns of audition: I address these points further in chapters 7 and 8. I also often use toilet roll and felt tip pens as a music scoring technique with young children: unlike rectangular pieces of paper, toilet rolls don't have borders and so can be endlessly unraveled to allow a continual line or score to be drawn. The toilet roll is attached to the *Walking Scoring Device* with the string so that it can be unraveled across the board, allowing the user to rest on it while scoring with their dominant hand. Although implying a certain usefulness, the *Walking Scoring Boards* are cumbersome, impractical, and absurd. Juggling the toilet

roll, the ream of used toilet paper, the board, and a pen quickly gets you in a tangle. The boards and toilet paper turn to mush in the rain and get blown about and away in the wind (and for those not familiar with the north of England, wind and rain is a pretty good summary). In addition to their absurd construction, toilet roll is often a poor writing medium: pens poke through it, and pencils tend to tear it.

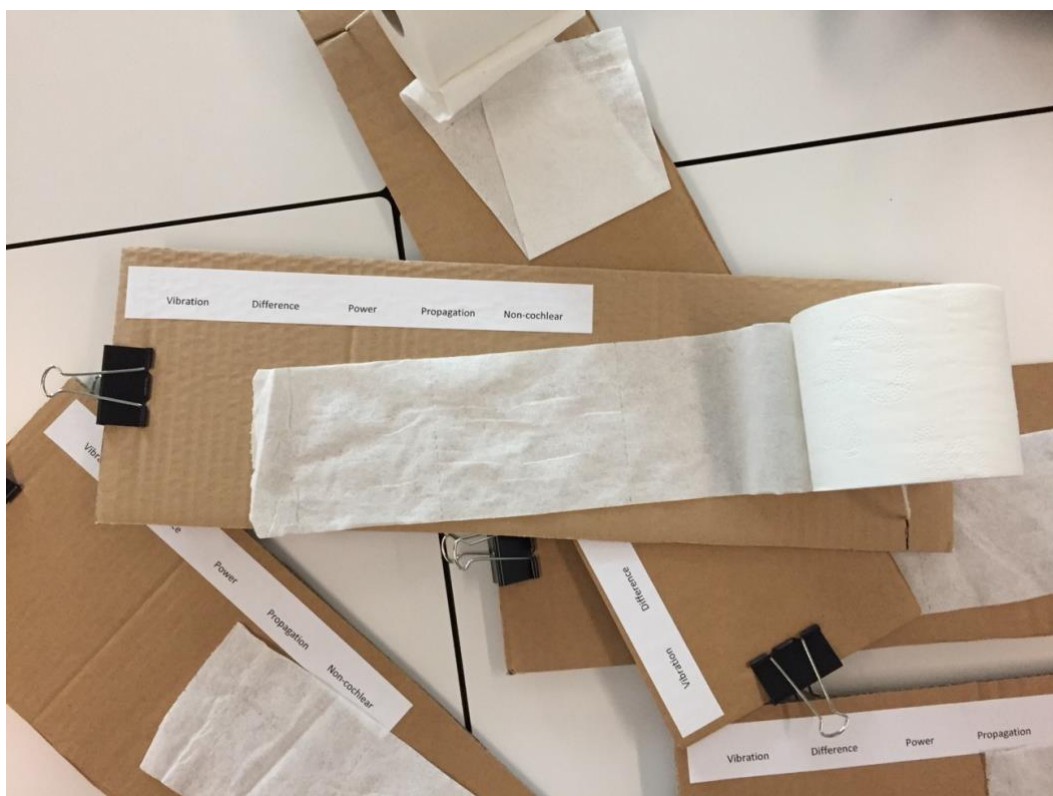


Figure 5. The picture shows Walking Scoring Devices. A label stuck to each board reads 'vibration, difference, power, propagation and non-cochlear'.

During the plenary of the fourth pilot episode, Abayan comments that the peaks and troughs of the EDA signal remind him of a train journey. After some discussion, we agree to use the EDA signal from one device as a graphic score (referencing the previous week's activity) for some train music. In week 5, I introduce video footage of trains accelerating and decelerating, and a video of the National Children's Orchestra (2011) performance of Villa-Lobos's *The Little Train of the Caipira*, as propositions. After reminding the young people of how the EDA line is generated, we compose line-based

graphic scores along to the performance of *The Little Train of the Caipira*. We draw lines that follow the frissons and lulls of the composition, as it accelerates and undulates chaotically, before eventually calming as the train arrives at the station. The floor quickly becomes a mass of toilet paper, ripped and tangled, and poked through with felt-tips and Staedler pencils. We gather up the rolls and fragments. In the next and final episode of the pilot, we pull the toilet paper apart (where it hadn't already been) and stick it back together in different orders on sugar paper.³⁶ Most of Britney and Kwodwo's group try to match up a perfect line across the sugar paper, which Emma quietly resists, insisting on gluing all her pieces on top of each other in the bottom-left corner (much to the consternation of the other five). Other groups aim for polyphony, creating congruent parts out of their own rolls of toilet roll. After seeing Emma's corner-layering, Aaron's whole group somehow decide to layer fragments of score on top of one another, where traces from different parts of the composition could be read through one another. We then rehearse the completed score before performing it. Frissons initially derived from Villa-Lobos's score are repurposed and reshaped, inverted and complicated, stacked and rendered imperceptible. In later projects in the residency, we repeat the activity using a print off of actual EDA data, and perform a similar unsettling. I discuss this in more detail in chapter 7.

As propositions for further thinking, the different scoring techniques used by the young people intervened in the congruent journey of Villa Lobos' little train, and instead showed how the ramping-up and tapering-off of the electrodermal-generated skin conductance response might be thought differently. Instead of starting out slow, ramping up and then slowing down, much as an EDA-generated arousal would, Aaron's group's

³⁶ Sugar paper is a cheap, usually large piece of paper in pastel-colours with a distinct, slightly furry texture.

and Emma's layering of the different fragments of toilet paper refused this natural-seeming progression of the event. This was made all the more apparent when the compositions came to be performed: while other scores could be played with lulls and accelerations, Aaron's group's little train journey initially bewildered them somewhat, and was ultimately cacophonous and short. And while most of Britney's and Kwodwo's group can be heard following their own little train's journey (all be it with now sudden frissons and abrupt endings), Emma's own, equally cacophonous shaking makes this much more difficult to perceive.

As I come to argue in chapter 8, the methodological inheritances of electrodermal activity gizmos intend to making the A/autistic (or otherwise divergent) subject knowable, and temporally contoured by neurotypical researchers. As an intervention into this progression, the young people's Little Trains compositions showed how the output of EDA devices might be obfuscated. Moreover, in Emma's layering, not only did the original train's journey become illegible, but so too did the possibility of any discernible journey. Thus, it is an intervention into the "epistemological certitude" of knowing (Muñoz, 2009, p. 28), and instead activates the luxurious potential of queer-crip failure. If this failure is, as Tavia Nyong'o writes, a "choosing what to do with the failure that has chosen us" (Nyong'o, 2012, cited in M. L. Johnson, 2015, p. 246), then the failure to create a new discernible line is to choose to fail, and to fail to become *discernible*. I argue in chapter 8 that much A/autisms research, including research that activates electrodermal methods, is built on the frustrating unknowability of the A/autistic body(mind). It this unknowability that drives much A/autisms research and practice. Thus, A/autisms are "narrative" terms (Duffy & Dorner, 2011). For Yergeau (2018), behavioural check-lists narrate the A/autist, rendering them knowable and predictable for the nonautistic. Thus, Emma resists knowability and discernability. Instead, it is an example of the same failure that Loveless

(2019) contends makes trans-disciplinary research unsettlingly generative. She argues that it is the failure to adequately fill all of a discipline's disciplinary boundaries that makes it 'work'. In this case, then, failing to do the line properly.

Emma is A/autistic. Her resistance resembles the A/autistic refusals that might meet the criteria of Power Differential Aversion (or Pathological Demand Avoidance), an aspect of A/autisms which presents as a refusal to follow other people's agendas (although she does not have a separate diagnosis of PDA). This wasn't limited to her layering of tissue fragments in the Little Train activity: on one memorable occasion, coming back from a soundwalk, Emma didn't want to go back into the classroom. "You can't see me," she said when I suggested several times that she should come in. In the end, Saadiya had to stay outside with her for the rest of the episode while she quietly plucked blades of grass from the square garden near the door. Thus, resisting the careful plotting of the rest of her group was a 'symptom' of A/autisms, but also (if we assume 'competence') a flamboyant and generative failure. All of this is essential for how my project sought to map against dominant doxa of how A/autisms, and disability more broadly, are frequently (mis)represented. By refusing the EDA gizmo as a vector of certitude, and instead introducing messy polyphonies, we refused to (mis)represent A/autisms in normative terms.

Having summed up some of how the pilot phase, and by proxy the study as a whole, was animated by Mykitiuk et al.'s (2015) ethical questions for doing artistic research with disabled participants, I conclude this chapter with a summary of the rest of the projects done as part of the larger *Neuroqueer(ing) Noise* study.

***Neuroqueer(ing) Noise*: The six composition projects.**

Neuroqueer(ing) Noise consisted of a series of six smaller projects, although there was

considerable overlap between each: sometimes, I was only certain a new project was starting once it had already begun. At some points, multiple projects ran concurrently. The pilot project described above differed to the remaining projects in the study in that I planned and determined the broad theme (that of EDA) entirely by myself (because I wanted to inform children's consent). The projects were:

1. Pilot: EDA and the Little Train of the Caipira.
2. Carnival of the Animals: Extended
3. Walking Through Leeds on a Windy Day.
4. Deep Listening & Synaesthesia.
5. Junk Music.
6. Under the Sea.

For three reasons, I repeatedly incorporated the music production technique 'sampling' across these projects: (1) the requirement for teaching 'music technology' in the primary national curriculum (which generalist teachers tend to find very difficult, and which I thought I could help with); (2) my compositional interest in sampling techniques; and (3) my research interest in the electrodermal gizmos. In music production, sampling is a process by which the composer repurposes snippets of audio (i.e., samples) as part of a larger composition. Similarly, the electrodermal gizmos measure arousal by sampling the resistance of the skin four times every second. Moreover, my own process of choosing what to talk about in this thesis is kind of like a sampling process. Earlier in the chapter, I attended to how I selected (or 'sampled') the events that feature in this thesis, as a process of rejecting the anthological impulse of sound study, and instead 'listening in detail' to a curated selection of micro-events (Olsson, 2009; Vazquez, 2013). The curation of these events, a trans-corporeal consequence of data glows, lingering shit smells and political (in)tensions, is also a kind of sampling: while there were many events I could

have focused on, my political attention to contesting normative notions of ability and disability shaped this curation. However, in order to give the reader a sense of the wider project, I conclude this chapter with a brief description of each of the projects.

Carnival of the Animals: Extended

Thinking with Camille Saint-Saëns's *Carnival of the Animals*, we wrote film music to video footage of different animals. I spliced these compositions with Saint Saëns's original compositions. This project coincided with the class topic on 'Carnivores and Herbivores', and ran throughout September and October 2018. I discuss the process of composing these works more in chapter 8.

Walking through Leeds on a Windy Day.

A soundwalking project, in which we walked through the local area and then speculatively inserted different sounds into the space. Wahneema H. Lubiano (1991, p. 262, as cited in Schalk, 2018, p. 21) contends that we are tempted, when working with the 'real,' to "accept what is offered as a slice of life because the narrative contains elements of 'fact'" (p. 20). This soundwalking project contested the reality of what a space 'really sounds like' by inserting speculative sounds, including non-English language words, the sonified output of the electrodermal gizmos, and a range of sound effects that the young people 'heard' during the walks. Most of the project ran from October 2018 until February 2019. However, the final walk for the project took place on a sunny day in June 2019. I discuss this project more in chapter 7, where I think with the process of composing this work to consider how neurodivergence is shaped sonically in the mainstream primary classroom, at the intersection of racializing, Anglo-centric and ablenationalist logics.

Deep Listening & Synaesthesia.

This project ran alongside *Walking through Leeds on a Windy Day*. We explored how sound can be experienced synaesthetically across different senses. This project ran through January and February 2019, and coincided with the class topic on 'Materials'. I discuss this project in chapter 8, where I consider how the research-creation complicated neurotypical coding of the senses.

Junk Music.

Junk Music does not feature in this thesis again, and so I offer a more thorough engagement with it here. In this project, we composed-with Tan Dun's notion of *organic music*. Organic music uses 'natural' objects as musical instruments: for instance, *Water Concerto for Water Percussion and Orchestra* is composed for bowls of water and the waterphone. In the classroom, we listened to excerpts from the *Water Concerto* and watched footage of people playing bowls of water and a waterphone. The unpredictability of water brings a 'liveness' to the work, which reflects Tan Dun's experience of Dào-ist ritual growing up in Húnán province, south China, that understand the natural world as having a degree of animacy. *Junk Music*, on the other hand, is composed with traditional classroom instruments, alongside a combination of found objects: chunks of old Christmas tree, plastic bottles, three bricks from my dad's shed, pebbles, empty fizzy drink cans (which I rapidly taped-up after Ismael got his finger stuck), empty tins, lightly fermented milk cartons, and an abundance of hummus pots. This project was designed to support the topic on materials: some of these objects were already in the school, while others I dragged from Liverpool to Leeds on the train (including the bricks, pebbles and pieces of tree). In the second workshop of this project, I setup a carousel, where I grouped the different objects according to their material (e.g.

triangles, tinfoil, cans, a glockenspiel, cymbals and tins). We explored the different timbres that could be produced by the objects when played in different ways. The following week, we record these properly into the computer using the studio microphones. The young people snaked around the whole classroom in a big long line. While one young person recorded their performance, I used a combination of stickers and increasingly unusual threats to try to keep the 27 other young people quiet. I was very grumpy by the end. Before the next session, I cut each performance into a sample library, with each performance occupying a different key on a keyboard: this meant that the young people's samples could be played back on the keyboard. In the next workshop, children composed rhythm grids using the different samples ("Not rhythm grids again" heckled Aaron): instruments, found objects, and junk (including the bloodied cola can from the stuck finger).

This is a very traditional example of how music composition might be used to 'teach' something. Young people explored the qualities of different materials, sorted them, used adjectives to describe them, and then composed with them. Sounding them and composing with them taught about these properties. Moreover, the work activates Donna Haraway's (2016) concept 'natureculture', which indicates the impossibility of separating humans from nature, including the impact of human activity on 'nature'. Tan Dun's *Water Concerto* adopts a hierarchical approach that assumes matter can be sorted by order of decreasing 'liveness'. Water, stone, paper and ceramics are presumably more 'organic' or possessed of greater liveness than plastic. Thus, it adopts what Chen (2012) theorises as an *animacy hierarchy*. Yet, Haraway's natureculture also indicates the ways that water, stone and wood cannot be neatly parsed from plastic: rather, they are porous to them. Inhuman geographer Kathryn Yusoff (2013) argues that we need to attend to the ways that humans are both composed by geology and are also "an intemperate force

within it” (p. 779): a part of what Yusoff calls ‘geologic life’. So, while Tan Dun’s *Water Concerto* relies on the notion that certain materials are closer to the organic and can be adequately separated from the Man-made, *Junk Music* indicates the co-composition of nature and culture, plastic and stone. This project ran from the February halfterm until Spring break in March.

Under the Sea.

Under the Sea ran through the Summer term and continued from the work done on compositions for found objects. The class topic was about life under the sea and had included discussion of the dangers of plastic waste. We composed a harmonic composition using the schools xylophones and two different musical modes (the ionian and the lydian) to explore the idea of excess, and of how to make art in environmentally compromised times: in this way it took the title of Natalie Loveless’s (2019, but unreleased at that point) *How to make art at the end of the world* as a proposition. Thus, the project complicated the innocence of typical environmental education, which focuses on stewardship and restoration narratives, by hinting at how excess and liveness continue even in compromised times.

Chapter summary.

This chapter introduced the children, the school and the types of activities that we engaged in each week in the music episodes. I have also attempted to describe some of the ethical complexities of working in the classroom and of doing art with disabled young people (without claiming to do Disability Art). I have also provided an overview of the research methods, including audio recording and electrodermal gizmos.

As I've already stated, this chapter adopts a very dyadic understanding of ability and disability to elucidate the ethics and politics of doing arts-based research with disabled participants. However, this is not in keeping with how I think about disability in the rest of the thesis. Puar (2017) conceives of disability as a triadic model: 'debility | capacity | disability'. In Puar's model, 'disability' refers to disability identity, while debility and capacity relate to what might be thought of as the fungibility of 'impairment'. Body(mind)s become more, or less, impaired at the intersection of multiple, overlapping socio-material processes that include sexual, gender and racial hierarchies. Puar (2017) writes:

Disability is not a fixed state or attribute but exists in relation to assemblages of capacity and debility, modulated across historical time, geopolitical space, institutional mandates, and discursive regimes. (Puar, 2017, p. xiv).

In the next chapter, I take up Puar's definition to complicate the dyadic understanding of ability and disability I adopted here. I do so with regard to *Neuroqueer(ing) Noise*, my in-school research-creation study.

7. Noising tendency/Neuroqueering noise: Volition, animacy, inclusion.

Preamble: Affect aliens.

In this chapter, I draw from affect theories and the in-school study *Neuroqueer(ing) Noise* to consider how neurodivergence is shaped sonically in the mainstream primary classroom, at the intersection of racializing, Anglo-centric, and ablenationalist logics. I think about this shaping as a 'noising of tendency'. Specifically, I 'listen in detail' to four micro-events to consider how composition and attention to the passage of affect might defamiliarise the fixity of these patterns of experience.

Whenever you compose or play music in a school, somebody(mind) is always noisily out-of-tune. Not in the common-sense meaning—which (for me) implies off-key recorders, 600 different versions of *What a Wonderful World*, and a 3pm migraine—but in terms of *tendencies*. Somebody(mind)'s tendencies are always noisily out-of-tune: running out of phase with the melody: ruining your careful attempt at harmony. “[T]here’s always a body out of tune,” write Dernikos, Lesko, McCall and Niccolini (2020, p. 4): a body(mind) whose affective *tendencies* are out of place, out of time, or out of sorts: an affect alien. Previously, in chapter 4, I drew from Ahmed’s (2010) description of the affect alien as one who experiences some “gap between the promise of happiness” and their affection (i.e., their affecting-being-affected) “by objects that promise happiness” (p. 42): I drew from this to consider how music composition research-creation defamiliarises habitual patterns of listening to place. In this chapter, I consider how perceptions of capacities *to affect and be affected* shape neurodivergence in the

classroom. Previously, in chapter 4, I described theories of affect as intensities or forces out of which subjectivities emerge through their modulation of the capacities of body(mind)s. In this chapter, I want to think about affective alienness and how it complicates the accrument of impressions, or tendency. Massumi (2015) describes 'tendency' as the second-most important concept in discussion of affect, with the first being 'relation'. Tendency, for Massumi, refers to "patterns of movement" that "weight" particular bodies as more or less "accessible" or "ready to go" based on their individual histories (p. 50). This is also evident in Deleuze's (1978) conceptualisation of affect: the sun both *melts* wax and *hardens* clay. Inherent here is that the modulation of those body(mind)s occurs within certain parameters. The sun did not, for instance, *harden* wax and *melt* clay. Similarly, it didn't transform either one into a pelican or teach it to play the viola. In other words, some aspect of what Manning calls 'bodying-forth' must pre-exist the encounter: the body must have already partially bodied. This is not in contradiction to what I wrote in chapter 4 about how body(mind)s are only *fully* conditioned in the encounter. Rather, I think about this pre-body(mind)ing in terms of 'tendency'. I conceptualise tendency as an accrument of modulations on the affectable surfaces of both the affecting body(mind) and the affected body(mind), which then modulates the ongoing reception of further affections. In other words, tendency is how we might come to think about how body(mind)s arrive already partly formed. This has significant implications for how we can use affect to think about patterns of marginalisation in the classroom. Yet, in Massumi's description of patterning, the emphasis of what shapes 'accessibility' seems to be described as a feature of the body(mind). Of course, for Massumi, there is no affecting/affected body without the affecting/affected milieu: they are "two faces of the same event" (Massumi, 2015, p. 48). Yet, given how much of his *Politics of Affect* reads as a bad-tempered response to ongoing critiques of affect theory's

elision of patterns of marginalisation such as racism and ableism, Massumi's description of histories and tendencies as though they always 'belong' to a particular body(mind) seems quite normative. Thus, this chapter complicates 'tendency' as both a (1) feature of an individual body(mind), but also of how tendency comes to be (2) 'articulated' across a relational nexus (Weheliye, 2014). As I argue across this chapter, there are very practical implications for these ideas in the mainstream, integrated classroom.

As I already argued in chapter 2, 'inclusion' in a British education context usually refers to the integration into a mainstream school of young people with disabilities: affect aliens, whose affection in response to being affected in the pedagogical encounter is always unexpected. However, rather than transform the school, inclusion often seeks to rehabilitate or tune-up the 'divergent' child's noisy tendencies, making them easier to include. In chapter 5, I took up Schuller's (2018) notion of *biophilanthropy* to describe the ethical intention of dominant pedagogical approaches to disability. There, I followed Schuller in suggesting that the pedagogical encounter seeks to rehabilitate divergent body(mind)s by impressing them with new, more useful tendencies. Unlike Schuller, however, who considers biophilanthropy as a control technology for reshaping the capacities of *racialised* body(mind)s, I argued that 'inclusive practice' does the same for *neurodivergent* body(mind)s. This is particularly evident in special educational doxa, where individuals routinely have their own desires and intentions subverted in 'their own best interests' (e.g. Roscigno, 2019). Music, as well as the arts more broadly, has long been instrumentalised as one way of achieving this rehabilitation, relying on the assumption that there is something already inherently opposed to music—out-of-tune, or noisy—about that child. Yet, less has been written on the value of these practices as illustrative of, rather than in opposition to, A/autistic agency. It's to this that I turn in this chapter.

Chapter overview.

I begin this chapter with a recap of some key ideas around inclusion from chapter 2. I then expand on the moral model of disability I discussed in chapter 2 with a synthesis of ideas from Puar (2017) and Weheliye (2014): these ideas have typically been heavily problematised in disability studies and so I make a small contribution here in offering a reparative reading. After this, I explore how the arts have been instrumentalised as a way of making people more includable (rather than as a way of including people). Then, I consider how deliberate attention to noise might help in unsettling 'mere inclusion': in effect, changing the mode with which we think in education. I argue instead for the need for disability justice in education. In the final chapter (chapter 8), I consider how disability justice in education requires attention to the tension between different orientations to A/autisms in the research or pedagogical encounter.

Inclusion and the moral-individual model of disability.

In this section, I briefly recap two concepts from chapter 2: those of 'rehabilitation-as-inclusion' and the moral model of disability. I then draw from Puar (2017) and Weheliye (2014) to consider how the moral model of disability has resurged in mainstream schools. These ideas are important for reconsidering what inclusive practice in the early childhood classroom *does*.

As I intimated in chapter 2, in a British education context, 'inclusion' usually refers to the physical integration of neuroqueer young people into a mainstream school. In the UK, 73.6% of A/autistic young people educated in state-funded schools are educated in mainstream (integrated) settings rather than specialist provision (Department for Education, 2020): this proportion is roughly stable over time (between 70-75%). As I explained in chapter 2, inclusive education is less about changing what we understand by

'education', and more about rehabilitating the child to more closely approximate 'normalcy'. Thus, inclusion might be thought of as a "rehabilitation that makes disability [(or difference)] disappear" (McRuer, 2006, p. 129). However, this rehabilitation can only ever be an 'approximation': a *disappearance* rather than a dematerialisation. Rehabilitation, then, is a process of closeting the divergent child, making them just-includable-enough by masking their most divergent tendencies. Thus, divergent body(mind)s become what Heather Sykes (2016) might call 'absent presences' (p. 60), whereby inclusion as a visual and physical integration masks how the included individual both came to be excluded and *continues* to be excluded, or what Muñoz (2009) calls 'identification'. What I am hoping to establish in this chapter, is how disability provision in schools might also (momentarily) invest in a counter-identification that resists inclusion (i.e., identification), and a dis-identification that defamiliarises the whole notion of 'ability'. In this section, I consider the relationship between inclusive practice and the moral understandings of disability.

In chapter 2, I discussed the moral-individual model of disability. This model conceptualises disability as a consequence of sin or some other divine displeasure. The moral model is typically associated with theocracies and so with other times and places than the bio-economic perspective on divergence we take up in the UK. I want to expand on this understanding with a discussion of how morality and disability have been considered in two books: Jasbir Puar's (2017) *The Right to Maim* and Alexander Weheliye's (2014) *Habeas Viscus*. Both texts have been critiqued by disability studies scholars because of (1) their reliance on disability as a state of ultimate abjection and (2) their situating of disabled people as close to death. However, I include both works here for two reasons: firstly, I consider how the spectre of disability is mobilised as a control technology in these two books, and how that spectre has implications for how we

consider the imperative to intervene in mainstream schools. Secondly, my take-up of their scholarship elsewhere in this thesis makes a lack of engagement with these problematised aspects of their work a seemingly selective omission.

Puar (2017) proposes the *right to maim* as a biopolitical concept that describes how oppressive institutions maintain oppressed people as alive but disabled as a kind of living warning against resistance. Puar gives the examples of African Americans who are injured but not killed by police brutality and Palestinians living under Israeli jurisdiction. Puar argues that both populations are kept alive but in various states of disability by supposedly humanitarian attempts to ‘not kill’. Similarly, Weheliye (2014) considers the *Muselmänner*—prisoners in Nazi concentration camps during the Second World War—who were near death due to starvation. Rather than the common understanding of a *Muselmann* as a brief state before death, Weheliye considers examples of people who lived as *Muselmänner* for years, some even continuing to identify as such as late as the 1980s. Rather than biopolitics as a project of maintaining life or coercing death, both Weheliye’s theorisation of the *Muselmänner* and Puar’s figuration of the right to maim show how living debility is used as a biopolitical control technology through the maintenance of disabled life—i.e., “not let die” (Puar, 2017, p. 13). In other words, the spectre of living debilitation is used as a control technology and, thus, both the ‘right to maim’ and the *Muselmänner* illustrate how disability *continues* to be figured as a consequence of sin or moral failing. As I now argue, this spectre of living debilitation has significant implications for how we approach inclusive practice in the early childhood classroom. In short, my argument is that ‘living debilitation’ continues to be mobilised as a spectre of what happens to you if you (or your child) are not rehabilitated. At the same time, particular body(mind)s continue to have intervention and diagnosis routinely withheld, placing them at greater risk of that same living debilitation: this is also true of

the mainstream early childhood classroom. Before refocusing on the classroom, however, it's important to attend to the two critiques I highlighted above: (1) Puar and Weheliye's reliance on disability as a state of ultimate abjection and (2) their situating of disabled people as closer to death.

As I have already described at the end of the previous chapter, Puar (2017) conceives of disability as a triadic model: 'debility | capacity | disability'. Here, 'disability' refers to disability identity, while debility and capacity relate to what might be thought of as the fungibility of 'impairment'. Puar's argument is that body(mind) configurations can oscillate between debility and capacity depending on the context. (I've already briefly touched on this in my critique of neurodiversity in chapter 2, whereby some disabled people might put forward more capacitated 'pieces' of themselves in particular contexts to more easily 'pass'.) Puar's model has been particularly critiqued by disability scholars for two reasons. First, within disability studies, the triadic model of disability has been argued to reject disability identity (e.g. L. Davis, 2017). I think this is a simplistic reading. Puar problematises ablenationalist disability identity for the same reason that queer of colour theorists have problematised homonationalist queer identity: that allowing our understanding of who or what 'is queer' to sediment—particularly by positing how queers are 'just like everybody else'—excludes those who can't pass as 'just like everybody else'. I've made similar arguments previously as part of my discussion of the neurodiversity movement in chapter 2, wherein 'diversity' can only be stretched so far. In other words, then, Puar is not critiquing disability identity, but how disability counter-identification reifies normative notions of ability and disability and so who might end up getting excluded from both. This interaction of Disability identity and the fungibility of disability itself are important to the conceptual work I do in this thesis with the term *A/autisms*.

Puar and Weheliye's work is also problematic because of how both scholars situate disabled life as so proximal to death. Concomitantly, there are decades of disability studies devoted to critiquing how perspectives such as the social model ignore the lived reality of disability, including pain (e.g. Crow, 1996; Price, 2015). Critical disability studies perspectives, including crip theory, could be argued to continue this ignore-ing by constituting ability and disability as contingent and porous. Moreover, critical disability studies continues to under-theorise the ways that the lived reality of disability continues to impact some body(mind) configurations more than others: It is this reality that Puar attends to with the term 'debilitation'. This understanding is relevant to the overrepresentation of white boys in autism diagnoses and doxa, which elides the experiences of racialised A/autists (Çelik, 2017; Ellis, 2017), A/autistic women (Saxe, 2017), and trans A/autists (N. Adams & Lang, 2020). Having attended to these two critiques of Weheliye and Puar, I now connect these ideas to the moral model of disability and the classroom.

Lots of scholars have broached ideas of disability or ill-health as a moral failing. For instance, Alexis Shotwell's (2016) concept *healthism* indicates how sickness is publicly narrated as a consequence of an individual's failure to meet their neoliberal 'personal responsibility' to maintain health, rather than structural inequality. Similarly, disabled people are sometimes blamed for their own exposures to contagions or toxins (Chen, 2012; Kupetz, 2019; Mitchell et al., 2019; Muñoz, 2009), and so for the consequent disability. What Puar and Weheliye make explicit, though, is the ways that this process is enacted biopolitically to encourage good citizenship: my argument here is that this continues in educational provision, whereby the spectre of neurodivergent (debilitated) life is so awful that even the most invasive rehabilitation is always preferable. Consider, for instance, the examples of Charlie Gard (Boyle, 2017), Isaiah Haastrup (C. Davies,

2018), and Alfie Evans (Grierson, 2018), all of whom had significant learning disabilities, and life-threatening or life-limiting illnesses. All of whom also had their life support withdrawn as infants, leading to their deaths. Media accounts often described these young people as lacking 'dignity', and that dignity was restored upon their deaths (Boyle, 2017; Clarke, 2018). Dignity in these contexts is a complex idea, but given the developmental stage of each young person, seems to hint more at the spectre of a future loss of dignity rather than anything undignifying about their then current state: they were infants, after all, and most of the media accounts emphasised how they would never talk, walk, or do other things developmentally beyond what an infant would be expected to do. In other words, the tragedy is of 'what future?' such a child could have. These accounts "invok[e] the image of an adult body with a baby's brain, and assum[e] such an image prompts repulsion" (Kafer, 2013, p. 55). In the case of each of the three infants, rehabilitation was impossible, and death was the only way to ward off that future. However, the same fear of the baby brain/adult body led to the development of the growth attenuation 'Ashley' treatment'. The 'Ashley' treatment was first used on 'Ashley X' (as recounted in Kafer, 2013), a young person with significant learning disabilities: the treatment consisted of a hysterectomy, appendectomy and double mastectomy, to prevent the pain of menstruation, appendicitis and breast development. She was also given oestrogen to close her growth plates so that she would be smaller and easier to move. Her parents nicknamed her their 'pillow angel'. The treatment has since been performed on others. These treatments, like restoring dignity through death to brain-damaged infants, are intended to ward off the future of the 'baby brain in an *adult* body' by maintaining the '*baby* body.'

Section summary.

The discussion in this section might seem melodramatic given my focus in this thesis on the mainstream early childhood classroom. However, the same logics I have outlined here are prescient to ‘inclusive’ practice: they drive the ethical imperative to intervene in a neurodivergent young person’s life and prevent particular futures. The spectre of debilitated life—the adult-body/baby-brain—is held up as a kind of spectral *Muselmänner*: a threat of the consequences of not sufficiently rehabilitating. Thus, intervention for the purposes of inclusion—to rehabilitate the disabled young person, especially where that disability is cognitive—is an ethical imperative, necessary to ward off the repulsive future of the adult body with the baby brain. An exploration of how this spectre takes hold in the classroom is what I do through the rest of the chapter (as well as proposing how to chase it off). In the rest of this chapter, I explore how this rehabilitative spectre takes hold in the classroom (as well as proposing how to chase it off).

Inclusion-as-rehabilitation.

As I have already argued, curriculum and pedagogy in schools are often enacted as a humanising assemblage that include divergent body(mind)s by transforming their capacities. Critical disability studies scholars have described how this humanisation is enacted to rehabilitate disabled young people. For instance, Goodley and Runswick-Cole (2010) describe how play is often mobilised as a means to drive development for disabled young people (even more so than for neurotypical young people) and so they argue that play must be untethered from developmentalism. Similarly, Watson, Millei, and Petersen (2015) critique the exclusivity of ‘inclusive practice’ in early childhood classrooms through investigating how inclusive practices ensure the ‘SEN child’ is “contained, limited and positioned as in need of remediation” (pp. 275-276). I argue later in this chapter that

learning support assistants (LSAs) become similarly bound to the young person, with problematic consequences. In the next section, I now argue that the arts, including music, are frequently instrumentalised as one such 'special' object that drives rehabilitation.

Instrumentalism and the Mozart effect.

All too often, the arts are also taken-up as a means of facilitating rehabilitation-as-inclusion. Rubén Gaztambide-Fernández (2013) might call this an 'instrumentalist approach', by which the value of the arts is in their perceived capacity to transform "educational outcomes and individual experiences, or even... the consciousness of individuals" (p. 212), and in so doing come untethered from young people's socio-political concerns (Schmidt, 2020).

In this section, I outline two overlapping instrumentalisations of music: (1) therapeutics and the Mozart effect, and (2) the supercrip/savant.

Therapeutics.

The 'Mozart effect' is one example of an instrumentalist approach to music. The Mozart effect is the supposed enhancement to educational attainment or child development afforded by accompanying everyday activities with certain works of (usually Western classical) music. The effect was initially posited by Rauscher, Shaw and Ky (1993) and its impact was limited to university-aged participants' motivation when completing spatial awareness tasks and listening to the *allegro con spirito* of Mozart's sonata for two pianos in D major (KV 448). The effect has since been expanded to include a franchise of related effects, such as the 'Vivaldi effect' (Giannouli et al., 2018), the 'Philip Glass effect' (Rauscher et al., 1995), the deliciously named 'Blur effect' (Schellenberg & Hallam, 2006),

and a 'raindrop sound-effects effect' (Proverbio et al., 2018).³⁷ Each is an example of an instrumentalist approach, by which mainstream education values the arts only because they're serving the inclusion agenda: i.e. helping to rehabilitate young people to better approximate 'values of normalcy'.

There is a significant and ongoing body of research that explores how Mozart-effect-style instrumentalisation of music might reduce the frequency of A/autistic practices, such as stimming or asociality. Jennifer Whipple (2004, 2017) identifies a research interest into the effects of music on A/autists going back to the 1970s: whether as background music, or through supplementation of therapies with musical skills. This research interest continues today. For instance, Mike Brownell (2002) found that 'social stories' were more effective if set to music, while Sharda et al. (2018) identified improvements in social communication amongst 6-12 year-olds after accessing social interventions that included music improvisations. Similarly, Vaiouli et al. (2015) found that joint attention and social engagement increased when young A/autists access therapy supplemented with music therapy ideas. A more recent meta-analysis identified not only the benefits of musical activities for improving therapeutic outputs, but also that there was an increasing research interest (Boster et al., 2021). My point here is not to criticise these ideas in and of themselves: they're probably better than ABA. What I am critical of is that music is portrayed here as innocently emancipatory, without attending to the violence inherent in the modulation being enacted. In other words, an instrumentalist approach to music is similar to other behavioural approaches to neurodivergence: they seek to rehabilitate the divergent individual by closeting them, ensuring that they better approximate 'values of normalcy'.

³⁷ Pietschnig, Voracek and Formann (2010) offer a detailed and critical overview of some of this work.

Moreover, in seeking to reduce the frequency of A/autistic practices by bringing music *into* the A/autistic body(mind), this instrumentalist approach relies on the assumption that A/autistic practices are already inherently *unmusical*. This is an important point, and one to which I return after introducing my second critique: the supercrip/savant.

The supercrip/savant.

Another scholarship has sought to establish some A/autists as highly creative savant-like proteges.³⁸ For instance, Jon Fessenden (2019) has written on the ways that A/autists might demonstrate a particular skill in ‘pitch perception’. I am not suggesting here that this is impossible or without value. However, I argue that it demonstrates a similar underlying logic as described of the Mozart effect and other instrumentalist approaches to the arts. Robinson (2020) contends that inclusion intends to “normalise the terms of engagement” (p. 7): he argues that by incorporating Indigenous musical practices into western art music space, the “Logics of western art music performance not only set the parameters for collaboration but also reinforce a particular idea of what music is” (p. 8). Similarly, Kristina Chew (2008) contends that the savant narrative is an example of ‘empathetic poetics’, by which extreme skill in some area considered uniquely human—i.e. normative notions of ‘music’—is used to present the A/autistic body(mind) as a distillation of what we consider most-valuable about the human. This kind of hyper-normativity encourages neurotypicals to empathise with neurodivergence. It might also be thought of as akin to what Puar (2017) calls ‘piecing’: the process by which divergent body(mind)s place front-and-centre their most passable tendencies to better approximate values of normalcy. In other words, the savant narrative seeks to salvage the

³⁸ See Straus (2014) for an overview.

least-autistic/most-includable ‘pieces’ of the A/autistic body(mind) to better mask those most-autistic/least-includable pieces.

Both approaches to music described here are instrumentalist approaches. They continue to understand art as something that happens outside and is then ‘brought in’—whether from outside the classroom or outside the A/autistic body(mind). Moreover, the value of the arts is caught up in inclusory therapeutic outcomes: music is ‘brought in’ to the A/autistic body(mind) to reduce the presentation of behaviours that fail to pass (i.e., disguising the ‘most A/autistic’ pieces), or else maximizing those most normative tendencies that already pass (i.e., salvaging the ‘least A/autistic’ pieces). In so doing, it has to assume that there is something opposed to music—noisily out-of-tune—inherent to A/autistic practices. These practices are mobilised rehabilitatively to ward off the neurodivergent spectre of the baby brain in the adult body

Affect and neurodiversity in the classroom.

For the remainder of the chapter, I explore the process of composing *Walking through Leeds on a windy day* to exemplify and how A/autistic practices come to be noised in the classroom. I also consider how this noising might be defamiliarised through what Muñoz (1999) calls counter-identification and dis-identification. In so doing, I follow Jacques Attali (2012) in suggesting that “subservice noise... betokens demands for cultural autonomy” and “support for differences or marginality” (p. 32). In other words, I look to see how what is ‘noised’ works on and against dominant modes of identification. First, I think and compose with a vocal improvisation that became heard as noisily out-of-tune in the classroom. I consider this improvisation an example of *Neuroqueer* counter-identification: it momentarily defamiliarises fixed notions of neurodivergence and neurotypicality by calling for us to take A/autistic practices seriously. Second, I examine

an episode in which we composed with statements in the young people's home languages, which for most young people was a language other than English. I consider this an example of neuroqueer dis-identification in that we momentarily defamiliarised the whole idea of neurodivergence and neurotypicality, as well as *neuroqueering* the adjacent intersections of race and ethnicity. In short, I explore how we—researchers and educators—might change how we think and listen in education, opening us to momentarily say “No!” to ‘mere inclusion’ (Muñoz, 2009).

Walking through Leeds on a windy day.

Walking through Leeds on a Windy Day is a 33-minute electroacoustic composition, created as one of the projects that made-up *Neuroqueer(ing) Noise*. As I have already explained, I do research-creation in schools as social practice art. Thus, it is distinct from approaches to artistic practice that understand art as something that is ‘brought in’ from outside, whether as pre-formed techniques, canon or curricula (Springgay, 2020a). Instead, is oriented primarily by its feminist, anti-racist and anti-ableist intention to method (Springgay & Truman, 2018b; Springgay in Truman et al., 2019). This intention is shaped by propositions, with technique, canon and curricula curated to better attune to different intensities and flows. I detail some of the propositions that shaped the project in the coming pages.

We composed *Walking through Leeds on a Windy Day* between October 2018 and February 2019, when the young people were in Year 2. The class topic for this period was ‘human and physical features of the local community’, which is a compulsory component of the Year 2 Geography curriculum. Part of the unit was planned to include a walk around the school's local area. I discussed with the teachers whether this might include soundwalking: they agreed (in part because another adult would make the walks much

easier!), and so I proposed it to the young people, who also agreed. I decided to complete this walk as a phonographic walk around the school. I also asked the teachers to let us repeat the walk at the end of the project. We did this as an audio walk listen back to our composition as we retraced our steps. I detail the process of composing this work over the rest of the chapter. You can hear *Walking through Leeds on a Windy Day* via the link below. A written description is included for D/deaf readers:

<https://www.davidbenshannon.co.uk/neuroqueer>

Password: neuroqueer

Neuroqueer noise.

In preparation for our phonographic walk, I introduced the young people to the music production technique ‘sampling’. As I already explained in chapter 6, I did not state the proposition in the same way as I had for *Oblique Curiosities*. Rather, I curated a series of enabling-constraints and activation devices (I explain these concepts and their relationship to the proposition at length in chapter 3). In this way, I curated technique, canon and curricula to attune to a queer-feminist, anti-racist and anti-ableist intention to method. We listened to examples of sample-based music³⁹ and watched a video featuring D/deaf artist Christine Sun Kim’s phonographic explorations of sound (Nowness, 2011) to explore how samples might be used compositionally. We played an adapted version of the ‘echo game’: rather than a pair of collaborators calling-and-responding with different percussion instruments (e.g., trying to play a large bassy drum in a way that sounds like a triangle), we used acoustic instruments to echo samples that we cued from an iPad (e.g.

³⁹ Pink Floyd’s *Money* (1973); Steve Reich’s *Different Trains* (1988); Ben Phaze’s *Underground* (2013); and my own works, *60,000,000,000* (2006) and *Old Green’s Life Night* (2009).

bird song, burp, clock ticking). Thus, we complicated the perception of what passes as 'music' and what is denigrated as 'noise'.

Feminist sound studies scholars have described at length how perception of a sound might pivot between 'music' and 'noise'. I have addressed this discussion in greater detail in chapter 4. For Nina Sun Eidsheim (2019), the *acousmatic question* is concerned with the non-neutral interpretation of the *thick event* of voice. Eidsheim writes: "The assumptions, expectations, and conventions of a given culture, and that culture's impression of who the vocalizer is, are overlaid onto its acceptance or rejection of the vocalizer" (loc. 441-442). For Jennifer Lynn Stoeber (2016), this process happens through the *listening ear*, a racializing filter that drives the *sonic colour line* to sort incoming sounds into poles, including "*music/ noise..., word/ sound, sense/ nonsense..., cultivated/ raw*" (p. 13). Similarly, Marie Thompson (2016) argues that "[f]eminine silence has been construed as 'virtuous'" because "the feminine shares with noise connotations of disorder, chaos, complexity, and excess" (p. 87). Thus, sound/noise has been thought as pivoting along racialising and gendering lines. However, similar arguments have not comprehensively been developed as to how ability and disability pivot along a similar line, (or what I wish someone would start calling 'crip sound studies'). For instance, Kafer (2013) considers how movement aids might generate 'unnatural' sounds on walking trails (see p. 137), marking those body(mind)s as out-of-place in a way that boot scrunches might not. In the next paragraph, I suggest that the sonic pivot between noise and sound narrates a *lesser capacity to affect than to be affected* of the noising body(mind).

Theories of affect, which I already discussed at length in chapter 4, attend to how the passage of myriad socio-material forces between body(mind)s condition their capacities to: (1) affect other body(minds) and (2) become further affected. Important to my thinking-with affect is that I attend to how it *modulates* capacity, rather than its

legibly capacitating or debilitating. Scholars interested in the ways that theories of affect might be used to understand and defamiliarise patterns of oppression—such as racism, ableism and queerphobia—have contended that the flow of these intensities is articulated: body(mind)s become ‘saturated’ (Ahmed, 2004) with perceptions of their capacities that ultimately go on to partially determine what that body(mind) can do. For Chen (2012), these hierarchical perceptions are underpinned by the animacy hierarchy—the degree of “agency, awareness, mobility, and liveness” (p. 2)—assumed of that body(mind): a stone has less animacy than a bumblebee, someone who is neurodivergent has less animacy than a neurotypical wheelchair user, and so on. At the apex of this animacy hierarchy sits the normatively abled white man (Man). It’s important to note that neither Chen nor myself is saying that this animacy hierarchy is somehow ‘true’, but rather that the doxic perception of a body(mind)’s animacy—its affective saturation—has a material impact on that body(mind)⁴⁰: in other words, body(mind)s become “invested with capacity” (Dernikos, 2020a, p. 419). Thus, Roxanna Ng (2012) states that hierarchical control does not only manifest in the form of sociocultural clashes but bodily: “Power plays are both enacted and absorbed by people physically” (p. 346). At the same time, the understanding of affect I’ve sketched since chapter 3 is of one that is curatable: affect’s non-neutral and historied passage can be sculpted by the proposition, which is what determines the relevance of prior events to the novel events. Thus, propositions can be mounted that throw a lugger wrench in the doxic flow of relevance (even if only for a few seconds at a time). This is what Whitehead means when he calls propositions a

⁴⁰ Theorists of Black affect (e.g. Ngai, 2007; Palmer, 2017) have written extensively on how the racializing perception of affects assumes a lack of intentionality of the racialised body(mind): of animation without animacy. Recent examples among millions of this perception might include Eric Garner and George Floyd’s unheeded pleas of “I Can’t Breathe” while they were being murdered by Daniel Pantaleo and Derek Chauvin.

‘determinant of definiteness’: the proposition maintains or redirects the flow of relevance, and so shapes feeling.

On a windy day, we complete a soundwalk around the block. We take blindfolds and ear defenders, which direct audition in different directions, both external and internal. We plan out a route around the school that includes three sites where we can pause so that young people can alternate free listening with wearing their ear defenders and blindfolds. The three sites are: (1) behind the school next to a housing estate, (2) next to a green hill, and (3) on the busy intersection next to the school’s entrance. We stand in an elongated ellipsis. After the walk, we discuss the different sounds that the young people heard. Some, I can recall hearing myself, such as a bus, footfalls, snatches of conversation, seagulls, and “Mr Shannon talking non-stop.” Others were made audible by the ear defenders: tiny somatic sounds such as a ‘burp’ and a “heartbeat in my neck.” Other sounds were speculative but ‘realistic’—dog barks, a TV, an ambulance, “like a thunderstorm”—while others were less so—a gorilla. For Wahneema H. Lubiano (1991, p. 262, as cited in Schalk, 2018, p. 21), we are tempted when working with the ‘real’ to “accept what is offered as a slice of life because the narrative contains elements of ‘fact’” (p. 20). Just as with the somatic, the speculative soundscape is no less real for its inaudibility. I try to salvage samples that could be used in our electroacoustic composition from the recording made during our walk, but the wind made these mostly unusable. Given that the samples we’d recorded were useless, we explored how else we might work with sounds we’d encountered. I decide to source samples of the sounds we discussed instead. In having to source samples from original sources, I decide not to distinguish between the ‘real’ (bus, footfall) and the speculative (a gorilla). I programme these sounds into a keyboard and apply sticky labels so that they can see which sound is loaded onto each key. Young people programme these samples into a MIDI sequencer as

percussive compositions. In this way, our sampling of speculative sounds defamiliarised neurotypical notions of audition.

We also create graphic compositions. Young people work in small groups to compose a score using a single line, with different colours to indicate different timbres and troughs and peaks to indicate different intensities. I explain we created these lines (and how they intervene in biocentric dox of A/autisms) in the next chapter. For now, though, I want to emphasise what happened during the performance of these works. We rehearsed for one week and then recorded the composition in as-near-as-possible-to-studio conditions as we could manage in the classroom. An example of the material impact of affective saturation can be heard beginning at 6:12 in the recording. Rei improvises a sudden, six-note vocalisation over her performance of the composition. Rei can be heard to move between the two microphones as her improvisation develops, becoming closer to the microphones as she does. Rei is an A/autistic girl: she is largely 'non-speaking' (although not 'non-vocal') and has a full-time Learning Support Assistant (LSA). On hearing her improvisation, Rei's LSA hurriedly reaches across the carpet to take Rei's hand. When it becomes clear that Rei's short improvisation has finished, the LSA relaxes back to the edge of the carpet, leaving Rei to carry on performing the composition. A second vocalisation was improvised by Kwodwo, an (ostensibly) 'neurotypical' boy. Kwodwo's improvisation begins at 16:04 and lasts for 55 seconds. Although considerably longer than Rei's—and employing a range of sounds including rhythmic hums and giggles—Kwodwo's improvisation is not interrupted.

Previously, in chapter 4, I argued that the etymology of the word 'noise' lies in the word 'nausea' and so associates it with 'disgust'. I want to build on that here to think about how the LSA's decision to stop Rei's improvisation was mobilised in repulsion of the adult-body/baby-brain. Importantly, I'm not looking to criticise the LSA for this but rather

am interested instead in how disgust might be thought of as ‘performative’. Ahmed (2004) draws from Judith Butler’s concept of gender performativity—by which gender is a performance of wider, pre-subjective logics—to describe disgust as performative. In other words, logics of disgust perform us, and in so doing we re-inscribe them. Logics of disgust drive the expulsion of the object, whereby the subject finds it disgusting *in the act of expelling*. Thus, the reception of an expression as noise is a being-performed-by racializing, and abling and disabling logics that saturate an object with ‘sticky’ affects and change how they are transformed by future affections. The revulsion of noise, then, might be considered the fear of contamination (i.e. modulation of capacities) by this stickiness at the point of contact between two surfaces (i.e. the moment of affection). In other words, Rei’s LSA did not find Rei’s improvisation inherently disgusting— and most definitely does not find Rei disgusting—but rather could *only* have performed disgust when faced with Rei’s improvisation because of how the ‘listening ear’ (Stoever, 2016) must operate within the parameters of rehabilitation-as-inclusion: the six-note improvisation is not includable, and so must be excluded. As such, my intent in thinking through this episode is not to critique an individual colleague for choosing to expel Rei, but rather to unsettle the logics that perform *all* educators in mainstream education: I am as subject to and as culpable of these logics as the LSA in this episode was.

Yergeau (2018) writes: “involuntariness dominates much of the discourse on A/autism” across “thought, mode, action, and being” (p. 7). For Yergeau, A/autistic practices such as self-stimulatory behaviours (sometimes called stimming), special interests, and asociality are understood as involuntary: “as impulses that unfold rather than intend” (p. 35). Thus, Yergeau contends that the popular perception of the A/autistic is one that emphasises the *auto-* (as in automatic) as much as the *autos* (as in self): the A/autistic is an *auto-maton*. A/autistic practices are ‘involuntary’, and so A/autists lack

agency: “rhetoric never arrives” (p. 83). Volition becomes what Snyder and Mitchell (2010) might call a ‘minimum capacity’ for inclusion. This pivots the perception of the listening ear: rather than perceive Rei’s vocalisation as music, the perception that it was involuntary—inanimate—means it holds a lesser capacity to affect, and so can only be perceived as noise. However, without this vocalisation, Rei passes at the level of the performed; Rei could be visibly included as an absent-presence.

Rei’s improvisation as neuroqueer dis-identification.

In research-creation, the ‘finished’ composition and research are always more fuel for further composing and researching. I was drawn to Rei’s improvisation. It is tuned perfectly within the Western classical 12 semi-tone system. Moreover, the improvisation is consistent with an octatonic diminished scale. If Rei’s starting note is the root-note of the scale, then she is composing with the half-whole diminished scale starting on B, which may imply an accompanying B^{13b9} chord. I played this chord as a pad and ran it under the whole work. The presence of this chord changes the mode (the harmonic foundation) of the composition. I also compose with her original six-note melody, echoing it on the piano, and adding countermelodies. Thus, ‘noise’ is quite literally centred in the work.

A rich line of thinking across sound studies has already looked to the ways in which ‘noise’ has been (or else could be) re-appropriated: rather than remain denigrated as ‘not music’, these scholars have considered how noise disrupts the inclusory logics along which music and noise pivot. Andrew Brooks (2015) thinks with glitch music and queer failure to consider noise as a productive, desirable part of music. Brooks writes, “glitch can be employed as a theoretical framework for understanding how disruption, deviation and disorder are productive in systems” (p. 40). For instance, Tricia Rose (1994) discusses the music production technique that she terms ‘into the red’: a production

technique common in rap and hip-hop music, whereby the gain of a track is pushed beyond the point at which the sound begins to distort. This technique is epitomised by the Roland TR-808 bass drum, which Tricia Rose describes as a “fat sonic boom” (p. 75). The popularity of this ‘fat sonic boom’ forced other audio engineers to deliberately work ‘in the red’, at the point at which ‘music’ distorts into ‘noise’ and thereby complicating the fixity of both. Alexander Weheliye (2005), meanwhile, theorises the interrelation of Black musical practices—often described as ‘noisy’—with the development of modern phonographic technology, and so of the necessity of ‘noisy’ Blackness to the existence of modernity. Others have started to do similar work in regards to disability, such as crippling stammering (J. S. Pierre, 2015) and sonic assistive technologies (Sterne, 2019) to explore how they might defamiliarise normative notions of time and voice, respectively. However, much of the uptake of A/autistic practices (and disability more broadly) in sound studies has remained oddly silent (e.g. Bakan, 2014) or else falls into the ‘empathic poetics’ described above.

Queer-inhuman theorist Eunjung Kim (2015) argues that, instead of compensatorily affording disabled people capitalist-era humanist traits—the absence of which justifies exclusion—we should instead make those traits “irrelevant in recognizing the ontology of a being” (p. 305). Thus, Kim contends that rather than ‘include’ by effacing difference or assuming some underlying sameness (which really is just another way to efface difference), we should change the whole notion of perception. As indicated by my own composing-with, there is nothing unmusical about Rei’s vocalisation. Rei’s LSA sought to exclude her because the perception of the listening ear marked it as A/autistic: involuntary and inanimate rather than voluntary and animate. Changing the musical mode with which we listen to the vocalisation—as I have done in *Walking through Leeds on a Windy Day*—brings the listening experience ‘in-tune’ with Rei’s improvisation, rather

than seeking to tune her up through inclusion. Changing the mode of perception with which we encounter neuroqueer noise removes the justification for exclusion.

neuroqueer(ing) noise

Inclusion in the UK “requires the reification of homonormative values,” wherein integration is “based on the ability to approximate values of normalcy” (Mitchell, 2014, p. 1). In the UK, these values usually refer to normative notions of ability/disability. We completed our initiating walk in October 2018, a little over two years after the Brexit vote, and smack in the middle of a period of mounting British nationalism that manifests as increased Islamophobic, racist and queerphobic violence. In this diverse space, an understanding of an ability/disability binary is complicated by the ways in which other patterns of oppression intersect: as Puar (2017) writes, instead of asking “are you disabled?” we should ask, moment-by-moment, “how abled are you? and how disabled are you?” (p. 56). In other words, body(mind)s are saturated with affects that ultimately condition what that body(mind) can do.

The taking-seriously of speculative sounds made kept “Mr Shannon talking non-stop” with me. My own ‘talking non-stop’—my white, cis-male, neurotypical talking non-stop—was indicative of the Anglo-centrism of many educational settings. This is despite the significant linguistic diversity of the research school’s community. Two months after the walk, we discussed how my ‘talking non-stop’ related to what we heard on the walk. Ioan commented: “in school, we talking English.” This resembles In this way, just as the included neuroqueer child can become an absent-presence in a neuronormative space—their physical integration naturalised while leaving intact minoritizing structures—a polylingual child can become an absent-presence in an Anglo-centric space.

We formulated a new proposition: to compose with samples of “other languages that we know.” The next week, we recorded samples from our other languages. Some of the young people asked for post-it notes so they could compose the sentences in advance. I’d forgotten how to give out pieces of paper to six-year-olds without causing a bloodbath and had to be rescued by the class teacher. We somehow go through 240 post-its. Ama decided to record the sentence: “*Me llamo Ama. Tengo siete años.*” Marie said: “我叫 Marie. 我吃汉堡包.” Rei said: “小狗.” Joseph switched between English and Akan. Five months later, while listening back to the composition, Abdurahman reveal through peals of laughter that his home language sentence was Arabic for “I’m going to smack your bottom.” Zhang Wei, possessed of exceptional English and conversational Chinese, became distressed when he couldn’t write his home language statements in 汉字; he tried several times to think of a sentence, but then became tearful. He explained that “Rei and Marie go to Chinese school, but I don’t go to Chinese school.” I offered him the option to record some words after class, or the following week, but he declined. Other young people recorded their sentences in the corridor, away from the class. Virginia, whose home language is English, said, “Why?” Similarly, Lucy said, “Hello!” Janai (whose home language is also English) uttered several phonemes, some of which I thought resembled Czech, and concluded his sentence with ‘oo la la’. Ozge, the class teacher, expressed that she was moved by the activity. She explained that there wasn’t space to work with home languages often and commented later that she hadn’t realised that, for instance, Rei and Marie could write and speak in Chinese.

In the previous section, I thought about Rei’s improvisation as neuroqueer noise, suggesting how we might better value neuroqueer practices as examples of counter-identification (Muñoz, 1999). However, at its queerest—its most ‘utopic’ (Muñoz, 2009)—the neuroqueer resists the formation of its own or indeed any boundaries. By this, I mean

that neuroqueering (as a verb) doesn't just change the mode with which we qualify *dis-*ability: it changes the mode with which we qualify ability. In suggesting home languages as a compositional tool, I hoped we would render their exclusion audible. However, in this episode, English as what Snyder and Mitchell (2010) might call a 'minimum capacity' for inclusion also seemed, momentarily, to be defamiliarised.

I am not suggesting that speaking multiple languages is a 'disability', nor that racialised people are 'neurodivergent' in the way we might typically understand it. Yet, Mitchell, Snyder and Ware (2014) critique school's "incapacity (or, perhaps, unwillingness) to adapt the lessons of systemically in-built accommodations and crip/queer content designed to address the range of learning differences comprising today's classroom demographics" (p. 300). Their point here is that the inclusion agenda, for all its flaws, is still better than what we try to do for other patterns of difference and marginalisation because there is at least an intention to address exclusion. Thus, neuroqueering tendency doesn't just have implications for how we orient towards neurodiversity, but also to linguistic, racial and gender diversity. As described above, young people whose only home language is English, or who have less experience in another language, found the task a little bewildering. Indeed, I was thoroughly bewildered by Abduhrahman's "I'm going to smack your bottom": especially as I had already shared the composition at a handful of academic conferences! Thus, neurotypical speakers of English as a home language were momentarily debilitated, just as Rei's neuroqueer 'non-speaking' was momentarily affectively capacitated by her ability to write and say 小狗 (puppy). Thus, the performativity of the listening ear was momentarily shifted into a different mode. Rather than 'include', which necessitates the rehabilitation of the divergent child, education itself as the thing in which we want to include young people was momentarily modulated so that body(mind)s came to pass differently. As

Massumi (2015) writes: “The oddest of affective tendencies are OK – as long as they pay” (p. 20). In this encounter, in simple terms, I hope that we momentarily modified the conditions of ‘what pays’.

And yet Fred Moten contends that “Black life is *always* neurodiverse [(meaning non-neurotypical)] life” (in Manning, 2019, p. x, emphasis mine). Although I am uncomfortable with the politics in my own echoing this claim, perhaps what I might suggest is that *neurodivergence is a racializing process*. In her overview of the historical origins of A/autism, Anne McGuire (2016) contends that the conditions of possibility inherent to neurodivergence include eugenic concerns of racial purity. Thus, hearing neurodivergence or neurotypicality isn’t just conditioned by a ‘sonic ability line’: It’s also conditioned by the sonic *colour* line (Stoever, 2016), which sorts sound into neurotypical (white) music and neurodivergent (less-than-white) noise. In other words, to re-configure Moten: neurodiverging life might be thought of as always *black(ening)* life, in that “movement toward the nonhuman is simultaneously movement toward blackness... as blackness constitutes the very matter at hand” (Z. I. Jackson, 2015, p. 217). Thus, then, this episode suggests a neuroqueer unsettling of the fragile distinction between able/neurotypical and disabled/neuroqueer. Moreover, it defamiliarises the racializing logic that underpins the very possibility of (neuro)divergence. Thus, it goes beyond neuroqueer counter-identification, and beyond unsettling the neurodivergent/neurotypical binary, and instead defamiliarises ever-expanding adjacent domains as a more capacious, more utopic, mode of neuroqueer(ing). In the final section of this chapter, I think with a second vocal improvisation by Kwodwo, an (ostensibly) neurotypical boy.

Kwodwo’s improvisation.

Kwodwo was born in Finland. He is Black. He spoke mostly in jargon, frequently engaged in self-stimulatory behaviours (such as vigorous rocking), and had a very detailed knowledge of WWE. However, Kwodwo did not make use of any additional communication tools, does not have a diagnosis, and was not included on the school's SEN register (which I found quite concerning). This is not an unfamiliar pattern in schools: diagnoses of neurological differences and disabilities such as A/autisms are under- and over-represented for different groups of young people, and Black boys and girls in particular are less likely to have diagnoses in place: for this reason, intervention, funding, and school-level support are also underrepresented (Department for Education, 2019b, 2020). In other words, despite showing numerous extravagantly neuroqueer behaviours that interfered with his learning, Kwodwo was not receiving any SEN support, which is indicative of the wider response to disability in young Black people in British schools. In other words, he 'passed.'

During the recording of *Walking through Leeds on a windy day*, Kwodwo performed a vocal improvisation. It is rhythmic, and incorporates hums, giggles, and sounds that could be mimics of drum sounds (or beatboxing). His improvisation lasts about 55 seconds. Yet, despite being nine times the length of Rei's improvisation, Kwodwo's improvisation was not stopped or interrupted. Similar to Rei's improvisation discussed above, then, I'm going to argue here that Kwodwo's improvisation, as well as the response to it, was "invested" with a lesser capacity to affect than itself to be affected (Dernikos, 2020a, p. 419). I unpack the complexity of this below. Before I do, it's important to point out that my thinking in this section is not an attempt to establish a generalisable cause and effect, by which I mean that (just as with Rei), what I'm about to discuss probably didn't happen every time he opened his mouth: indeed, for the argument I'm going to trace, it's probably not very important if it did. Rather, I return to

Deleuze's (2015) notion of 'quasi-causality' from chapter 5 to consider how this micro-event might help us to further complicate the role of affective tendency in formulating wider patterns of oppression. 'Quasi-causality' refers to the non-linear causality between events, whereby related events do not initiate one another, but rather *become* through their relation. In this way, the events are an interaction with the capacities already accrued on the surface of each participant's body(mind), with each 'making sense' of the other without causing the other (Roffe, 2017).⁴¹ In this way, I understand Kwodwo's improvisation, the practitioners' responses to it, and my attraction to it as quasi-causal: or, what MacLure (2013a) calls "matters spooling out without a predetermined destination... a kind of 'surfing' of the intensity of the event that has caught us up, in order to arrive somewhere else" (p. 662). Thus, in the context of music composition, Kwodwo's improvisation is weighted by the co-constitution of racialisation and neuronormative notions of 'ability,' and the pre-subjective performativity of this co-constitution as an affective tendency, but also of a line of partial escape from those logics. I attend to this beginning in the next paragraph, with a discussion of the theorisation of Black affect.

Scholars of Black affect have theorised the differential between the reception of the noisy Black-*as-a-body* and its antithesis white-*has-a-body* as an investment of capacity to affect or be affected. For instance, Lindon Barrett (1999, cited in Weheliye, 2002) distinguishes the always-embodied Black sub-Human 'singing voice' from the disembodied white Human 'signing voice'. In other words, Black sound is *only* sound—or 'prior to rationality' (Stoeber, 2016). Similarly, Ngai (2007) writes on the racialised affect

⁴¹ It's probably also worth pointing out that Deleuze never really 'finished' his conceptualisation of the quasi-cause: in this way, my engagement with it here and in chapter 5 is also quasi-causal, in that Kwodwo's improvisation is helping me figure out the quasi-cause as much as the quasi-cause is helping me figure out this complex incident.

of *animatedness*. For Ngai, animatedness is the reception of an affect in such a way that associates Black(ened) feeling with “the image of the overemotional racialized subject,” which also renders that subject “unusually receptive to external control” (p. 91).⁴² Consequently, just like Rei’s vocal improvisation, Kwodwo’s improvisation seems to be invested with a lesser capacity to affect or be affected, here indicated by a lack of interest in intervention. By way of a contrast to Rei’s improvisation—which was stopped because of the assumed lack of volition (and lack of affectability) of that improvisation, and the need to ward off the future of the baby brain/adult body—Kwodwo’s improvisation passed within the (neuro)typical range of Blackness. Like Chen (2012), then, Ngai and Palmer argue that the Black body(mind) is narrated as possessing a ‘lesser capacity to affect than to be affected’. Thus, while in the previous sections I have hinted at the *Blackening* of neurodivergence, here we see the neurodiverging of *Blackened* life: that there is an assumed divergence of capacity to intentionally affect.

As discussed in chapter 3, Ferguson (2004) in *Aberrations in Black*, problematises the raciality of restorative logics, in that racialised bodies are always-already diverging from the idealised European subject (Man). In other words, while white boys are ‘surprising deviants’ (Gibson & Douglas, 2018) because they would pass as abled if not for the (restorable) divergence, women and Black people are already irredeemably divergent and so cannot be restored: they are ‘*unsurprising deviants*.’ Consequently, A/autisms as a white boy thing—or as ‘would pass if not for’—leaves the Black neuroqueer as un-whitenable and so fundamentally un-piece-able: in other words, intransigent to intervention. As such, there was little point in intervening in this short music episode—or in enacting

⁴² Problematically, Ngai collates animatedness as affecting ‘people of color’, and so eliding the specificity of anti-Blackness that is important to the work of this section.

wider SEN provision—because divergence is unsurprising and intervention could not bring Kwodwo closer to (white) neurotypicality. So, what are we to do?

Fred Moten conceptualises Blackness as always in excess of how whiteness can frame it. In *Universal Machine*, Moten (2018) thinks about this excess as ‘saturation.’ He compares this saturation with the visual saturation of the Baroque compositional technique, *note nere* (by which the printed score is visibly saturated with excessive note-tails) and the closing, audibly saturated, chromatic glissando from Schoenberg’s *Erwartung*. In each of these examples, Moten considers Blackness as in excess of this saturation. In other words, as something more-than-chromatic. For Moten, then, while the existence of the racist’s frame is necessary for Blackness to be legible or audible, it is also always-already in excess of the capability of that frame to close it down, just as Schoenberg’s chromatic glissando is in excess of the octave. Through this ‘ceaseless fugitivity,’ Blackness—rather than a comparison to ‘what it is not’ (i.e. whiteness)—exists in the ‘chromatic saturation’ that evades the racist/racializing ‘tyranny of the octave’. It is the “theoretical and practical coexistence of all possible notes that can be played and, moreover, of all the impossible notes that can’t be played” (p. 154), calling both the (white) tonic and chromatic itself into existence. Kwodwo’s improvisation, then, rather than an excessive animatedness, might be thought in excess of animation: a rhythmic impatience with the confines of notation (Moten, 2003), or what he later refers to as the “tyranny of the octave” (Moten, 2018, p. 153).

Thinking about Kwodwo’s improvisation as in excess of the racializing frame offers a way to invest a different set of capacities. However, it’s important not to rose tint this too much. David Marriot (2016) accentuates how Moten’s fugitivity is ‘ceaseless’ precisely because of its reliance on the *impossibility* of escape from the racialising epistemic gaze: in other words, *Blackness is always escaping, but can never escape*.

Listening to Kwodwo with Ngai and Moten makes space to hear his improvisation as one that refuses the octave while still having that refusal sorted within the racialising assemblage that denies him intervention.

Chapter summary.

I am writing large swathes of this thesis while working part-time as a special education teacher in an additional resource provision (ARP).⁴³ Consequently, these conclusions seem even more relevant to me now than when I first drafted this chapter. Inclusion, as it operates in British schools, is the physical integration of disabled young people into mainstream settings, while leaving unchallenged the pedagogical understandings that able/disable them in the first place. Under these logics, A/autistic practices are involuntary and so inanimate: never music, always noise. This chapter addressed my first research question and associated sub-questions. It also addressed my second research question, by exploring the extent to which music research-creation allows the analysis of learning experiences in the classroom.

A reviewer for an article about *Walking through Leeds on a windy day* commented on how ‘haunting’ the work sounded: I suppose the half-whole diminished scale and its accompanying B13b9, as well as the home language statements and general reverberant gloominess, are a little further away from what we ordinarily think about when we describe music in the primary classroom. Thus, as with the examples of the scream and disorientating chord changes discussed in chapter 5, the composition intervened in the expected: both in terms of young people’s composing-with, in terms of mapping their experience of place while ‘walking through Leeds on a windy day,’ and in terms of

⁴³ An ARP is a special education ‘unit’ in a mainstream school: which young people spend part of their day in, before returning to mainstream learning.

mapping-against what is natural about nature. In this way, the work might generate what Hickey-Moody (2013) calls ‘little-publics’ that unsettle both “young people’s understandings of themselves and public understandings of youth” (p. 127). In the middle of a heatwave in June 2019, we retrace the steps of the original soundwalk as an audio walk, pausing in the same places, but this time playing the completed electroacoustic composition through a Bluetooth speaker. Inserting the composition into the walked route transforms the speculative into the real and the inaudible into the audible, “emplac[ing] audible pasts” (Black & Bohlman, 2017, p. 1). This time, home languages, stimming, the speculative, and the somatic are all as much a part of the soundscape as traffic and “Mr Shannon talking non-stop.”

I don’t want to make it sound like everything we composed about was this political. The young people also composed with burps in their neck, heartbeats, speculative seagull sounds, and a collection of other ephemera. Moreover, I hope it’s clear that I’m not dwelling in the noising itself, but how practitioners—momentarily, in the music classroom—might resist the racializing and abling/disabling pivot between noise and music by looking to how noise itself rejects the tyranny of the octave. Thus, it is a refusal of what Tuck calls ‘damage-focused research’ (Tuck, 2008, as cited in Ware, 2017). Part of the driving force behind this project was my own former practice as a SENCo: shrinking budgets, battling for EHCP ‘hours,’ while knowing how little a difference they made.

Yergeau (2018) argues that, despite the perception that A/autistic practices are involuntary, ultimately, *nobody* chooses their neurology: volition can only take credit for so much. Yet, the inconceivability of A/autistic agency is caught up in systems of releasing the ‘real human’—capable of volition and so, ‘obviously’, the non-expression of A/autistic

practices—who is trapped inside the A/autistic, even where doing so seems to (violently) violate their will, because what seems to be at stake is the very capacity to will.

Muñoz (2009) conceptualises queer refusal of inclusion as simultaneously “failure and virtuosity” (p. 169). Rei’s improvisation was virtuosically musical (half-whole diminished over B^{13,9}!) and yet flamboyant in its failure to pass as neurotypical: Thus, it was a refusal to be included. This has implications for how we—educators and researchers—understand what is valued in educational spaces, including the very refusal of those understandings. How might we direct support staff to transform education settings rather than to rehabilitate young people to be better included? What if we render ‘inclusion’ irrelevant to measures of ‘value’, both in terms of how we approach the arts and to how we approach the A/autistic? What might happen if we remain open to every rock, stim, and scat? Yergeau (2018) has described *neuroqueer rhetorics* as “anti-rhetorics[...] cunning enough to claim and embody the arhetorical” (p. 40). Applied across the school curriculum, a neuroqueer understanding of rhetoric—that renders (in)volition and all other (neuro)normative humanistic notions of ‘minimum capacity’ as irrelevant to a practice’s value—might reframe these ‘involuntary’ moments of refusal as that which both “embraces and fucks with rhetoric” (Yergeau, 2018, p. 40).

As I explained in chapters 2 and 3, this thesis adopts critical disability studies as a methodological approach: in other words, its intention to method is to unsettle (neuro)typical formulations of ability. Throughout this chapter, I have described my project as ‘momentarily unsettling’ the fixity of neurodivergence and neurotypicality, of capacity, and of adjacent domains; the modulations—embracings and fuckings-with—that I’ve proposed operate for only a few seconds at a time, and frequently rely on my own capacitation as: a white, cis-gendered, abled male; a visiting ‘expert’; and an experienced teacher and musician. Moreover, I’m not sure that a more massive

disruption is inherently valuable. Muñoz (1999) contends that rejecting assimilation is not possible for “all minoritarian subjects all of the time” (loc. 3307). Thus, at some times, becoming more easily includable is essential: particularly for those living at the intersection of disability, racialisation, and cis-gendering. Yet, the logics of momentary unsettling that I’ve suggested here are replicable. Not to suggest that we ever let go of disability, or that inclusion is never valuable, but rather to indicate some ways that we can—sometimes, momentarily—say “No!” to ‘mere inclusion’ (Muñoz, 2009), neuroqueering A/autistic ‘noise’ as:

1. Musical;
2. rhetorical;
3. jazzy (half-whole diminished over B^{13b9!});
4. flamboyant;
5. and fabulous.

8. A/autisms: A ‘necessary queer labour of the incommensurate.’

Preamble: The many faces of autism.

In this chapter, I propose ‘A/autisms’ as an organizing concept for considering the complex intersection of A/autistic identity, A/autistic disability, and the contingency of the diagnosis ‘autism’ in educational research. I draw from *Neuroqueer(ing) Noise*—my research-creation project in an integrated early childhood classroom—to consider how this intersection might help us orient towards A/autisms as artists, researchers, and teachers. Moreover, I suggest that A/autisms might be understood as a methodology for reorienting toward the human subject in the ontological turn.

A tension is evident in critical A/autisms studies as to how to orient oneself as a researcher towards neurodivergence. The contingency of the category ‘autism’, the importance of A/autistic identity, and the material reality of A/autistic ability and disability mean that any singular tracing of A/autisms is always problematic. Rather than understand these orientations as incommensurate, I draw from the *queer inhumanisms* and Barad’s account of *diffraction* to suggest that we might hold onto this tension as a site of *queer friction*. I propose illustrating this tension (in this chapter and throughout the thesis) through my stylised writing of ‘autisms’ as *A/autisms*. I draw from *Neuroqueer(ing) Noise* to consider how this tension might help us orient towards A/autisms as artists, researchers, and teachers. This chapter is in conversation with chapter 4, where I theorised how ocular-centric logics come to be materialised in non-ocular research assemblages as *methodological inheritances*. In this chapter, I expand

upon these ideas in two ways: first, in terms of how those logics materialise the research encounter; and second, in how medical-moral individual models of disability come to be built into accommodations and research devices, which further tethers those objects to the disabled person. Moreover, and while ostensibly ‘about A/autisms’, my activation of the queer inhumanisms in this chapter has the potential to contribute to wider discussions in educational research of how to supplant the overrepresented Euro-Western figuration of the human without imposing a new unitary humanism or erasing the structures on which marginalised populations depend for survival.

Chapter overview.

In the next section, I introduce the theoretical background that informs my argument in this chapter: First, I reintroduce Barad’s (2007) theorisation of *diffraction*; I use diffraction to consider how the theoretical orientation a researcher takes towards A/autisms *matters* in the research context. I offer four such orientations here. Rather than relying on one orientation towards A/autisms, I extend Puar’s (2012) concept of *friction* to propose holding several in a frictional presupposition, as what Muñoz (2015) calls a “necessary queer labor of the incommensurate” (p. 209). I then consider the implications of this friction by situating my argument within the *queer inhumanisms*. Following this discussion of my theoretical background, I introduce a series of three ‘vignettes’ from my in-school project: I apply the organizing concept A/autisms to these vignettes to illustrate how it complicates both educational practice and research praxis. I conclude this chapter by attending to the limitations of A/autisms as an organizing concept: I draw from Muñoz’s theorisation of queerness as ‘utopic’ to consider how these limitations might themselves be considered generative.

Theoretical background.

In this section, I propose *A/autisms* as an organising concept for researching with *A/autists*. This is the second of the two major theoretical contributions of this thesis (with the first being the research praxis of music composition research-creation). In formulating *A/autisms*, I am indebted to a similar move within *D/deaf* studies, whereby lower-case 'd' deaf indicates the state of non-hearing, while upper-case 'D' indicates the rich linguistic and cultural identity of Deafness.

As I intimated at the start of this chapter, a tension is evident in critical *A/autisms* studies as to how to orient oneself as a researcher towards neurodivergence. There are multiple yet incommensurate ways to trace what 'autism' is: autisms are pathologizing labels whose problematic conditions of emergence in the work of Leo Kanner, Ole Lovaas, and Hans Asperger (amongst others) relies on racializing and gendering eugenic logics (Gibson & Douglas, 2018; McGuire, 2016); *and* autisms are invisible disabilities that doubly erase those living at the intersection of racializing, gendering and disabling logics (Çelik, 2017; Saxe, 2017); *and* Autisms (upper-case A) are fabulous neuroqueer/neurodivergent counter-identities (Woods et al., 2018); *and* autisms (lower-case a) are neuroqueer disruptions of identity (Egner, 2019); *and... and... and...* In this chapter, I call these incommensurate perspectives 'orientations.'

For this reason, establishing any singular orientation towards *A/autisms* is problematic. This is particularly true when writing from my own positionality as a neurotypical, cis-, gay but 'straight-passing(ish)', white male: In homonormative times, writing in solidarity with neurological queerness requires great care. As Dan Goodley (2016) writes: "Any debate, analytical intervention or rhetorical interrogation of the many faces of *A/autisms* has the potential to upset somebody" (p.147). Yet, and while agreeing

with Goodley, I worry that ‘upset’ undersells the importance of orientation. In the next section, I discuss the material expression of ‘orientation.’

The importance of orientation: Diffraction and four A/autisms.

I am drawn here to (re)consider feminist theoretical physicist Barad’s (2007) description of *diffraction*. As I explained in chapter 4, Barad describes the materialisation of theoretical perspectives in the research encounter through the physical process of diffraction: through the methodological (in)tension to the research methods. Thus, establishing any singular orientation towards A/autisms materialises a particular interference pattern: A/autisms as contingent and drapey, A/autisms as identity, or A/autisms as a configuration of ability and disability. Any other pattern is *actively* dematerialised in the research encounter. To orient is to erase, multiple-y so when researching in the early childhood classroom, with populations already subject to the multiplying invisibility experienced at the intersection of neurodivergence, racialisation and girlhood. Having introduced the tensions surrounding A/autisms, and Barad’s diffraction (which I draw form to think about these tensions), I now introduce the four orientations to A/autisms I consider in this chapter.

Orientation 1: The contingency of the category ‘autism’.

The first orientation I discuss problematises A/autisms as loose, contingent, explanatory frameworks that are draped over body(mind)s, and by which a set of divergent behaviours are specciated as a ‘type’ of person (Fitzgerald, 2017). Thus, my argument in this section explores the geo-historical ‘conditions of possibility’ that allow us to collate, demarcate and describe ‘autism’ (Barad, 2007). For Barad (2007) ‘conditions of possibility’ are discursive-material arrangements that initiate particular material (re)configurations: in this way, I am not arguing that autism is ‘made-up’, but rather that the concept

'autism' both emerges out of and enacts a particular socio-material convergence: both formulating and formulated-out-of particular world-views (Clare, 2017; Fritsch, 2016). Anne McGuire (2016) contends that to write A/autism's history "is to write an abbreviation" that necessarily excludes many of the minute ways in which the category was formulated (p. 27). Instead, McGuire 'blows the dust off' key moments in the trajectory of the term 'autism'. I follow this approach to accentuate four 'contingencies' that are particularly important to my theorisation of the contingent conditions of possibility from which autism emerged: namely, (1) developmentalism, (2) biologism, (3) behaviourism, and (4) capitalism.

Contingency 1: Developmentalism.

A/autisms first emerged in the late-nineteenth/early-twentieth century, amidst increased surveillance of children by experts through the school system, the popularity of Freudian and Darwinian theories, and the then emerging interest in tracking and developing a normative model of childhood (Nadesan, 2008). It was amidst this convergence that a language to describe difference emerged alongside expectations for how development *should* unfold. Thus, and although some of the earliest uses of the word 'autism' date back to 1911,⁴⁴ it was in the "convergence of new ideas about childhood, new systems of surveillance, new expert authorities, and new institutional arrangements" that Hans Asperger (1943) and Leo Kanner (1943) first described A/autisms as we would understand them today (Nadesan, 2008, p. 87).⁴⁵

⁴⁴ Eugen Bleuler (1911) described A/autistic thinking as a mode of thought that everybody engages in during play, dreams, or delusion (see Feinstein, 2010).

⁴⁵ There's some consternation as to *how* Kanner came up with so similar a term for so similar a syndrome simultaneously with Asperger, with the most common assumption being that Kanner plagiarised Asperger's work

Contingency 2: Biologism.

A/autisms also emerged concomitant with eugenic concerns of what to do with the ‘feeble-minded’ (and usually racialised) individual, driven by the popularity of Darwinian logics (McGuire, 2016), and so the notions of ‘survival of the fittest’ and hierarchies of (capitalist) capacity: in other words, the emerging dominance of what Wynter (2003) terms “bio-economic man” (p. 318). Thus, McGuire (2016) contends that the possibility of neurodivergence relies on early twentieth century concerns of racial purity. Moreover, these concerns emphasised how neurodivergence might be hereditary and so A/autisms became caught up in concerns of how the A/autistic was a threat to future (white) generations. Not only did this drive the ongoing biocentrism of A/autisms research, but also the moral imperative to intervene and ward off particular futures (i.e., adult bodies with baby brains): I turn to this ‘intervention’ in the next paragraph.

Contingency 3: Behaviourism.

Gibson and Douglas (2018) examine the work of behavioural psychologist Ole Ivar Lovaas to trace the co-constitution of neurological queerness with gender queerness in the behavioural interventions he developed: namely, Applied Behaviour Analysis and the Feminine Boys Project. Through positive and negative reinforcements, Lovaas believed that (neuro)queer boys could be made “indistinguishable from their normal friends” (Lovaas, 1987, p. 8, cited in McGuire, 2016, p. 46). A/autists and queers were prime subjects for behavioural rehabilitation because (neuro)queerness predominantly presented in white, middle-class, and physically and academically abled males: or as

(Feinstein, 2010). While there’s evidence of Asperger using the term ‘autistic’ as early as 1934, I’m not sure that we need this to explain how A/autisms came to be shaped at this particular moment.

“marker[s] of children who did not fit pre-existing categories of the “unfit”” (Gibson & Douglas, 2018, p. 7). In previous chapters, I have suggested that potential for rehabilitation relies on both (1) the distance between a body(mind)’s capacities and those of Man and (2) the degree of ‘*impressibility*’ of that body(mind), which allows the *impression* of new capacities and so the approximation of normative body(mind)ing (Schuller, 2018). As ‘surprising deviants’, who were understood as requiring less impressions than racialised and ‘feeble-minded’ people, and who were more able to *receive* those impressions, A/autists and queers were understood as well positioned for rehabilitation. Indeed, Gibson and Douglas argue that, for Lovaas and his colleagues, there was an “ethical imperative” (p. 8) to biophilanthropically salvage this subject from their divergence, in order to ward off the future of ‘baby brains in adult bodies’ —both for their sake, and (as already argued) that of future generations (Chen, 2012; Ebben, 2018; McGuire, 2016).⁴⁶ The overrepresentation of the otherwise-ideal subject in A/autisms diagnostic statistics continues today, and arguably is constituted by diagnostic criteria that emerged out of an otherwise ‘neutral’ (white, middle-class, dominant language speaking, physically-enabled, cis-, male) subject (Çelik, 2017). Thus, the problem of (neuro)queerness was understood as the moment that noise was introduced between the highly-capacitated neurotypical subject trapped behind neurodivergent expression: in other words, the moment of the behaved. It is this moment of behaviour that intervention has typically targeted,⁴⁷ and the marketing of these interventions that I attend to in the my final contingency in the next paragraph.

⁴⁶ My discussion of the resurgence of the moral model in chapter 7 is important here.

⁴⁷ My thinking here around the ‘behaved’ draws from information theory, which understands ‘noise’ as distortion that emerges between different parts of a communications system (e.g., C. E. Shannon, 1948). There is insufficient space to adequately expand on this relationship here.

Contingency 4: Capitalism!

My final point on the contingent conditions of possibility from which A/autisms emerged relates to how markets have *capitalised* on it. Nadesan (2008) contends that Asperger's 'little professor' A/autist was popularised during the information and technology booms of the 1960s: this boom narrated the Aspergeric A/autist as technologically sophisticated or akin to the machinic and so as better placed to capitalise upon the new information age. This narration of A/autisms remains very visible in popular media representations of the socially-awkward science genius—or even the contemporary and pervasive interest in social robots in interventions for A/autistic children (see, for instance: Alhaddad, Cabibihan, & Bonarini, 2018; Feng et al., 2018; Zhang et al., 2019). Moreover, the market has come up with myriad ways to market 'special' services and objects back to the A/autist (and to which A/autistic young people then become tethered): for instance, carefully branded communication tools such as the picture exchange programme PECS and the British Sign Language-derived Makaton. Moreover, the language of 'spectrum' situates formerly abled people as in need of intervention, or as consumers in need of cure (Fritsch & McGuire, 2019; McGuire, 2017), and so commodifies difference as diversity (and so as a humanistic success story).

In this section, I discussed my first of four orientations towards A/autisms: contingency. In discussing this first orientation, I named four contingencies: developmentalism, biologism, behaviourism, and capitalism. My point in discussing these four contingencies was not to suggest that A/autisms don't exist. Rather, I'm arguing that the conditions of possibility that allow A/autistic experience to be demarcated and described and, perhaps more importantly, *marketised* emerged at particular 'socio-geo-histo-infrastructural' moments (Puar, 2017). As I will argue later, these four

contingencies—developmentalism, biologism, behaviourism, and capitalism—are distilled into the electrodermal gizmos and come to shape what can be knowable about the A/autistic body(mind) in EDA research. For now, though, I attend to the remaining three orientations.

Orientation 2: the reality of A/autistic ability and disability.

The second orientation towards A/autisms I want to consider relates to the reality of A/autistic disability. The complexity and contingency of A/autisms' history has led some to question whether the diagnosis is valid, or at the very least to wonder 'what' is being diagnosed (Fitzgerald, 2017; K. Runswick-Cole et al., 2016). Yet, in deconstructing A/autisms, I think we need to be careful 'what we wish for'. As non- or intermittently apparent disabilities (Price, 2015), A/autisms and A/autists are often erased in discussions of disability, compounding the erasure disabled people are already subject to. Thus, A/autists are elided from neuronormative doxa, both in abled and disabled spaces. Moreover, we should be careful from whom diagnosis (no matter how 'invalid') is routinely withheld: or in Barad's terms, whose A/autisms we try to dematerialise. For instance, in both the UK and North America, Black students remain underrepresented in A/autisms diagnoses, yet overrepresented for communication and behavioral differences. Girls also remain underrepresented by 4:1 in the UK. Thus, A/autisms are constituted by diagnostic criteria that emerged out of an otherwise 'neutral' (white, middle-class, physically-abled, cis-male) subject (Çelik, 2017). Moreover, diagnosis and support are most often withheld from the same body(mind)s on whom unabashed neurodivergence most often plays out with violent consequences. For Jasbir Puar (2017), this debilitation—of disability as experienced at its intersection with racializing and gendering logics—unsettles the notion of disability and ability as binary, sedimented states. Instead, Puar

contends that disability should be understood as a constant oscillation: instead of asking “are you disabled?” we should ask, moment-by-moment, “how abled are you? and how disabled are you?” (p. 56). Thus, much as how ‘queer’ at its least capacious and least disruptive often comes to be synonymous with white male homosexuality, the overrepresentation of white middle-class males in A/autisms diagnoses fails to account for the debilitation evident at its intersection with other patterns of marginalisation. In other words, we shouldn’t pretend that the material reality of A/autistic disability is any less real for being ‘made-up’ (Clare, 2017, p. 142). Nor should we neglect to consider how that reality multiplies and complicates other patterns of marginalisation.

Orientations 3 and 4: counter-identity and dis-identity.

The third and fourth orientations towards A/autisms I want to consider in this chapter relate to A/autistic identity. A/autisms (upper-case ‘A’) are also disruptive sites of what Muñoz (2009) might call *dis-identity*. As I explained in chapter 3, dis-identification resists the notion of identity, whether the dominant, normative identity, or resistant forms of counter-identity. Thus, orienting towards A/autisms as a dis-identification can unsettle the whole notion of neurotypicality and, indeed, identity. For instance, Yergeau (2018) thinks-with the supposed involution of autistic stimming to reframe how we frame rhetoric. In many ways, I might also suggest that the fact that autism is traced through a behavioural checklists—particularly checklists with such woolly borders that most people could probably identify something A/autistic about themselves at some point—allows us to think about the leakage in which everybody is neuroqueer in some way.

This subversive streak is integral to *crip* and *neuroqueer* theories, which seek simultaneously to establish dis/ability as emerging in relations (rather than inside the disabled person’s body) while holding onto the politics of Disability identity. It is this

politics that I turn to now: A/autistic (upper-case 'A') identity is a fabulous site of cultural production and of counter-identitarian political activism (Woods et al., 2018). As Yergeau (2018) writes:

clinical exegeses of autism pinpoint many of the core markers of what might be termed identity, in all of identity's fluidity and fluctuations—affect, intent, concept of self, concept of others, empathy, sensation, cognition, motor coordination, mental processings, interests and hobbies, relationality, communication, and so on. If these are the items my doctor terms autism, how am I not to say that autism is me? (p. 132)

Thus, Yergeau understands their autism as identity.⁴⁸ So far so obvious. But I want to dwell with this complexity a moment longer. As Muñoz (2009) contends: “dis-identification is not an appropriate strategy for all minoritarian subjects all of the time” (loc. 3307). For Muñoz, minoritarian subjects rely on identitarian or counter-identitarian support networks. Similarly, Puar (2007, 2017) critiques the privilege—financial security, protection-from rather than subjection-to state violence—that allows some (white) queer subjects to flaunt failure and refuse to ‘identify’ or counter-identify. A/autists are not widely valued in the ways that (some) queer and (some) D/deaf individuals have come to be. This is evident, for instance, in the decisions across Europe to ban gay conversion therapies while continuing (or even beginning) to invest in ABA. For this reason, in this moment, I think we need to reiterate A/autistic (upper-case 'A') identity, even if it's in a more counter-identitarian, less disruptive (arguably 'less queer') form.

There has been heated discussion in critical A/autisms studies across the four orientations I've traced above. Orienting along any one line of inquiry forecloses the

⁴⁸ I use the singular 'autism' here to better reflect Yergeau's singular use of the term. As a neurotypical scholar drawing from the work of autistic scholars, it is important to accurately represent Yergeau's notion of what their autism is.

possibility of any other A/autisms materialising in the research encounter. For instance, discussion of the contingency of an A/autisms diagnosis has been understood as a threat to A/autistic identity (eg. Woods et al., 2018). Similarly, the rejection of ‘disability’ is easiest for those most able to procure support (Bentley, 2017), or else to pass some non-disabled aspect of themselves (Puar, 2017). Rather than an oppositional clash, Puar (2012) suggests that rubbing incommensurate frameworks together might produce *friction*. Thus, I might suggest that the tension between the different orientations towards A/autisms I have established here might be thought of as productive rather than problematic. Adding to Puar’s thinking around friction, I suggest that—in the same way that friction as a physical force is produced by the underlying electromagnetic *attraction* between the objects rubbed together—friction between concepts is generative precisely because of some underlying attraction. Thus, my stylisation of A/autisms is intended to indicate a productive friction: rubbing counter- and dis-identity together with contingency and disability is productive because of their simultaneous mutual incommensurability and their mutual attraction.

Similarly, Barad’s (2007) description of an interference pattern—the effects of the diffraction experiment described in chapter 4—does not emphasise difference as the ‘difference-between’ the two waves or particle streams of light. Rather, Barad emphasises what is generated by those differences. She writes: “A diffraction pattern does not map where differences appear, but rather maps where the *effects* of difference appear” (p. 300, my emphasis). In other words, diffraction indicates the inability to know the world within any singular frame: moreover, it is a mattering process by which the difference between phenomena is productive, because the orientation traced in the research encounter materialises a different world. *Friction*, then, holds the effects generated by difference in a productive tension by *materialising* the effects of multiple

orientations simultaneously. Importantly, this is only possible because of some underlying attraction between those orientations: or what Edelman (in Berlant & Edelman, 2019) might call a processes of figuring the “underlying unity” to banish the “digitalizing *or*” (loc. 1090).

The risk of misorientation is wrapped up in what Shannon and Truman (2020) might term a *politics of approach*, or “the ethico-political perspective a methodology implies” (p. 3). Orienting towards A/autisms means attending to the ethics of what you are simultaneously orienting away from: or, attending to what you will cause to matter (or materialise) and what you will prevent from mattering (or dematerialise). In many ways, my rubbing together of four orientations toward A/autisms risks a further dematerialisation of those myriad A/autisms I haven’t brought along. While the four orientations I’m writing through here seem to trace some of the more common orientations towards A/autisms in the literature, I remain cautious of joining the ranks of neurotypical white men deciding once-and-for-all what A/autisms is or could be. It is my hope, then, that cutting around these four orientations makes this discussion manageable in such a short piece, but without closing down A/autisms’ intrinsic capaciousness (which is the whole point of the chapter!). In the next section of this chapter, I think about the tension I’ve identified here within a wider tension in critical uptake of feminist material and ‘post’-human orientations to the human.

Between the universalising and the locating: The queer inhumanisms.

The tension of incommensurate A/autisms that I’ve described here is similarly evident in qualitative educational research that draws from theoretical resources collated as part of the ‘ontological turn’: these resources include posthumanism and the feminist materialisms. As I have already indicated in chapters 3, researchers are interested in

these methodological turns for how they might: attend to how subjectivity is shaped as part of a more-than-human network; engage with findings from the physical and life sciences; decentre language and representation in favour of affect and more-than-representation; and decentre European conceptualisations of the objective (white, male) organising researcher (e.g. Shannon & Truman, 2020; Snaza et al., 2016; Truman, 2019a). Yet, as I described in chapter 2, some queer, anti-colonial, and critical race and disability studies scholars remain cautious of these efforts. Luciano and Chen (2015) summarise this caution as the tension between impulses that seek simultaneously to de-centre (Man-as-)human experience without establishing a new unitary 'post'-human that continues to erase the specificity of marginalised experience. The friction I've described here as inherent in 'autism' might offer a way of approaching this tension in the ontological turn: after Manning (2016b), "Not to *so*lve problems, or to resolve questions, but to illuminate regions of thought through which problems-without-solutions can be intuited" (p. 10). As a mode of queer inhumanisms, José Esteban Muñoz (2019) might understand the rubbing together of incommensurate A/autisms I've proposed here as reparative: as seeking to "reconstruct partial or dangerously incomplete objects that structure our reality into a workable sense of wholeness" (loc. 4028), in other words, as seeking to glean something from the incommensurate. For Muñoz (2009), 'queer' at its queerest should be always on the horizon: if we were ever to allow it to arrive and sediment, we would just establish another mode of unitary humanism. Thus, then, frictional uptake of these orientations towards A/autisms is 'utopic' (Muñoz, 2009): a continuous, capacious queering that refuses sedimentation and leaves us open to those modes of (neuro)queerness we have yet to encounter. Thinking A/autisms frictionally allows us to account for how A/autistic individuals might have to relate differently to A/autisms moment-by-moment throughout their lives: It complicates notions of different

incommensurate orientations towards A/autism—how A/autisms might be contingent, *or* counter-identitarian, *or* dis-identitarian, *or* abling/disabling—by taking queer delight in the fact that it’s usually all four. It is a queer inhuman orientation that both yearns for the human and refuses it, holding onto the violence of maintaining the ‘human’ and so accounting for the specificity of neurodivergent experience, while unsettling neuronormative notions of what it means to be human. Thus, it is an ethico-political imperative—what Muñoz (2015) might term a “necessary queer labor of the incommensurate” (p. 209)—because without it we run the risk of foreclosing what A/autisms in the classroom is instead of what it: can be, can mean, or can do.

In chapters 2, 3 and 6, I discussed queer, Black and crip theories of the human that are sometimes collated as the queer inhumanisms. These perspectives seek to account for the messy and more-than-human entanglement of human subjectivity without letting go of the human. Muñoz’s (2015) description of the queer inhumanisms positions them as ‘never fully knowable’, but rather as a continuing ‘incommensurate’ queer labour. This ‘utopic’ (Muñoz, 2009) queering is dis-identificatory: inhumanisms are a plurality, which should never be sedimented into identificatory or counter-identificatory structures. Yet, unlike, for instance, Puar’s (2007) *unhuman*—which describes the removal of legibility from subjects as a biopolitical control—Singh’s (2018) *dehuman*—which is a ‘recuperative’ practice that rests inside dehumanizing processes to think the human differently—or Colebrook’s (2014) *own inhuman*—which is after and in absence of the human—the prefix ‘in’ of the queer inhumanisms is an auto-antonym. This auto-antonym is important for thinking about the concept of inclusion in schools. Jeffery Cohen (2015, cited in Truman, 2019b) contends that this ‘in-’ proposes a generative, paradoxical ‘estranged interiority’ to the human. Denis Flannery (2019) finds in- both awful and awe-filled, having both the capacity to contain and the potential “take in the world with a view

to releasing uncanny powers” (loc. 2718). The in- of inhuman, then, holds onto the tension between “universalizing and locating impulses” (Luciano & Chen, 2015, p. 192); it indicates both the violence of estrangement, and the desire to keep a hold of relation within humanism, and the capacity to continue unsettling that humanism; the utopically, future-oriented, undetermined/undeterminable something of queerness. For the remainder of this chapter, I explore three cuts from *Neuroqueer(ing) Noise* that explore this inhuman tension, between universalizing and locating impulses.

After Barad, I understand my limiting of this discussion to these four orientations as an agential cut. The agential cut is necessary to do meaningful research: eventually, you need to draw a ring around the things you’re going to talk about and not talk about everything else. Without the cut, the frame of the research encounter could be expanded out infinitely to include other schools, other planets, and events from the future, because all of these are just as imbricated in the research encounter. In other words, cutting around these four orientations makes such a discussion manageable. I also am one of the things being cut into and out of the research. Yet, Barad (2007) also writes that: “Cuts cut ‘things’ together and apart” (p. 179). Thus, the cut is a process of exclusion, but is also generative in that it enables a particular interference pattern. In the next section of this chapter, I cut together-apart these four orientations with the queer inhumanisms: I do so while remaining open to A/autism’s inhuman capaciousness.

Summary: A/autisms as a queer labor of the incommensurate.

In this chapter so far, I have suggested that there is a generative tension (or friction) between the irreconcilable orientations often adopted towards A/autisms in educational research. The four orientations I have proposed are:

1. autistic ability and disability;

2. the contingency and problematics of the category 'autism';
3. the fabulous (neuro)queerness of A/autistic counter-identity;
4. autism's potential to disruptively (neuro)queer identity.

For the remainder of this chapter, I focus on three vignettes from my in-school research-creation project, *Neuroqueer(ing) Noise*. I explicate how the project materialised the effects of A/autisms differently, when thought at the intersection of these four orientations.

A/autisms in three vignettes.

In this section, I explore three vignettes from my in-school research-creation project. In the first vignette, I consider how the project deployed electrodermal gizmos to provoke the contingency of the category 'autism' (orientation 2, in my list above). In the second vignette, I consider how A/autistic failure in the classroom is counter-identitarian (orientation 3), but still a material configuration of ability and disability, and subject to disablement (orientation 1). In the third and final vignette, I consider how a series of experiments with synaesthesia provoke the contingency of the category 'autism' (orientation 2), while also frictionally reifying counter-identity (orientation 3) and dis-identifying the whole notion of identity (orientation 4).

Vignette 1: Contingency, absurdity and the electrodermal gizmos.

As described elsewhere in this thesis, *Neuroqueer(ing) Noise* used electrodermal gizmos as part of the composition process. In the first part of my discussion of this vignette, I consider how these gizmos are shaped through dominant doxa of A/autisms: these doxa shape the gizmo through methodological inheritances. Following this, I will demonstrate

how those doxa might be unsettled by deliberately provoking the contingency of the category 'autism'.

What is EDA?

EDA is a measure of the body(mind)'s resistance to an electrical current generated between a pair of electrodes placed on the skin. Decreases in the skin's resistance to this electrical current can imply an increase in the body(mind)'s state of arousal. This decrease is due to the autonomic nervous system, which increases perspiration in response to heightened emotion or stress (thereby reducing resistance). This arousal is not valent: it does not attribute how 'positive' or 'negative' the arousal is. For instance, Colver and El-Alayli (2016) identify electrodermal responses to moments of frisson (i.e. heightened emotion) in pieces of music. Measurements of electrodermal activity are frequently described as 'non-invasive' in the literature. For this reason, I reiterate again here that EDA is not a measure of a pre-existing current, but instead a measure of the body(mind)'s resistance to a current generated by the electrodermal gizmo.

EDA & A/autisms.

I employed electrodermal gizmos in the in-school project to map against the swelling body of research that establishes a link between neurodivergence and atypical autonomic responses. Although the findings of this research are quite confused and contradictory, there remains a determination that the neurodivergent (and particularly A/autistic) body(mind) must be autonomically 'other'. EDA is a particularly common method of exploring this 'otherness': quite why EDA is so popular is complicated, although I would contend that it is at least in part due to the doxa that understand A/autists as already closer to the technical and the technological (McGuire, 2016; Nadesan, 2008), or the

robotic (Yergeau, 2018), and so to the electrical.⁴⁹ Moreover, others have suggested that EDA might be useful in predicting and preventing moments of crisis, or ‘meltdowns’ (e.g. Baker et al., 2018; Cappadocia et al., 2009; Panju et al., 2015): Again, this seems due in part to doxa that narrate A/autists as computational or robotic, or what Yergeau (2018) describes as emphasizing the ‘auto-’ prefix in ‘autism’: the A/autistic narrated as an A/auto-maton. In other words, use of electrodermal gizmos to indicate an oncoming crisis assumes the A/autistic is like an ‘If This Then That’ algorithm. Thus, electrodermal gizmos (when used as a preventative technology) are very much aligned with the continuing history of using electricity and electrocution to control neurodivergent body(mind)s (Gibson & Douglas, 2018). This is also why I avoid the neutral-sounding word ‘sensor’: the ‘gizmo’ isn’t just reading something off the A/autistic body(mind); it’s actively doing something *to* the body(mind) to intervene in it. Thus, the gizmos seem to enact Ruha Benjamin’s (2019) account of how oppressive logics come to be built into technology. Benjamin calls this process the ‘New Jim Code’, which she defines as the “*employment of new technologies that reflect and reproduce existing inequities but that are promoted and perceived as more objective or progressive than the discriminatory systems of a previous era*” (p. 5-6, italics in original). Benjamin describes the myriad ways in which technology and algorithms propagate raciality, often under the veneer of ‘colour blindness’. As she points out, “tech designers encode judgements into technical systems but claim that the racist results of their designs are entirely exterior to the coding process” (p. 12). Thus, just as the ‘New Jim Code’ activates and covertly reinforces racializing logics, and just as I suggested in chapter 4 that sound methods are shaped through ocular centric methodological inheritances, the electrodermal gizmos activate and covertly reinforce

⁴⁹ This may also drive related interests, such as the startling number of papers published in recent years on the use of social robots to ‘improve’ A/autistic children’s social skills.

neuro-ableist logics that frame A/autists as automaton-like, lacking agency, and akin to the technological. This has implications for how A/autisms is materialised in the research encounter. Earlier in this thesis, I explained that Barad's (2007) concept of diffraction describes how the theoretical orientation brought to a research apparatus shapes how the experiment unfolds, and so unfolds matter differently than if a different theoretical orientation was used. Positivist and biocentric use of electrodermal gizmos materialises a 'face' of A/autisms that shapes the A/autistic as lacking agency, automaton-like, and akin to the technological. In this way, the gizmos become ever more tethered (and *marketable*) to the Autist as a 'special object' (Karen Watson et al., 2015) because they materialise that version of A/autisms in the research encounter. In other words, *orientations matter*.

As I will explain in the next section, my doctoral in-school research project *Neuroqueer(ing) Noise* deploys electrodermal gizmos as a way to map against this doxa (and its materialisation): the vignettes I explore refuse EDA's bounded and biocentric understanding of the A/autistic body(mind), both as it relates to researching with EDA and the doxa that inform that research. In the next section, I'll explain how my project enacted this refusal through a methodological commitment to absurdity.

A methodological commitment to absurdity (or 'How did I use EDA?')

The first composition we completed as part of the wider *Neuroqueer(ing) Noise* project was an exploration of what EDA is and what it measures. I thought up this project myself, as a way of informing the children's consent to wear the electrodermal gizmos. I began the first episode by wearing one of the gizmos. I projected its signal onto the interactive whiteboard through my cell phone. The EDA data is presented on a line graph, which resembles an ECG or audio waveform. An autonomic response to an arousing event is

illustrated on the line graph as a quick peak followed by a very gentle tapering off. I demonstrated to the children how moments of agitation or nervousness caused peaks in the signal. (Fortunately, it had been almost a year since I last taught a group of children, and so I was plenty nervous already.)

Rapid peaks and gentle troughs in the EDA line graph indicate an autonomic response to an arousing event. In typical EDA research, the researcher usually initiates these arousing events, so that they can measure how arousing that event is. For this reason, the researcher must carefully control the research environment to limit exposure to non-researcher-initiated events. However, in analysis of EDA data, peaks and troughs can appear where an arousing event was not initiated by the researcher. Moreover, they sometimes appear when no arousing event is determinable at all: these events are treated as noise. Simultaneously, the devices must be treated with great care to get a clear signal: cold (below 22°C), heat (above 24°C), physiological actions such as “coughing, deep respiratory movements..., sneezes and excessive talking” (Braithwaite et al., 2015, p. 41), or movement of any kind disturb the position of the electrodes and make the signal illegible. I explained these limitations to the children. I jumped about, sang, yelled, and fake-sneezed (these were pre-COVID days), and pointed out how erratic and distorted the line-graph had become. We improvised along with the line-graph on hand-held percussion, correlating increases in signal with energetic playing, and the levelling-out or tapering-off with calmer playing. This improvisation did two things: first, it taught the children what the increases and decreases ‘meant’ in terms of arousal. However, it also resisted the biocentrism of the electrodermal gizmos: rather than reading researcher-initiated events off the body(mind), this episode began to reconfigure the bio as something messier and porous to the social: and, most importantly, as something that could be disrupted.

In a later session, I introduced *Walking Scoring Devices*. These devices were activated with the same methodological commitment to absurdity as the electrodermal gizmos. Over the remainder of this paragraph, I'll explain how that commitment shaped the creation of the *Walking Scoring Devices*. Following this, in the next paragraph, I'll explain how it helps me to problematise the electrodermal gizmos. As described in chapter 6, the *Walking Scoring Devices* consist of a toilet roll attached to a short length of firm cardboard with a piece of string, and a bulldog clip: a more detailed discussion appears on page 210. Although implying a certain usefulness, the *Walking Scoring Boards* are ultimately cumbersome, impractical and absurd. Thus, they I activate them with an identical methodological '(in)tension' as the electrodermal gizmos (Springgay & Truman, 2018b): to absurdity as a defamiliarisation strategy. My use of the term 'gizmo' to refer to the EDA devices throughout the project and this publication is tied to this ethico-political (in)tension: I use the word gizmo deliberately and humorously, but not out of a desire to make light of the technology: make no mistake, I find the technology deeply sinister. Yet, like the *Walking Scoring Devices*, carefully activating the absurdity of the method is part of the ethico-political (in)tension I brought to the gizmos. In formulating the idea of the gizmo, I draw from Ngai's (2020) writing on the gimmick. Ngai describes the gimmick as a mode of aesthetic that is 'extravagantly impoverished' because of some discordance between its perceived value and its relationship to labour and time. She writes: "We call things gimmicks when it becomes radically uncertain if they are working too hard or too little, if they are historically backward or just as problematically advanced, if they are wonders or tricks" (p. 49). Ngai argues that the suspicion with which we approach the utility of the gimmick might be generative, and it is that suspicion that I hope to activate through my use of the term 'gizmo'. She contends that "the damaged gimmick's intimate relation to comedy,... reminds us of how the exercising of suspicion can be creative,

playful, and sometimes queer” (p. 37). The electrodermal gizmos are seemingly useful, sophisticated and serious. At the same time, their narrow operating parameters are hilarious, and make them unsuited to the kinds of claims that researchers have tried to make using EDA. The temperature of the classroom varied wildly during the winter, and the idea of asking children to avoid sneezing and breathing is hilarious. Moreover, the gizmos glitched-out with alarming regularity, switching themselves on and off, and suddenly flashing indicator lights in ways that weren’t described in the manual. They rarely formed the familiar ‘peak and gentle tapering off’ expected of a truly legible autonomic response. Thus, the gizmos imply technological sophistication, and yet as research devices are ultimately absurd: working too hard and yet clearly not working hard enough. Yet, as Truman and Shannon (under review) contend, we live in times in which the absurdity of Western political figures (such as Boris Johnson) mean that the absurd is serious business. As Truman and Shannon write:

the unending capacity of whiteness—particularly whiteness on a wealthy and enabled male body(mind)—demands that [they] continue to be taken seriously despite that absurdity. Thus, we are called upon to take the absurd seriously.
(n.p.)

The absurd limitations of the electrodermal gizmos—including the very specific operating parameters, such as the narrow operating temperature, the need to stay still, etc.—have clearly not stopped their use to make absurd claims about the future of the A/autistic body(mind). Yet, and absurd thought it may be, the obsession with rendering the A/autistic body autonomically legible runs deep. Thus, after Truman and Shannon, ‘we are called upon to take the absurd seriously.’ So how can we simultaneously take EDA seriously and yet problematise its seriousness?

Jack Halberstam (2011) writes: “The desire to be taken seriously is precisely what compels people to follow the tried and true paths of knowledge production” (p. 6). Thus, by using the electrodermal gizmos alongside the *Walking Scoring Devices* to enact absurdity as an ethico-political (in)tension to method, we might enact “...new rationales for knowledge production, different aesthetic standards for ordering or disordering space” (Halberstam, 2011, p. 10). In other words, pursuing a methodological commitment to “embrace the absurd, the silly and the hopelessly goofy” creates interference (Halberstam, 2011, p. 187). The point, then, becomes: what interference (patterns) can be generated by that absurdity?

Experimenting with the contingency of A/autisms.

After instructing children on how the EDA line worked, we composed line-based graphic scores to a performance of Heitor Villa-Lobos’s *The Little Train of the Caipira* by the British National Children’s Orchestra. We drew lines that follow the frissons and lulls of the composition, as it accelerates and undulates chaotically. The floor quickly became a mass of toilet paper, ripped and tangled, and poked through with felt pens and HB pencils. We gathered up the rolls and fragments. In the next workshop, we pulled the toilet paper apart (where it hadn’t already been) and stuck it back together in different orders. Some children tried to match up a perfect line. Others aimed for polyphony, creating congruent parts, and sometimes even layering fragments of the score on top of one another, where traces from different parts of the composition could be read through one another: futures and pasts bleeding together. We then rehearsed the completed score for several weeks before performing it. Frissons and arousals initially derived from Villa-Lobos’s score were repurposed and reshaped, inverted, and complicated.

In a later episode, when composing *Walking through Leeds on a windy day*, we repeated this activity, but this time using the lines generated by the gizmos during a walk around the area immediately surrounding the school. Schools are deeply Anglo-centric spaces, and notable for the absence of non-English voices. Thus, the EDA mapped frissons as they unfolded in a racializing as well as disabling environment. We cut up the electrodermal line-graph and stuck it down on big paper. A4 paper is less malleable than toilet paper, and so the children formed one long line out of the reconstituted signal: they flipped it upside down and stuck peaks where there should have been troughs. Thus, they intervened in the legibility of the (autistic) body(mind).

Additionally, and as with most of the workshops, two young people wore electrodermal gizmos for the duration of the workshop. I sonified the data created by these gizmos, by running them through an algorithm that changes the EDA data points into MIDI data, and then running that data through a synthesiser: I then added this to the rest of the composition. As I often found, the outputs are unusually static, probably due to the intense cold of this time of year. However, I concluded this episode with a dance to one of *Oblique Curiosities* songs—*Alpha Centauri*, which Abayan commented sounded like “An alien came to the ghost party”—which generated a significant amount of noise. Thus, when we replayed the work as an audio walk, while re-treading the original steps of the opening phonographic walk, layer after layer of audition was audibly inserted back into place: the noisy defamiliarisation of the frissons we harvested from the original walk (now turned into percussive compositions), the noisy dancing defamiliarisation of the autonomic data from the composition episode (sonified by me via the algorithm, but noised by the young people’s motion), and the defamiliarisation of habitual patterns of audition through the (noisy) insertion of home language statements and the centring of Rei’s improvisation. Typically, sonification is the transformation of the “relationships in

data or information into sound(s) that exploit the auditory perceptual abilities of human beings such that the data relationships are *comprehensible*” (Walker & Nees, 2011, p. 9, cited in Akiyama, 2014, p. 29, emphasis mine). However, in this instance, frissons were stacked up upon frissons cacophonously folding and amplifying space on top of one another, and generating an illegible, incomprehensible autonomic cacophony.

Wynter (2001) contends that the biological body(mind) is porous to social structures. She argues that semiotic processes are able to override the biological tract: Thus, the social is viscerally lived. She calls this *the sociogenetic principle*.⁵⁰ In other words, the biological *is* determinate of some things, but is not *wholly* determinate, and can also be determined by social processes (Wynter & McKittrick, 2015). This is similar in some ways to other feminist material discussion of the hybridity of nature and culture. What is unique to Wynter’s conception is how she centres raciality (Z. I. Jackson, 2020). For Wynter, this social living of visceral life, and visceral living of social life, means that the felt experience of being human is in part shaped by the spectre of the overrepresented European Man. Thus, discussion of typical deployment of EDA methods centres an ‘individual’ A/autistic (lower-case) body(mind) that ‘feels’ (i.e. is aroused without valence) in a way that is legible to Man. What the disruption of EDA in this vignette reaches for, then, is a dis-identitarian unsettling of that individual in such a way that also hints at the contingency of the category of ‘autism’. Concomitantly, our absurd failure to do method properly—after Tavia Nyong’o (2012, as cited in M. L. Johnson, 2015)—subverts the failure that had already chosen the A/autistic body(mind) (and that

⁵⁰ Wynter is inspired by Frantz Fanon’s (1967) concept *sociogeny*, or the social stuff that goes along with *ontogeny* (i.e. individual genetic) and *phylogeny* (i.e. species-level development). However, Fanon does not understand the phylo- or onto- as editable by the socio- in the way that Wynter does.

is narrated in the typical use of EDA methods). Instead, it applies that failure to the gizmo. The friction generated at the complex materialisation of multiple, incommensurate A/autisms composed with—and unsettled the expectation of—what a body(mind) can do, subverting the reality of disability. I go on in the next vignette to think more about failure, specifically how the A/autistic failure to pass as neurotypical illustrates these overlapping incommensuracies.

Vignette 2: Neuroqueer and neuroqueering failure.

In discussing this vignette, I think about A/autistic counter-identity, as well as the reality of A/autistic ability and disability.

‘Rei’⁵¹ is a neuroqueer, Chinese girl. She often improvises vocal lines when recording our compositions. For instance, in one workshop, she softly chanted *xiǎo gǒu* (small dog) into the microphone. In another workshop, we wrote music for a series of animal video clips that had been used as part of the class’s topic lessons on naming animals: we did this in small groups. Our compositions extended movements from Camille Saint-Saëns’ *The Carnival of the Animals*.⁵² I tasked Rei’s group with extending the *Kangaroos* movement. Someone in the group was playing a *kalimba*—an Indonesian ‘thumb piano’—in an unusually firm way, which made a boinging sound. Rei improvised a vocal chant along with the boinging. In another workshop, while composing the sound walk described in the previous vignette (*Walking through Leeds on a windy day*), Rei improvised a six-note melody (6:12 in the recording below). Her melody was perfectly aligned with the half-whole diminished scale starting on B. You can hear both *Kangaroos*:

⁵¹ Pseudonyms are used throughout.

⁵² *The Carnival of the Animals* is often taught in British primary schools in fulfilment of the requirement that children listen to ‘great composers.’

Extended and *Walking through Leeds on a windy day* via the link below (audio descriptions are provided following the link):

<https://www.davidbenshannon.co.uk/neuroqueer>

Password: neuroqueer

In each of these improvisations, Rei failed to pass as neurotypical. But as Halberstam (2011) contends: “failure often means being relieved of the pressure to measure up to patriarchal ideals” (p. 4). Thus, these micro-failures are also moments of release from neuronormative expectations, and so are also moments of counter-identitarian activism. I have written at length on the queer virtuosity of Rei’s six-note improvisation in *Walking through Leeds on a windy day* (Shannon, 2020). Here, however, I want to emphasise what might be termed, after Jon Fessenden (2019), the A/autistic predilection for *spectral hearing*. Fessenden defines spectral hearing as “perceptual strengths in tasks involving pitch, and weaknesses involving time” (p. 1). Thus, Fessenden joins a group of scholars interested in what might be understood as an A/autistic musicing: specifically, one that suggests A/autists are better able to appreciate pitch than rhythm. Fessenden refers to this practice as a ‘cognitive imbalance’, although—having always been very poor at rhythm and much more interested in harmony—I don’t know that I understand it as such. Yet, spectral hearing also hints at the reality of A/autistic ability, disability and disabling. In this instance, Rei’s learning support assistant attempted to silence her six-note improvisation, and its manifestation of spectral hearing, because this was a rhythmic (or at least percussive) activity: no pitch welcome. Thus, her improvisation, although gorgeous, failed to ‘pass’. This was further evident when another child—Kwodwo—began his own improvisation (16:04 in the recording): his improvisation lasts 55 seconds but is highly rhythmic and non-tonal, combining beatboxing, giggles, and spoken rhythms. Kwodwo’s improvisation was not interrupted.

Muñoz (2009) describes how queer refusal is both virtuoso and failure in the face of straight time. By enacting both failure and the virtuosic, this vignette hints at the intersection of two of the orientations towards A/autisms that I consider in this chapter: the reality of A/autistic ability, disability, and disablement, as well as the contingency of the category 'autism'. Rei's (neuro)queer temporo-rhythmic failure in this encounter is a counter-identitarian refusal of heterosexual-temporalities, while still subjecting her to the material oppression experienced at the intersection of racializing and neurodiverging assemblages.

Vignette 3: Synaesthesia and unparsing the body(mind).

In the third and final vignette, I go on to think about synesthetic experience, and how its failure at neurotypicality hints at the contingency of the category A/autisms but also leaves us open to frictionally dis-identify with that category and reify counter-identity.

On 15th November, I introduced Pauline Oliveros' (2005) *Deep Listening* as a proposition for that day's workshop along with accompanying Makaton signs (see Figure 6, below).

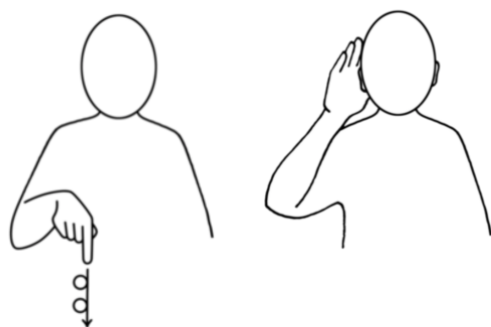


Figure 6: Makaton line drawings of the signs for 'deep' and 'listening'. Deep is drawn as pointing down with the index finger of the dominant hand, and then spiralling down, and 'listening' is drawn as cupping the ear with the dominant hand.

To explain Deep Listening, we began with a discussion in which we listed some of the things we ordinarily listen to. For instance, 'music'. Britney quickly suggested "other music." I reminded her that we've already said music, but she interrupts exasperatedly to

tell me “No! *Other* music that you listen to when you’re doing writing!” which to me implies muzak-esque ‘chill’ Spotify playlists and piano arrangements of Disney tunes. Other examples include TV, Batman, and Turkish music. Aaron said, “*Gangnam Style’s* my favourite song.” Ioan added: “a balloon... when they break.” A clock, on the bus, the computer, teachers, voices, clocks, grown-ups (“That’s the same as voices Mr. Shannon” said Abayan in a stage whisper), microphones, and drums. Then, I explained Deep Listening as something that lets us listen really hard to really quiet sounds that are normally too quiet to hear: sounds outside of us, sounds inside of us, and even our own thoughts. We listened to *Lear* from Oliveros, Dempster and Panaiotis’ (1989) album, *Deep Listening*. I asked for words that could describe it. There was a little pause, with nobody really sure how to describe it. I asked some binary questions: “Is it exciting or relaxing? Scary or happy? Sad or angry?” Abayan suddenly offered “dark” as an adjective.

In a later workshop, I had the children participate in an episode of deep listening. In every workshop, I always kept a small pile of florescent yellow ear defenders on hand, just in case anybody finds the volume of sound upsetting. I suspect that more often than not, they were just being worn for the novelty. On this occasion, one child asked to wear ear defenders. I said yes, which quickly lead to a stampede for the remaining ear defenders. Fortunately, I had received fifteen blindfolds that morning in preparation for a session in January and had brought them into school early so I couldn’t lose them. Between the ear defenders and blindfolds, there were enough somethings to placate everyone. Suddenly, we were doing deep listening with a bunch of children who couldn’t hear anything, and another bunch wearing sleep masks.

We ended up lying on the carpet for just over ten minutes. Every thirty seconds or so I’d suggest something that we might listen for (e.g., “Can you hear any moving? Can you hear any voices... um, voices that aren’t me?”). I suddenly realised that the children

wearing ear defenders couldn't hear me and yet were managing perfectly well without my interruptions, and so I stopped talking completely for about three minutes. The children carried on listening. Steven suddenly shouted "Mr. Shannon, I can hear my heartbeat!" This caused a ripple of "I can! I can!" Somebody shouted, "I can hear Aaron fidgeting." I reply, "We can *all* hear Aaron fidgeting." This caused another ripple, this time of giggles, and I decided to wrap it up. A few minutes later, back on the carpet, we discussed the listening. The children mentioned hearing 'shouting pigeons, shouting children, lots and lots of cars, and noise,' as well as "Emma telling you off for sitting on the table," the teacher "paper-waving," "Ulas feeling the carpet," and the "children outside hurt[ing] my ears." We talked about how paying really close attention with ears seemed to make things louder. Suryanshu, who had been wearing one of the pairs of ear defenders said, "One thing that I heard was that the sun was on my eyes and it was so bright."

Abayan's 'dark' and Suryanshu's 'hearing the sun so bright' are examples of synaesthesia. Synaesthesia is the experiencing of one sense as another. Composer Jean Sibelius was a well-known synesthete: he painted different parts of his home Ainola in colours that sounded like particular scales, and which in turn resembled the function of that part of the house. For instance, he had his wood-fired stove adorned in green tiles because green sounded like F major. Like other sensory processing differences, synaesthesia is more common in A/autists than the general population (by approximately three times).

Synaesthesia is a neurotypical concept: it relies on what Manning (2020) calls "an account of sensation that can be parsed... cleanly between sense modalities and between the bodies that are said to be the locations of sense" (p. 148-149). Similarly, Steph Ceraso (2018) complicates the clear delineation of hearing from other modes of sensory

experience through her concept of ‘embodied listening’: rather than the simultaneous perception of distinct senses, embodied listening attends to the multimodality of sound, and so to listening as “the practice of attending to the sensory, contextual, and material aspects of a sonic event” (loc. 328). Similarly, sound studies scholars have written extensively on how sonic experience is constituted by non- (e.g. Tchumkam, 2019) or more-than-sonic experience. However, for Manning, to delineate synaesthesia as a unique mode of sensory experience doesn’t just require ‘cleanly parsed’ senses: rather, it also requires ‘cleanly parsed’ *bodies* capable of experiencing those senses. These ‘cleanly parsed bodies’ are also the same unit of inquiry that the electrodermal gizmo explores. In the next paragraph, I consider how experimentation with the delineation between sensory modes might unsettle neurotypical coding of the senses, as well the neuroableist delineation between bodies.

I started the following episode by reminding the children of some of their ideas from the previous workshop: namely, Abayan’s ‘dark’ (shared anonymously, by his request) and Suryanshu’s ‘hearing the so bright sun.’ We talked about how interesting it was that both children had heard something that we normally see. I had planned a carousel of experiments for this workshop based on Abayan and Suryanshu’s propositions, with groups of six children engaging in each experiment at a time. On one table, a tiny Bluetooth speaker plays back *Walking through Leeds on a windy day* with the bass EQ turned up high. Initially, I balanced the tiny speaker on a long thin piece of plywood, which vibrated as the music played. However, the children quickly realised that holding the speaker made the vibration much more noticeable, and it inevitably ended up held a few inches above the table by all six children in each group simultaneously: the throbbing bass frequencies from the Bluetooth speaker were no longer mediated by the plank of wood, and instead directly melded and morphed the *mélange* of six pairs of

(rapidly moistening) hands. On another table, I placed the two Empatica devices, synced up to a pair of iPads showing the output of the sensors on a line graph, along with three pairs of *clave*: the children improvised along with the EDA lines using the *clave*. The lines quickly begin to inform one another, with the *biolooping* of galvanic skin responses responding both to one another, and to the children's musical improvisations with those responses. In A/autisms research, the term 'biolooping' refers to the ways in which the institutional and familial responses to A/autisms diagnoses might cause more A/autistic-like behaviours: in other words, with the social construct of diagnosis reinforcing the biologic aetiology of what it is that's been diagnosed (and vice versa: see Hackett, 1999, as cited in J. N. Straus, 2013). Here however, biolooping indicates the ways in which ostensibly separate EDA signals from neatly parsed children's body(mind)s fed back through and amplified one another. Another table had ear defenders and sleep masks: children put them on and off to see how the general din in the room changed. The final table had adjectives from that half-term term's topic work on 'materials' and a collection of musical instruments: the children sorted adjectives such as metal, hard, shiny, blue, and heavy to the sounds generated by each instrument when played. The association of non-auditory properties with sounds draws attention to what Ceraso (2018) calls the "sensory, contextual, and material aspects of a sonic event" (loc. 328).

Each of these experiments hinted at the contingency of 'synaesthesia'. From time-to-time, everybody(mind) experiences synaesthetically. Indeed, composers are used to rendering non-auditory experiences as sound. Thinking with DeafBlind author John Lee Clark's concept of *distantism*, Manning (2020) writes: "The categorising of experience in advance through neurotypical codes limits our capacity to imagine experience beyond the spatiality of [mediation]" (p. 189). In the classroom, our carousel of experiments revelled in the synesthetic by rejecting or complicating these neurotypical codes of sensory

experience. Thus, they unsettled the arbitrary pathologisation of some modes of sensory experience, and in so doing revealed the contingency of the category of 'autism' (lower-case a). Moreover, some of the experiments tentatively hinted at how we might imagine beyond the notion of a cleanly-parsed body(mind): the unit of measurement electrodermal gizmos rely upon to make claims about autonomic otherness. The biolooping of the electrodermal gizmos through one another hints at how the neatly parsed body that EDA assumes is porous to other body(mind)s. At the same time, by deliberately materializing the cross-modality of synesthetic experience, the carousel of experiments played with A/autistic (upper-case A) practice as a counter-identitarian cultural production, as valid and important as any other. Finally, the experimentations also dis-identified the whole notion of typicality and divergence by refusing the tidy delineation between neurotypical sensory experience and neurodivergent sensory experience. This is not say that the children 'experienced' what it's like to be A/autistic or have sensory processing differences, but rather that our experiments complicated the pathology of those experiences from the dis-identificatory perspective of a "disempowered politics or positionality that has been rendered unthinkable by the dominant culture" (Muñoz, (1999, loc. 869).

Chapter conclusion.

In this chapter, I have suggested that there is a generative tension (or friction) between the wildly differing and irreconcilable orientations often adopted towards A/autisms. I have framed this tension through my stylised writing of *A/autisms*. In this way:

- A/autisms is a contingent, problematic speciation of tendency;

- A/autisms is a ‘real’ (scare quotes) disability with implications for how life is lived and particularly for those from whom diagnosis is routinely withheld;
- A/autisms is a fabulous (neuro)queer counter-identity;
- A/autisms is a (neuro)queering disruption of identity.

I have suggested that, rather than ‘pick one’, holding all four in tension is a “necessary queer labour of the incommensurate” (Muñoz, 2015, p. 209): necessary in that A/autisms are already all of these things (and more!). This laborious tension is one that we would do well to hold onto not just in writing about A/autisms, but in any educational research that seeks to attend to a ‘post-’ or ‘beyond’ vision of the human. Thus, like queer inhuman orientations towards ‘post’-human and feminist material methodologies, A/autisms exists at a point of tension between ‘universalizing and locating’ impulses.

The tracings of A/autisms that I offer here are limited, not least by my neurotypical intrusion into this academic space. No doubt there are A/autisms that I have not yet been lucky enough to encounter, and so have failed to adequately trace. Rather than a limitation, I follow Muñoz (2009) in understanding this incompleteness as a ‘utopic’ mode of queerness. For Muñoz, the most utopic formulation of queerness is the one that remains on the horizon: a queer capaciousness that’s constantly, tantalizingly just out of reach. As Michael Orsini (under review) describes, all too often researchers find the complexity and intransigence of A/autisms alluring; he contends that we should adopt an ‘epistemology of ignorance’, wherein the A/autistic body(mind)’s refusal to explain itself is *itself* generative. Thus, the impossibility of fully materializing the (A/autistic) body(mind) through any one of these orientations might itself be thought of as a capaciousness that keeps A/autisms on the horizon: to hold A/autisms in tension as an ongoing ‘necessary queer labour of the incommensurate’ is to keep them open to

those faces we have yet to encounter, and those encounters we have yet to trace. This chapter addressed my first research question and associated sub-questions. It also addressed my second research question, by exploring the extent to which music research-creation allows the analysis of learning experiences in the classroom.

9. Conclusion.

I began this thesis with the following research questions:

1. How do theories of disability identity and neurotypicality help us make sense of the politics of what goes on in mainstream (or ‘integrated’) classrooms?
 - *Sub-question 1:* How can creative practice intervene in (neuro)typical representations of disability in educational provision?
 - *Sub-question 2:* What are the implications of thinking propositionally for critical disability and A/autisms research in education?
2. To what extent do research-creation and sound art pedagogies allow the analysis of learning experiences in the classroom?
 - *Sub-question 1:* How do theories of affect problematise the use of sound methods in educational research?
 - *Sub-question 2:* What can attention to music do for the practice of research-creation?

In this conclusion, I explore the extent to which my project has answered my research questions. In answering these questions, this thesis makes two contributions: in answering question 1, I have proposed the organising concept A/autisms; in answering question 2, I have conceptualised the research praxis of music composition research-creation. In the following sections, I discuss how these contributions attend to each of my research questions in more detail. I also offer propositions for future research-creation.

Question 1.

How do theories of disability identity and neurotypicality help us make sense of the politics of what goes on in mainstream classrooms?

This thesis has argued that inclusion is not sufficient to accommodate young people with SEN in mainstream British schools. Including a young person in something maintains the exclusive logics that initially excluded that young person: in other words, trying to 'include' maintains the logics that narrate A/autists as 'out of tune' in the first place. In this thesis, I have proposed A/autisms as an organising concept for the critical study of *ability* in the early childhood classroom. My discerning the tensions that emerge from the complexity of bringing queer disability identity to the early childhood classroom through this concept is a contribution to knowledge. This concept places A/autistic counter- and dis-identity, the reality of A/autistic disability, and the contingency of the category 'autism' in a frictional presupposition: this contributes to the field of critical autisms studies, which has exhibited a tension between reifying identity structures and eliding the reality of A/autistic disability. Importantly, A/autisms is not a 'solution' to the 'problem' of autistic provision in mainstream schools. Rather, A/autisms is an ongoing *problematizing* that acknowledges we'll never be able to determine once and for all what provision for A/autistic young people should do, because we'll never be able to determine what A/autisms will be from one moment to the next, (in part) because we'll never be able to finally determine what neurotypical *ability* is. Thus, A/autisms is a crucial ongoing friction, or a "necessary queer labour of the incommensurate" (Muñoz, 2009, p. 209).

In this thesis, I have begun to problematise the notion of inclusion. However, I still ran into the ethical problematic of necessarily identifying an individual young person as 'autistic'. This was particularly difficult because of how diagnosis is routinely withheld

from some populations. For instance, Rei has a diagnosis of A/autism, while Kwodwo does not. Diagnoses are routinely withheld from some groups of children, in part because of the supposedly neutral white subject upon whom A/autisms was initially identified. However, at the time of writing, a decade of austerity measures and delays caused by the COVID-19 pandemic have led to three year wait times in some boroughs for an EHCP or educational psychologist support for *every* A/autistic young person, with an associated delay in funding and provision.⁵³ Future research could identify how some of the questions raised in this thesis might be able to problematise the notion of diagnosis itself. In the next paragraph, I explain this more thoroughly by thinking about how affect shapes ‘diagnosis’.

Affect is often theorised as pre-something: pre-personal, pre-linguistic or pre-social. Gregory Seigworth (2017) maintains that the study of affect “works to provide a contextualised account of relationality (in-between-ness) and singularity (this-ness) at the same time” (p. iii). Thus, Seigworth thinks this ‘pre’ not as distinctly ‘before’ sociality or before the personal—which, as I’ve already argued, would be quite problematic from a disability studies perspective—but rather “considering the individual and the social alongside the processes that lead to their mutually exclusive (now turned inclusive) bifurcation” (p. iii-iv). Thus, considering diagnosis itself through theories of affect hints at what Kelly Fritsch (2016) calls disability as “an intracorporeal emergence” (Fritsch, 2016, p. 355). Disability, she writes:

invokes a complex constellation of needle production, biopsy procedure, genetic counselling, ethics, race, class, gender, sexuality statuses, curb cuts, cyborgs, the human-nonhuman, conferences, fundraising, cures, pharmaceutical development,

⁵³ I have observed this first hand in my current school, but it has also begun to be reported in the mainstream media (Jayanetti, 2021).

neoliberal entrepreneurial individualism, motherhood, and, and, and. My disability is not mine, it is of the world, of others both human and nonhuman. (p. 355)

Similarly, Clare (2017) writes diagnoses are ‘made-up’ (p. 142): not in the sense of being ‘invented’, but that—as Fritsch argues—they construct a particular worldview. Des Fitzgerald (2017) pushes this line of thinking even further by arguing that, even though A/autisms are shaped by behavioural checklists, there is something ‘affective’ about the diagnostic encounter with the A/autistic person, or what he describes as “THIS THING WE RECOGNIZE WHEN WE SEE IT” (p. 47). This reinforces particular configurations of A/autistic difference in research—specifically, the version of A/autisms as a ‘white boy thing’ capable of receiving diagnosis (Çelik, 2017). Thus, Fitzgerald contends, there is a tension between the ‘compulsory positive’ of A/autisms as considered in research (whereby participants need to firmly meet diagnostic criteria to be considered ‘autistic’) and the more porous definition used by practitioners in deciding what provision to deploy. I’ve started to reach towards this complexity in my writing, particularly around Kwodwo and my complication of ‘accommodation.’ However, this theme remains underdeveloped here.

Future research should also attend to the implications of the tension I organise here as A/autisms. While most of my writing relates specifically to the music education classroom, what might this tension do to the wider curriculum? What might it do to phonics? Or literacy? How might it change the function (and cost) of the LSA, if the curriculum wasn’t routinely a neurodiverging assemblage? More pressingly, what are the implications for statutory assessment? How might accounting for disability community, disability (counter-)identity and culture, and the situatedness of any understanding of ability/disability transform the Education Health and Care plan? In pandemic times, how might more robust attention to the porosity and performative formulation of body(mind)

divergence in the classroom transform the locus of what it is that comes to be diagnosed? How might attention to the simultaneity of ability and disability complicate inclusory logics, and outcomes, and provision? How would children's grown-ups relate to disability identity?

Proposition for further research-creation: Disability justice in education is a 'necessary ongoing queer labour of the incommensurate' :: *Crip constantly*

Sub-question: How can creative practice intervene in (neuro)typical representations of disability in educational provision?

In this thesis, I adopt critical disability studies as a methodology. In other words, I take up a theoretical orientation to method that contests (neuro)typical formulations of both ability and disability. In so doing, my project has implications for education provision for all young people. When applied as a pedagogical *proposition*—i.e., the speculative restriction of potential to any given assemblage of events in such a way that intervenes in how those events unfold—A/autisms defamiliarises habitual patterns of thought and sensory perception (audition in this thesis, but interchangeable for any other sensory mode you might wish to explore) to momentarily unsettle how we orient to neurotypical conceptualisations of place and ability. Feminist material theories such as affect are often critiqued for depoliticising research sites. Yet, when applied with attention to how affect is curated, I have suggested that they might be used to unsettle neurotypical expectations of minimum capacity, with pedagogical implications for how we activate ethics, publics and difference in educational research and practice. These are important things to attend to because research in early childhood settings must always account for the complex ethical considerations of researching with disabled participants, because (as I argued in chapter 6) the inclusive approach to disability provision enacted in the UK means that all research done in schools is research done *with* disabled participants. This is a complicated

statement: from a disability politics perspective, I mean that all classrooms have students who are disabled and students who are not disabled; but also, all from a critical disability studies perspective, classrooms are a complicated collection of capacities and intensities that problematise the notion of disability. *Future research in early childhood classrooms should endeavour to account for this politics.*

Sub-question: What are the implications of thinking propositionally for critical disability and A/autisms research in education?

In both studies described in this thesis, I have applied Whitehead's articulation of the proposition. In chapter 2, I explained Whitehead's proposition as the speculative restriction of potentials to a particular arrangement of events. In chapter 6, I explained my understanding of defamiliarisation as propositional, in that the proposition might be mobilised to intervene in the neurotypical flow of relevance, between one wave of events and those it feeds into: Thus, research-creation is crip-feminist praxis, wherein the mobilisation of theory as proposition enacts emancipatory change. In other words, thinking propositionally is essential to how my project aims to defamiliarise ability by throwing a lugger wrench into the doxic flow of relevance.

The title of the in-school study is *Neuroqueer(ing) Noise*. I called it this to keep hold of how queer functions as both an adjective/noun and a verb. Chen (2012) warns of the temporal foreclosing of adjectival or noun forms of identification—or what Muñoz (1999) might call identificatory or counter-identificatory structures. For Chen, as described above, such adjectival and noun forms of identity (i.e. Queer), although providing political shelter, are “deverbalized” and “atemporalized” “encouraging a bounded reading of the concept's content, and[...] rendering identities finite” (p. 74). However, Chen sees disruptive potential in the second, verbal form (i.e. queering), which is processual and temporally-contoured. Thus, the parenthetical '(ing)' of *Neuroqueer(ing)*

Noise is a way to remind me that it's a doing. At the same time, the parenthetical calls after Weheliye's (2014) reading of *Glashuas's Bald (und wir sind frei)*: 'soon (and we are free)'. For Weheliye, the parentheses indicate both a nearness and an out-of-reach: a tension between the futurity of maybe and the constraining of inhuman futures "to the parenthetical" (p. 138). Similarly, majoritarian, humanising forms of reproductive pedagogy cannot envisage a future that is different to the present. In Muñoz's (2009) words "'Straight time' tells us that there is no future but the here and now of our everyday life" (p. 22). It is for this reason that Kafer (2013) writes: "[We] need to imagine crip futures because disabled people are continuously being written out of the future, rendered as the sign of the future no one wants" (p. 46). Although my thesis speculates on a disability affirmative *present*, it does not explicitly formulate disability futures: this needs to be done explicitly, because—as Muñoz writes—the future is always-already assumed for abled, white, straight people (because it is the *same* as the present).

Proposition: Disability is the site of the future that no-one wants :: *Imagine neuroqueer futures.*

Question 2.

To what extent do research-creation and sound art pedagogies allow the analysis of learning experiences in the classroom?

The intersection of art and pedagogy as research praxis has definitely enabled me to find things out that I might not otherwise have found. However, it is challenging to write about these findings without falling back on representational logics and my success at this is very patchy in this thesis. Moreover, in research-creation, the research happens through the epistemic unfolding of creative practice, whereby decisions and tangents produce insights: accounting for such disparate findings in the thesis format has been difficult.

There is also a significant amount of privilege inherent to music composition research-creation. This includes skills acquired over decades of musicianship, experience in classroom practice, and the tens of thousands of hours required to resource, plan, compose, record and produce the work. This privilege led Vivienne Bozalek (Post Philosophies and the Doing of Inquiry, 2021) to question during a webinar on my project “Who can do this?!” So, while the method may have offered insights, it relies on enormous amounts of privilege that limit the method’s usefulness outside of my own engagement with it.

Sub-question: How do theories of affect problematise the use of sound methods in educational research?

Theories of affect problematise the use of sound methods in educational research by prompting us to consider how our experience of sound is conditioned by our experience of non-sound: or, how the sonic is affectively conditioned by the more-than-sonic aspects

of sonority. In theorising the idea of the *more-than-sonic*, I took this passage from Deleuze's (1981/2017) *Francis Bacon: The Logic of Sensation* as a proposition:

Certainly, music traverses our bodies in profound ways, putting an ear in the stomach, in the lungs, and so on[...] It strips bodies of their inertia, of the materiality of their presence: it disembodies bodies. (p. 39)

Here, Deleuze is describing how music is felt across the body, or what Ceraso (2018) calls embodied listening. Thus, Deleuze considers the ear a “polyvalent organ for sonorous bodies” (p. 39). I took this as a proposition for sound-based method: if sound is experienced ‘polyvalently,’ across multiple bodily systems, then how might audio composition recirculate that polyvalent experience? In chapter 4, I contended that, by failing to attend to this polyvalence, sound studies too often reproduces the same ocular-centric logics that the turn to sound methods was supposed to liberate us from. By way of a contrast, I contended that sonic researchers can overcome these logics to a certain extent by attending to the composition or curation of sound, and so: (1) making their own engagement and participation in a soundscape deliberately, flamboyantly audible, as well as (2) more-than-representing those affects that polyvalently contextualised those sounds in the first place. I also argued that this more-than-representation comes with an ethical responsibility for what it is that we end up recirculating. In short, thinking about sound methods through theories of affect requires us to attend to how sonic methods curate sound polyvalently, by attending to how the experience of sound is shaped by non-sonic experience, within which the researcher is always imbricated and with an ethical responsibility for what the work recirculates in making those more-than-sonic (and so inaudible) features of sonic experience *audible*.

What this thesis has not explicitly attended to is how this compositional attention might play out in non-musical research-creation, or non-artistic research. *Future research*

and research-creation could attend to how ‘embodied listening’ might be empirically investigated in the classroom.

Proposition: The ear is a polyvalent organ :: *Put your ear in your stomach!*

Sub-question: What can attention to music do for the practice of research-creation?

I consider how my thesis attends to this final sub-question in three ways: the unique temporal contour of music research-creation; my articulation of the proposition; and the impossibility of truly doing research-creation with a class of thirty children.

Research-creation’s temporal contour.

Much of this thesis has emphasised what research-creation can do for how I approach disability and sound studies. However, this thesis also contributes to the ‘field’ of research-creation by being the first example of how it might be enacted through music composition. This is not itself much of a contribution. However, one way in which the projects in this thesis do make a further contribution to the ‘field’ of research-creation is by complicating the temporality often associated with research-creation praxis. In short, the projects in this thesis complicate the doing of research-creation because they are simultaneously *transient* and *repeatable*. Thus, music composition research-creation is unlike other forms of research-creation. Let me explain further: Steven Feld (1996) contends that sound is temporally contoured: by this, I mean that a sound has a duration and that after that duration the sound is over. Thus, it is (ostensibly) unlike vision because vision relates to space.⁵⁴ In the case of electroacoustic music (music designed to be played from a recording, and that can’t be played live without adaptation), this duration

⁵⁴ Thus, it is unlike Jacques Derrida’s (1982) consideration of writing as making speech out last the speaker, or Walter Ong’s descriptions of written words as a permanent representation of impermanent sounds.

is fixed: the compositions sound identical and last an identical length of time every time you play them. This is different to how textual, visual, or performative modes of research-creation play out: unlike visual works, the songs don't sit still, but unlike performative works, that 'not sitting still' can be repeated (identically, endlessly). This affords us an opportunity to think about the contouring of affect in research-creation.

An affective contour, Muñoz (2020) writes, is "the set of collective and often contagious responses towards historic and emotional situation" (p. 101). Similarly, Bertelsen and Murphie (2010) contend that repeated actions carry different affects. They write: "Imagine two similarly structured smiles from a friend, but one much faster than usual, one very slow. They affect you very differently" (p. 146). Moreover, an affective contour "constitutes the movement of experience into the future (and into the past, as memory)" (p. 146). This resembles how Deleuze conceptualises repetition. For Deleuze (1968/2004), repetition unfolds in difference. Repeat listening to an identical sound conveys a different series of affects. Important to Deleuze's understanding of difference is that it is not a comparison or difference *from* (by which one must always be lesser), but the actualisation of virtual potentials (differentiation) and the modulation of virtual potentials by the actual (differentiation). Thus, the rolling out of an affect over a listening body(mind) impresses on top of (and so alters) the impressions already on the affecting-affected surface of that listening body(mind), which in turn materially alters the shape of that body(mind) that participates in its next affection, and the memory (or accrued impressions) of that body(mind)'s previous affections. In short, the song is affecting a surface it and a bunch of other encounters have already affected: its trajectory is altered each time it lands. It is this contour that electroacoustic music ostensibly does 'differently' to (or at least more explicitly than) other kinds of research-creation. As such, although I'd argue that every work of art is temporally contoured, that contour is not

fixed nor as obviously replicable as it is in music. *Future research-creation could specifically attend to the ‘contour,’ or to how the affective trajectory of the work is conditioned by factors outside that work.*

Proposition: (Sound-based) research-creation is temporally contoured :: *Don’t let your work sit still!*

Whitehead’s proposition.

Another contribution that this thesis makes to the ‘field’ of research-creation is my detailed thinking through of Whitehead’s articulation of the proposition and how this is mobilised in research-creation. In chapter 3, I described research-creation scholarship as frequently emphasising Whitehead’s articulation of the proposition as a ‘lure’ for speculative and creative activity. However, it is also my contention that, sometimes, this scholarship can de-emphasise the concept’s roots as a speech act that can be judged to be either true or false. Here, I have tried to more closely link my use of the proposition to Whitehead’s by writing propositions as logical statements (i.e., that can be judged true or false) as well as in the form of imperatives (i.e., that can be easily activated). However, there has not been space here to adequately attend to *how* the proposition as mobilised in research-creation relates to the truth/false distinction that animates Whitehead’s articulation of the concept.⁵⁵ Our contemporary political era is mobilised by false propositions, where the ‘self-evidence’ of certain truths—or what Tavia Nyong’o (2019) calls “imperialist nostalgia and white supremacist fantasy”—are mobilised whereby “lies

⁵⁵ Although I have argued elsewhere that the proposition as mobilised in research-creation determines the “relevance of a previous event to the new event, possibly informed by a potential rather than actually being informed by one” (Shannon, 2021, p. 58) and so might enable us attend to a modality of truth, or to what might be deemed “necessarily true, possibly true, or perhaps beyond truth” (p. 71).

about the past serve the interests of power” (Nyong’o, 2019, p. 44). When archival accounts of history are already so speculative, Nyong’o (2019) propositions us to wonder, “what is a *queer* fabulist to do?” (p. 44, emphasis mine). *Future research-creation could be more explicit as to how they activate this true/false distinction when taking up Whitehead’s articulation of the proposition.*

Proposition: Propositions can always be judged as either true or false :: *Account for false propositions!*

Research-creation is a proposition.

Finally, in attending to what music does for the practice of research-creation, I want to think about the difficulties of doing music composition research-creation in a classroom environment. There is a tendency in some early childhood research to paint a very positive perspective of researching in the early childhood classroom: the children always say wonderful things and make beautiful, socially conscious art, and they never ever just want to talk about Spider-Man, or show you something they found in their nose, or hit someone, or throw up in their headscarf. Moreover, you as the artist, researcher, and facilitator/teacher never fuck up, never lose your shit, and never, ever breathe a sigh of relief come 3pm when they all (finally) go home. This creates unrealistic expectations of how arts-based research *could* unfold for those interested in pursuing it as a method but also creates unrealistic expectations of how classroom practice *should* unfold. If, as Loveless (2019) contends, research-creation is marked by the trans-disciplinary failure to fully fulfil the expectations of multiple disciplines, that also means that sometimes things fail spectacularly in the wrong sort of way. Thus, doing research-creation is a negotiation between an idealistic mode of classroom practice, colonial notions of the ‘ideal child’, and the exhaustion of being a classroom practitioner: to put it another way, praxis is a

negotiation between theoretical ideals and the practicalities of a pile of puke: or ‘some of these ruptures aren’t nice.’ Thus, I have started to think of research-creation *itself* being a proposition for what can reasonably be done in (and with) the academy and the early childhood classroom. I have tried to account for some of these mishaps and bizzarities in writing this thesis, but ultimately, even in a thesis supposedly animated by failure, *I very much want to succeed*. Thus, the mode of failure I’ve performatively courted is pretty much identical to the capitalist modes of success I’ve tried to distinguish myself from. *Future research-creation could more adequately take account of the impossibility of doing quality pedagogy, art, and research all the time.*

Proposition: Research-creation is impossible :: *Cannibalise it as a proposition for further thinking!*

Closing proposition.

I return to Bertelsen & Murphie’s (2010) proposition that attending to affect “signals a constant innovation” in how we configure ethics that requires us to “develop a creative responsibility for modes of living *as they come into being*” (p. 141, italics in original). This innovation calls us to continuously contest what ‘passes’ as neurotypical in the early childhood classroom as a necessary queer labour of the incommensurate—to make space for neuroqueer noise as we keep on neuroqueering our perception of ‘noise’—moment-by-moment with each tiny, emergent neuroqueerness. In other words:

Proposition: Neuroqueer (n.) noise :: *neuroqueer (vb.) noise*

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Appendices

Appendix A: Publication list and publications.

Appendix B: Consent form (person with parental responsibility).

Appendix C: Teacher consent form (teaching staff participant).

Appendix D: Head teacher consent form (head teacher).

Appendix E: Parent / Child information letter

Appendix F: Teacher information letter

Appendix G: Head teacher information letter

Appendix H: Ethics board application form

Appendix I: Ethics board approval

Appendix J: TRO Essex Copyright Licence

Appendix K: Images

Appendix L: Artist consent form

Appendix A: Publication list and copyright permissions.

Publications generated alongside this thesis (published works included in full at the back of the thesis).

- A.1 Truman, S. E. & **Shannon, D. B.** (2018). Queer sonic cultures: An affective walking-composing project. *Capacious: Journal for Emerging Affect Inquiry*, 1(3), 58-77. <https://doi.org/10.15209/jpp.1178>
- A.2 Shannon, D. B. (2019). 'What could be Feminist about Sound Studies?': (in)Audibility in Young Children's Soundwalking. *Journal of Public Pedagogies*, 4, 97–107. <https://doi.org/10.15209/jpp.1178> ⁱ
- A.3 **Shannon, D.B.** & Truman, S. E. (2020). Problematizing Sound Methods Through Music Research-Creation: Oblique Curiosities. *International Journal of Qualitative Methods*, 19. <https://doi.org/10.1177/1609406920903224>
- A.4 Shannon, D. B. (2020). Neuroqueer(ing) Noise: Beyond 'mere inclusion' in a neurodiverse early childhood classroom. *Canadian Journal of Disability Studies*, 9(5), 489–514. <https://cjds.uwaterloo.ca/index.php/cjds/article/view/706/968> ⁱⁱ
- A.5 Shannon, D. B. (2021). What does the 'proposition' do for research-creation? Truth and modality in Whitehead and Wittgenstein. *Matter: Journal of New Materialist Research*. 2(2), 50-75. <https://doi.org/10.1344/jnmr.v2i2.35891> ⁱⁱⁱ
- A.6 Shannon, D. B. (under review). A/autisms :: a 'queer labour of the incommensurate': Holding onto the friction between different perspectives on autism in the early childhood classroom. *International Journal of Qualitative Studies in Education*. ^{iv vi}
- A.7 Shannon, D.B. (under review). 'Trajectories matter': Theories of affect and disability justice in an in-school research-creation project. *Qualitative Inquiry*. ^{iii vi}
- A.8 Shannon, D. B. (under review). Perversity, precarity, and an embarrassment of (neuro)queer failures: Tracing a 'more precise typology' of the affects of failure and anxiety in an in-school research-creation project. *International Journal of Qualitative Studies in Education*. ^{vi}
- A.9 Truman, S. E. & **Shannon, D. B.** (under review). Cosmic Beavers: Anti-colonial archives, future-pasts and the practice of research-creation. *Routledge Handbook of Co-Futurisms*. ^{vi}

ⁱ parts of this publication are included in chapter 5 and 7.

ⁱⁱ parts of this publication are included in chapter 7.

ⁱⁱⁱ parts of this publication are included in chapter 3.

^{iv} parts of this publication are included in chapter 8.

^{vi} under review as of submission: 04.01.2021.



3/9/21

Dear David,

You recently published the article “What could be feminist about sound studies?: (in)Audibility in young children’s soundwalking” in Volume 4 of the Journal of Public Pedagogies. You have asked whether you have permission to reprint this article, in whole or in part, for your PhD Thesis at Manchester Metropolitan University. You have full copyright to the article, and full permission to use and reuse it as you see fit.

Kind regards

A handwritten signature in black ink that reads 'Karen Charman'.

Karen Charman
Editor—Journal of Public Pedagogies

CANADIAN JOURNAL OF

Disability Studies

Published by the Canadian Disability Studies Association · Association Canadienne des Études sur l'Incapacité

Dear David Ben Shannon,

You recently published the article "*Neuroqueer(ing) Noise: Beyond 'mere inclusion' in a neurodiverse early childhood classroom*" in Volume 9, Issue 5 of the *Canadian Journal of Disability Studies*. You have asked whether you have permission to reprint this article, in whole or in part, for your PhD Thesis at Manchester Metropolitan University.

You have full copyright to the article, and full permission to use and reuse it as you see fit.

Sincerely,



Jay Dolmage, PhD
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Matter: Journal of New Materialist Research (ISSN: 2604-7551), a bi-annual and peer-reviewed research journal, in electronic and digital versions, certifies that **David Ben Shannon** has recently published the article “What do ‘propositions’ do for research-creation? Truth and modality in Whitehead and Wittgenstein” in the *Volume 2, Number 2* (Fourth Issue) of *Matter: Journal of New Materialist Research*. He has asked whether he has permission to reprint this article, in whole or in part, for his PhD Thesis at Manchester Metropolitan University. He has full copyright to the article, and full permission to use and reuse it as you see fit.

Barcelona, 01st September 2021

Beatriz Revelles Benavente

A handwritten signature in black ink, appearing to read 'Beatriz', with a stylized flourish below it.

Editor of Matter: Journal of New Materialist Research

Appendix B: Consent form (person with parental responsibility).

CONSENT FORM (PERSON WITH PARENTAL RESPONSIBILITY)

Title of Project: Music, Emotion and Technology in the Early Years

Name of Researcher: David Ben Shannon

Please initial all boxes

1. I have read the 'Participant Information Sheet'; I have thought about the information, and have had time to ask questions.
2. I agree to **anonymised** audio recordings, photographs and field-notes of my child being made throughout the project. I agree that these will be used by the researcher in completing his University course, and may be used in publications, performances or creative works.
3. I agree to my child wearing a multi-sensory device throughout the project. I agree that anonymous data from this device will be used by the researcher in completing his University course, and may be used in future publications, performances or creative works.
4. I understand that my child's **real name** will not be recorded next to any individual set of data.
5. I understand that my child's participation is voluntary and that my child and I are free to withdraw at any time from the **research** without giving any reason; I understand that they can still take part in the **in-class activities** and **local-visits**, although if they do take part they may still feature in audio recordings.
6. I agree that my child can, if they wish, be credited for the music they have created along with other members of the class in any publications, performances or creative works using their **real name** or imaginary name (pseudonym).

Child's name

Child's imaginary name
(pseudonym)

Child's signature

Your name
(person with parental responsibility)

Date

Your signature

Appendix C: Consent form (teaching staff participant).

CONSENT FORM (TEACHING STAFF PARTICIPANT)

Title of Project: Affect and Neuro-diverse learning in the Early Years: Sound-art as relational pedagogy

Name of Researcher: David Ben Shannon

Please initial all boxes

1. I have read the 'Participant Information Sheet'. I have thought about the information, and have had time to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time from the **research** without giving any reason, and without my professional responsibilities as a member of the teaching staff being impinged.
3. I agree to **anonymised** audio recordings, photographs and field notes of me being made throughout the project. I agree that these will be used by the researcher in completing his University course, and may be used in future publications, performances and creative works.
4. I agree to wear a multi-sensory device throughout the project. I agree that **anonymous** data from these devices will be used by the researcher in completing his University course, and may be used in publications, performances or creative works.
5. I understand that my **real name** will not be recorded next to any individual set of audio, visual or multi-sensory device data.
6. I give permission to be credited for the music I have created along with other members of the class in any publications, performances or creative works using my **real name**.

Your name

Date

Your signature

Appendix D: Consent form (head teacher).

CONSENT FORM (HEAD TEACHER)

Title of Project: Affect and Neuro-diverse learning in the Early Years: Sound-art as relational pedagogy

Name of Researcher: David Ben Shannon

Please initial all boxes

1. I have read the 'Participant Information Sheet'. I have thought about the information, and have had time to ask questions.
2. I understand that participation is voluntary and that pupils and staff are free to withdraw at any time from the **research** without giving any reason, and without losing the chance to participate in the **in-class activities** or **local-visits**.
3. I understand that pupils and staff's **real names** will not be recorded next to any individual set of data.
4. I agree to **anonymous** audio recordings, field notes and photographs of pupils and staff being made throughout the project. I agree that these will be used by the researcher in completing his University course, and may be used in later publications, performances and creative works.
5. I agree that pupils and staff may wear a multi-sensory device throughout the project. I agree that anonymous data from these devices will be used by the researcher in completing his University course, and may be used in publications, performances or creative works.
6. I agree that pupils and staff can, if they wish, be credited altogether for the music they have created in any publications, performances or creative works using their **real name**.

Your name

Date

Your signature

Appendix E: Parent / Child information letter

Music, Emotion and Technology research in Year 2

Parents and carers

Dear grown-ups,

I am writing to tell you about an exciting research project that be taking place in your school this year. I would like to invite your child to take part.

Who am I?

My name is David Shannon; I am a PhD student at *Manchester Metropolitan University*. I am a qualified Primary School teacher; I have taught in Reception, Year 1, 2, 3 and 4. I have been an Assistant Head Teacher, a SENCo, and served as a school Governor. I am also a musician.

What is the purpose of the project?

This research project hopes to explore ways that children can learn through music in Year 2. I am interested in finding out how learning with music can be used to better include all children.

Why have I been invited?

You have been invited because your child be in Year 2 from September 2018.

Do I have to take part?

You do not have to take part; it is up to you and your child to decide. You can read more about the project in this letter. You can ask your child's teacher or me any questions you have. You can talk to me on Friday 08/6/2018 after school, where I will show you the sensors and a data example.

What happen to my child if I take part?

Your child will take part in all of their normal lessons. For up to one hour, once each week, all of the children in your child's year group will be doing their normal lessons through music. This will include making some instruments for your school to keep, and writing our own compositions. The teachers and children will decide what the focus of the music should be. At the end of the project, we will have a special concert or art installation of all your child's work from the project, that you and your child be able to attend.

If your child chooses to participate, these lessons will be recorded using a microphone for me to analyse later. I may also write down some anonymous details about what everyone is doing, or take photographs. If they choose to, your child may wear a biosensor on their wrist (along with teachers and myself); the biosensors are a bit like Fitbits, and record anonymous data about heart rates, sweatiness, and movement. This data will then be made into a graph (without any identifying features) to allow me to see how all different kinds of bodies (child and adult) interact during a lesson; please note that I am not interested in the data of individual participants.

What do I have to do?

It is free for your child to take part. All you have to do is bring your child to school as normal!

What are the possible disadvantages and risks of taking part?

I don't expect there to be any disadvantages or risks in taking part. This project has been carefully checked by the Ethics board at *Manchester Metropolitan University* to make sure it doesn't pose a risk to any of the children. Sometimes children become upset during the school day, and this could also happen during the research. If this does happen, and they want to stop taking part in the research for that day, then they can.

What are the possible benefits of taking part?

I hope that your child will benefit in lots of ways if they take part in the project:

- Your child will be able to use some really sophisticated technology.
- They will be able to learn about the way their body works in a way most children can't.
- In preparing for the project, they will be able to learn about how research works in a university.
- Your child will be able to have some of their creative work shown in an installation.
- Most importantly (as a teacher) I hope that all of the class will be able to have a lot fun.

What if there is a problem?

If you have a concern about any aspect of this project, you should get in touch with me or speak to your child's class teacher; my contact details can be found on the last page of this letter. If you remain unhappy and wish to complain formally you can do this with my university; their contact details can also be found on the last page of this document.

Will my taking part in the study be kept confidential?

All information which is collected about you during the project be kept strictly confidential. All of the data will be saved on a removable, encrypted hard-drive, or on a dedicated secure online server. Data from the biosensor will be anonymised using an imaginary name (pseudonym) that you or your child can choose. The data will be used during the rest of my study, and will be included in my thesis (which I must complete by October 2021). The data will only be accessible by me and my supervisory team (Professor Maggie Maclure, Dr Abigail Hackett, and Professor Elizabeth de Freitas).

Data will be retained for five years from the beginning of the research project (January 2019) to allow time for completion of my studies and any extra analysis. It will then be reviewed to see if it is still useful; if not, it will be destroyed.

What happen if I don't carry on with the study?

If you decide you don't want your child to carry on with the project, just tell your child's teacher. Data from the biosensor about your child will be destroyed. Your child be deleted from any pictures taken. It may be impossible to delete your child from the audio we record because we be using only one set of microphones to record the whole class.

What happen to the results of the research?

You and your child will not be identified in anything to do with this research. However, as your child will be creating music during this project, you may want their name to be credited in a list alongside all of their classmates wherever the music is heard. The school and I will hold a special event after we have finished our project for you to see all the hard work your children put in.

By October 2021, I need to complete a thesis that explains the research findings. A copy of the thesis will be made available to the school in case you want to read this yourself. A copy will also be made available on *Manchester Metropolitan University's* web site. Depending on the outcomes of the research, I may try to share the findings with a wider

audience, such as through journal articles or book chapters. I may also try to share the findings as a creative work of some kind.

Who is organising or sponsoring the research?

The research project is funded by *Manchester Metropolitan University*.

Contact details:

Researcher contact details

Name: David Ben Shannon

Postal address: Manchester Metropolitan University, 53 Bonsall Street, Manchester, M15 6GX.

Telephone: 0161 247 2264

Email: david.b.shannon@mmu.ac.uk

University contact details

If you are not happy with the project and would like to discuss it with someone else at the University, please contact:

Name: Professor Ricardo Nemirovsky (Chair of the Ethics Committee, Education)

Telephone: 0161 247 2023

Appendix F: Teacher information letter

Affect and Neuro-diverse learning in the Early Years: Sound-art as relational pedagogy

Teacher participants

Who am I?

My name is David Shannon; I am a PhD student at *Manchester Metropolitan University*. I am a qualified Primary School teacher, and have taught in Reception, Year 1, 2, 3 and 4. I have been an Assistant Head Teacher, a SENCo, and served as a school Governor. I am also a composer and sound artist.

What is the purpose of the project?

This research project hopes to explore ways that children can learn through music in a Year 2 class. I am interested in finding out how learning with music can be used to better include all children, with a particular interest in neuro-diverse conditions (e.g. Autisms).

Why have I been invited?

You have been invited because you are a member of the teaching staff in Year 2.

Do I have to take part?

You do not have to take part; it is up to you to decide. You can read more about the project in this letter. You can ask me any questions you have.

What happen to me if I take part?

You will take part in all of your normal lessons. For up to one hour, once each week, all of the children in your class will be learning through music. This will include making some instruments for your school to keep, and writing our own compositions. You and the children will decide what the focus of the music should be. At the end of the project, we will have a special concert or art installation of the work from the project, that you will be able to attend.

These music lessons will be recorded using a microphone for me to analyse later. I may also write down some anonymous details about what each participant (child, teacher or researcher) is doing, or take photographs to remind me of how participants are positioned in the room. All participants may wear a biosensor on their wrists; the biosensors are a bit like Fitbits, and record anonymous data about your heart rate, your electro-dermal activity, and how much you're moving.

What are the possible disadvantages and risks of taking part?

I don't expect there to be any disadvantages or risks in taking part. This project has been carefully checked by the Ethics board at *Manchester Metropolitan University* to make sure it doesn't pose a risk to any of the participants.

What are the possible benefits of taking part?

I hope that the project will benefit all adults and children who participate:

- This will be an opportunity to use some really sophisticated technology in your practice that you may not ordinarily have had use of.
- This could also be an opportunity for CPD, including learning about some of the theoretical framework we'll be using.

- Most importantly (as a teacher) I hope that all of the class will be able to have a lot fun.

What if there is a problem?

If you have a concern about any aspect of this project, you should get in touch with me or speak to your head teacher; my contact details can be found on the last page of this document. If you remain unhappy and wish to complain formally you can do this through my university; their contact details can also be found on the last page of this document.

Will my taking part in the study be kept confidential?

All information which is collected about you during the project be kept strictly confidential. All of the data will be saved on a removable, encrypted hard-drive, or on a dedicated secure online server. Data from the biosensor will be anonymised using an imaginary name (pseudonym) that you can choose. The data will be used during the rest of my study, and will be included in my thesis (which I must be complete by October 2021). The data will only be accessible by me and my supervisory team (Prof Maggie Maclure, Dr Abigail Hackett, and Prof Elizabeth de Freitas).

Data will be retained for five years from the beginning of the research project (January 2019) to allow time for completion of my studies and any extra analysis. It will then be reviewed to see if it is still useful; if not, it will be destroyed.

What happen if I don't carry on with the study?

If you decide you don't want to carry on with the project, all the information and data we have collected about you will be destroyed. I will also delete all of the information collected using the biosensor. However, it may not be possible to delete you from the audio we record because we be using only one set of microphones to record the whole class.

What happen to the results of the research?

You will not be identified in anything to do with this research. However, as you will be creating music during this project, you may want your name to be credited in a list alongside the children's wherever the music is heard. The school and I will hold a special event after we have finished our project for you to see all the hard work your children put in.

By October 2021, I need to have completed a thesis that explains the research findings. A copy of the thesis will be made available to the school in case you want to read this yourself. A copy will also be made available on *Manchester Metropolitan University's* web site. Depending on the outcomes of the research, I may try to share the findings with a wider audience, such as through journal articles or book chapters. I may also try to share the findings as a creative work of some kind.

Who is organising or sponsoring the research?

The research project is funded by *Manchester Metropolitan University*.

Contact details:

Researcher contact details

Name: David Ben Shannon

Postal address: Manchester Metropolitan University, 53 Bonsall Street, Manchester, M15 6GX.

Telephone: 0161 247 2264

Email: david.b.shannon@mmu.ac.uk

University contact details

If you are not happy with the project and would like to discuss it with someone else at the University, please contact:

Name: Professor Ricardo Nemirovsky (Chair of the Ethics Committee, Education)

Telephone: 0161 247 2023

Affect and Neuro-diverse learning in the Early Years: Sound-art as relational pedagogy

Head teacher

Who am I?

My name is David Shannon; I am a PhD student at *Manchester Metropolitan University*. I am a qualified Primary School teacher, and have taught in Reception, Year 1, 2, 3 and 4. I have been an Assistant Head Teacher, a SENCo, and served as a school Governor. I am also a composer and sound artist.

What is the purpose of the project?

This research project hopes to explore ways that children can learn through music in a Year 2 class. I am interested in finding out how learning with music can be used to better include all children, with a particular interest in neuro-diverse conditions (*e.g.* Autisms).

What happen to research participants?

Children and teachers will take part in all of their normal lessons. For up to one hour, once each week, all of the children and adults in the class will be learning through music. This include making some instruments for your school to keep, and writing our own compositions. The teachers and children will decide what the focus of the music should be. At the end of the project, I hope to put on a special concert or art installation of the work from the project, that parents be able to attend.

These music lessons will be recorded using a microphone for me to analyse later. I may also write down some anonymous details about what participants (child, teacher or researcher) are doing, or take photographs to remind myself of how participants are positioned in the room. All participants may wear a biosensor on their wrists; the biosensors are a bit like Fitbits, and record anonymous data about participant's heart rate, electro-dermal activity, and movement.

What are the possible disadvantages and risks of taking part?

I don't expect there to be any disadvantages or risks in taking part. This project has been carefully checked by the Ethics board at *Manchester Metropolitan University* to make sure it doesn't pose a risk to any of the participants.

What are the possible benefits of taking part?

I hope that the project will benefit all adults and children who participate:

- This will be an opportunity to use some really sophisticated technology your school may not ordinarily have had use of.
- This could also be an opportunity for CPD, including offering your staff opportunities to learn about some of the theoretical framework I'll be using.
- Most importantly (as a teacher) I hope that all of the class will be able to have a lot fun.

What if there is a problem?

If you have a concern about any aspect of this project, you should get in touch with me; my contact details can be found on the last page of this document. If you remain unhappy and wish to complain formally you can do this through my university; their contact details can also be found on the last page of this document.

Will my taking part in the study be kept confidential?

All information which is collected during the project will be kept strictly confidential. All of the data will be saved on a removable, encrypted hard-drive, or on a dedicated secure online server. Data from the biosensor will be anonymised using an imaginary name (pseudonym) that participants can choose. The data will be used during the rest of my study, and will be included in my thesis (which I must complete by October 2020). The data will only be accessible by me and my supervisory team (Prof Maggie Maclure, Dr Abigail Hackett, and Prof Elizabeth de Freitas).

Data will be retained for five years from the beginning of the research project (January 2019) to allow time for completion of my studies and any extra analysis. It will then be reviewed to see if it is still useful; if not, it be destroyed.

What happen if I don't carry on with the study?

If any of the participants decide they don't want to carry on with the project, all the information and data we have collected about them will be destroyed. I will also delete all of the information collected using the biosensor, and remove participants from any photographs taken. However, it may not be possible to delete individual participants from the audio we record because we will be using only one set of microphones to record the whole class.

What happen to the results of the research?

Individual participants or the school not be identified in anything to do with this research. However, as participants will be creating music during this project, they may want their name to be credited wherever the music is heard. I hope that the school hold a special event after we have finished our project for participants and parents to see all the hard work the children put in.

By October 2021, I need to complete a thesis that explains the research findings. A copy of the thesis will be made available to the school. A copy will also be made available on *Manchester Metropolitan University's* web site. Depending on the outcomes of the research, I may try to share the findings with a wider audience, such as through journal articles or book chapters. I may also try to share the findings as a creative work of some kind.

Who is organising or sponsoring the research?

The research project is funded by *Manchester Metropolitan University*.

Contact details:

Researcher contact details

Name: David Ben Shannon

Postal address: Manchester Metropolitan University, 53 Bonsall Street, Manchester, M15 6GX.

Telephone: 0161 247 2264 (mobile, not provided to parents: 0798 154 1662)

Email: david.b.shannon@mmu.ac.uk

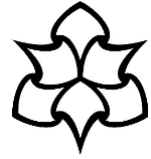
University contact details

If you are not happy with the project and would like to discuss it with someone else at the University, please contact:

Name: Professor Ricardo Nemirovsky (Chair of the Ethics Committee, Education)

Telephone: 0161 247 2023

**Manchester Metropolitan
University**



Memo

To: David Shannon

From: Prof Ricardo Nemirovsky

Date: 05/03/2018

Subject: Ethics Application Ref. ED-1718-24

Title: Affect, Neurodiversity and the Biosocial in the Early Years: Sound-art as socially-just pedagogy.

Thank you for your application for ethical approval.

The Faculty Research Ethics and Governance Committee review process has recommended approval of your ethics application. This approval is granted until 31/07/2019. Extensions to the approval period can be requested.

If your research changes you might need to seek ethical approval for the amendments. Please request an amendment form.

We wish you every success with your project.

Prof Ricardo Nemirovsky

Head of Ethics
Faculty Research Ethics and Governance Committee

Appendix I: Ethics board application form.

APPENDIX 2

Application Number _____
Date Received _____

APPLICATION FOR ETHICAL APPROVAL



Manchester
Metropolitan
University

Introduction

All university activity must be reviewed for ethical approval. In particular, all undergraduate, postgraduate and staff research work, projects and taught programmes must obtain approval from the Academic Ethics committee.

Application Procedure

The form should be completed legibly (preferably typed) and, so far as possible, in a way which would enable a layperson to understand the aims and methods of the research. Every relevant section should be completed. Applicants should also include a copy of any proposed advert, information sheet, consent form and, if relevant, any questionnaire being used. The Principal Investigator should sign the application form. Supporting documents, together with one copy of the full protocol should be sent to the Faculty/Campus Research Group Officer.

Your application will require external ethical approval by an NHS Research Ethics Committee if your research involves staff, patients or premises of the NHS (see guidance notes)

Work with children and vulnerable adults

You will be required to have an Enhanced CRB Disclosure, if your work involves children or vulnerable adults.

The Academic Ethics Committee will respond as soon as possible, and where appropriate, will operate a process of expedited review.

Applications that require approval by an NHS Research Ethics Committee or a Criminal Disclosure will take longer.

1. Details of Applicants

1.1. Name of applicant (Principal Investigator): *David Shannon*

Telephone Number: *0798 154 1662 (personal number)*

Email address: *david.b.shannon@stu.mmu.ac.uk*

Status: *Postgraduate Student (Research)*

Department/School/Other Unit: *Education and Social Research Institute, Faculty of Education*

Programme of study (if applicable): *PhD Education*

Name of supervisor/Line manager: *Professor Maggie MacLure (DoS)*

1.2. Co-Workers and their role in the project: (e.g. students, external collaborators, etc)

Name: *Dr Abigail Hackett*

Name: *Professor Liz de Freitas*

Telephone Number:

Telephone Number:

Version 2 September 2015

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Role: <i>1st Supervisor</i>	Role: <i>2nd Supervisor</i>
Email Address: <i>A.Hackett@mmu.ac.uk</i>	Email Address: <i>L.de-Freitas@mmu.ac.uk</i>

2. Details of the Project

2.1. Title: *Affect, Neurodiversity and the Biosocial in the Early Years: Sound-art as socially-just pedagogy.*

2.2. Description of the Project: (please outline the background and the purpose of the research project, 250 words max)

This project has adopted the following research aims.

- Explore how Sound-art methods and pedagogical practices can support learning with a neurologically-diverse group of children.*
- Explore how Sound-arts can contribute to the theorising of the biosocial subject.*
- Explore the pragmatics of bio-sensors as pedagogical devices and research methods in Year 1.*

The project will adopt a research-creation framework, conducted as a series of weekly sound-based compositional/improvisatory workshops across the Spring and Summer terms, and in which the process and created art will be the primary units of analysis. The workshops will be facilitated by the researcher.

The project aims to explore Sound-art as socially-just arts-based practices and pedagogies in the Early Years (Year 1) classroom. The project will attend specifically to inclusion of neuro-diverse children, thinking-with conditions such as Autism for theorising the Posthuman and Biosocial subject, and a performativity of dis/ablement. The project will draw on and critically negotiate theories of Affect as circulating, pre-cognitive force that changes the capacities of different (more-than-human) bodies to act. Bio-sensing devices will be useful in this thinking-with, and part of the project's intention will be to build methods that integrate these technologies with research-creation. The project will conclude with an installation or performance-piece based on children's creations.

The arts-based and participatory project is necessarily emergent, with the focus decided in situ. However, the following tentative research questions are proposed.

- How can classrooms become more socially-just through adoption of a music-based sensorial pedagogy?*
- What new insights are gained about classroom interaction when we study learning as part of a material-affective network using bio-sensors?*

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2.3. Describe what type of study this is (e.g. qualitative or quantitative; also indicate how the data will be collected and analysed). Additional sheets may be attached.

The project is a piece of school-based educational research, and will register qualitative and quantitative data. It will draw on participatory arts-based methods, adopting a research-creation framework. The project will include the following methods of data collection:

- Audio recordings of the workshops and music/noise creations.*
- Amodal (multi-sensory) field-notes; this form of data collection is included here for ethical approval, although it will only be collected if audio recordings alone do not seem to provide a rich enough data-set during the pilot study.*
- Photographs of participants and/or any visual creative outputs (e.g. participant-created instruments, visual scores); this form of data collection is included here for ethical approval, although it will only be collected if audio recordings alone do not seem to provide a rich enough data-set during the pilot study.*
- Collection of biodata from wearable technologies, including:*
 - Movement, ascertained using a 3-axis accelerometer.*
 - Peripheral skin temperature.*
 - Cardiovascular data, including Heart-Rate and Heart-Rate Variability, ascertained through a measure of Blood Volume Pulse.*
 - Electrodermal activity.*

Children's creative outputs are the primary unit of analysis, with other data types being considered in relation to these.

2.4. Are you going to use a questionnaire?
No

2.5. Start Date / Duration of project:
Pilot: 06.2018 – 07.2018
Main study: 01.2019 – 07.2019

2.6. Location of where the project and data collection will take place:
Nightingale Academy, Leeds (see attached partnership offer)

2.7. Nature/Source of funding:
VC scholarship and Biosocial Research Laboratory resources

2.8. Are there any regulatory requirements?
No

3. Details of Participants

3.1. How many?
Up to thirty children in Year 1 (one class)

3.2. Age:
5-6

3.3. Sex:
Children of all sexes and genders will be invited to participate.

3.4. How will they be recruited? (Attach a copy of any proposed advertisement)

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The research project will be enacted in one Year 1 class of a mainstream Primary school (currently intended to be Nightingale Academy, Leeds, which is a two-form entry school – please see attached partnership offer). The class will be selected in discussion with the Head Teacher.

Child participants will be recruited from the selected class; however, participation may be opened up to children in the second (non-research) class if too few children from the selected class elect to participate.

Teacher participants (i.e. teachers, or support staff) will be recruited from the selected class; however, if none of the teaching staff in the selected class choose to participate, participation will be opened up to the second (non-research) class (whereby teachers will swap classes for the duration of the workshop each week).

Participant information sheets (see attached), as well as consent forms, will be distributed to those with parental responsibility for each child, to each teacher participant, and to the Head Teacher (as gatekeeper).

3.5. Status of participants: (e.g. students, public, colleagues, children, hospital patients, prisoners, including young offenders, participants with mental illness or learning difficulties.)

Children, including participants with disabilities.

3.6. Inclusion and exclusion from the project: (indicate the criteria to be applied).

All pupils in the class will be enabled to participate (should they so wish).

3.7. Payment to volunteers: (indicate any sums to be paid to volunteers).

None.

3.8. Study information:

Have you provided a study information sheet for the participants?

Yes

3.9. Consent:

(A written consent form for the study participants MUST be provided in all cases, unless the research is a questionnaire.)

Have you produced a written consent form for the participants to sign for your records?

Yes

4. Risks and Hazards

4.1. Are there any risks to the researcher and/or participants?

(Give details of the procedures and processes to be undertaken, e.g., if the researcher is a lone-worker.)

Most of the research will be situated within a classroom space. The researcher will be accompanied and assisted by additional adults (with ratios determined by the school's own policy) throughout the project. In addition, the researcher is a former Primary and Early Years teacher with Qualified Teacher Status, and has retained Enhanced DBS clearance through the DBS Update Service (Certificate: 001527950910, issued 28/04/2016). Consequently, risks within the classroom should be limited.

As it is expected that children identified as having Special Educational Needs will participate significantly in the project, the researcher must be familiar with any behaviour plans or Individual Education Plans that require specific differentiations before beginning the research project; this is to ensure safety and wellbeing of the participants.

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Children may determine that they would like to include one or more walks or local visits as part of their creation project. In this event, numerous risks present themselves including the possibilities of:

- a child being struck by a vehicle,*
- a child wandering or running away from the group and becoming lost,*
- a child becoming significantly distressed or ill, including to the point that this poses a risk to their own or other (child or adult) participants,*
- a child stumbling on uneven pavements or kerbs.*

4.2. State precautions to minimise the risks and possible adverse events:

Researcher should be familiarised with any Individual Education Plans or behaviour plans to minimise risks.

If walks are undertaken, the following risks and avoidance processes must be followed:

- The school's approach to local visits will be followed. Where no such approach exists, children must walk in pairs on the side of the pavement away from traffic to minimise the risk of a child being struck by a vehicle. Adults should be dispersed across the line of children, with one adult leading, and another standing at the back so that the whole group can be monitored. Additional adults should disperse evenly along the line. The lead adult should also retain responsibility for ongoing visual inspection the pavement for uneven paving or obstacles.*
- The school's approaches to crossing roads should be followed, and shared with the researcher in advance of any walks. Where no such approach exists, children should only use pedestrian crossings, when the 'green person' is illuminated. The most senior member of staff present should cross to the middle of the road, before the children cross the road with the rest of the staff. The senior member of staff will follow once all children have crossed safely.*

4.3. What discomfort (physical or psychological) danger or interference with normal activities might be suffered by the researcher and/or participant(s)? State precautions which will be taken to minimise them:

Some children may become distressed as part of the research process, whether due to the wearing of the wristband, the activities (including sound-generating activities), the presence of the researcher (an unfamiliar adult, the consequent change in routine), or due to factors not directly related to the research.

Local visits with young children necessitate the provision of changes of clothing, and first aid kits. Emergency contact details will be held by all attendant adults (in accordance with the school's own policy for local visits).

Children will be made aware of their right to withdraw from the research should this be the source of their distress, and the researcher and other attendant adults will elect to withdraw children themselves should this be deemed in their best interests.

5. Ethical Issues

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 Date Received _____

5.1. Please describe any ethical issues raised and how you intend to address these:

Consent

Consent will be informed, and negotiated on an ongoing basis. Participant information sheets and consent forms will be distributed to those with parental responsibility, teachers and the head teacher ('gatekeeper'); where relevant, these will be translated into the appropriate home languages. Consent to all three of the following will be necessary for participation:

- Consent to audio recording (anonymous)*
- Consent to collection of biometric data, including:*
 - Movement, ascertained using a 3-axis accelerometer.*
 - Peripheral skin temperature.*
 - Cardiovascular data, including Heart-Rate and Heart-Rate Variability, ascertained through a measure of Blood Volume Pulse.*
 - Electro-dermal activity, which can indicate the level of arousal demonstrated by the sympathetic nervous system.*
- Consent to researcher observation through field notes (if applicable) and photographs (if applicable)*

Prior to the first session, children will be informed by the researcher (using age- and need-appropriate verbal and non-verbal means, including social stories, and an investigatory Science lesson to illustrate the nature of 'research') of the variety of data being collected, and how it will be used. It will be made clear to participants that they are allowed to withdraw at any point during the research process, and that their withdrawal would not necessitate their exclusion from the activities, although continued participation may result in continued audio recording.

Anonymity

As the project will involve the children as co-producers, and is intended to conclude with a performance or installation of the children's creative work, children may wish to have their authorship acknowledged; this could be through use of their real name, or their own selection of pseudonym. If the participants' real names are used, they will not be recorded against a specific set of data, but rather attributed to the creative work as a whole. Data from the biosensors will be anonymised at source, retaining only the child's age, gender, ethnic group, and whether or not they are considered to have a Special Educational Need (defined as inclusion on the school's SEN register at 'Wave 1', or universal provision level, and above).

Biosensors

The biological and medical nature of the data registered by the biosensors could indicate underlying health concerns; the researcher has an ethical duty to report any such anomalous data in accordance with school procedures (e.g. class teacher).

Safeguarding concerns

As an adult in a school setting, children may make safeguarding disclosures to the researcher – these will be responded to in accordance with the setting's child protection procedures, and the information relayed to an appropriate individual (e.g. designated safe-guarding officer, school leadership). It should also be noted that the researcher is a former 'designated person' for safeguarding, and has received significant training and practice in the proper relaying of such concerns.

Application Number _____
 Date Received _____

'The stare' and representation

The project's specific intention to include participants who have been labelled as 'disabled' (or as having Special Educational Needs) situates the work within a complicated history of the bodies of such individuals interacting with 'the stare' of enabled others; being simultaneously 'displayed' (e.g. medical literature, freak shows, charity advertising, and the unwanted attention of curious others) and 'concealed' (e.g. hospitals, institutions, SEN/ARP units). It is my intention that the project should appropriate 'the stare' for its participants, necessitating a co-constructive approach to the research. Similarly, the rights and desires of such individuals have often been ignored or mis-represented, including by individuals themselves in order to appear disabled in the 'right' way to receive additional support; while it must be acknowledged that any attempt to register my research findings will lead to a degree of representation, my desire to attend to the sonic through arts-based methods in this project in part extends from that medium's capacity to account more readily for the affective and self-representative aspects of communication.

6. Safeguards/Procedural Compliance

6.1. Confidentiality:

6.1.1. Indicate what steps will be taken to safeguard the confidentiality of participant records. If the data is to be computerised, it will be necessary to ensure compliance with the requirements of the Data Protection Act 1998.

Any identifying information obtained as part of the research project will only be disclosed as required by law (for example, in the event of disclosure of a safeguarding issue, whereby the school's standard safeguarding process would be followed, including referral to a designated person for child safety), or else in the event of the child's real name being used.

6.1.2. If you are intending to make any kind of audio or visual recordings of the participants, please answer the following questions:

6.1.2.1. How long will the recordings be retained and how will they be stored?

Audio data will be stored on a pair of encrypted external storage drives; a primary drive, and a back-up. Data from the wearable multi-sensory devices will be stored on Empatica's secure cloud-based repository (Empatica Connect). Any downloaded visualisations will be anonymised and stored alongside the audio data. Print versions (where used as part of the project at the children's behest) will also be anonymised.

6.1.2.2. How will they be destroyed at the end of the project?

Audio and multi-sensory data will be retained for five years from the project's start-date, upon which the researcher will make an assessment as to the utility of the data moving forward; if no further utility is identified, then the data will be deleted (both on the storage drives and on Empatica's cloud-based repository).

What further use, if any, do you intend to make of the recordings?

The recordings may be used in additional analysis, performance or creative endeavour after the completion of the project (within the confines of consent given).

6.2. The Human Tissue Act

Application Number _____
Date Received _____

The Human Tissue Act came into force in November 2004, and requires appropriate consent for, and regulates the removal, storage and use of all human tissue.

6.2.1. Does your project involve taking tissue samples, e.g., blood, urine, hair etc., from human subjects?

No

6.2.2. Will this be discarded when the project is terminated?

Not applicable

If NO – Explain how the samples will be placed into a tissue bank under the Human Tissue Act regulations:

6.3. Notification of Adverse Events (e.g., negative reaction, counsellor, etc.):
(Indicate precautions taken to avoid adverse reactions.)

Please state the processes/procedures in place to respond to possible adverse reactions.

In the case of clinical research, you will need to abide by specific guidance. This may include notification to GP and ethics committee. Please seek guidance for up to date advice, e.g., see the NRES website at <http://www.nres.npsa.nhs.uk/>

The pupil participants will be in the care of their regular teaching staff, as well as the researcher, at school. If any child demonstrates an adverse reaction to their participation in the research, or their use of the wristband, the school's usual emergency procedures (including contacting those with parental responsibility or emergency services where relevant) will be followed.

SIGNATURE OF PRINCIPAL
INVESTIGATOR:



Date:

01.12.2017

Resubmitted: 13.02.2018

SIGNATURE OF FACULTY'S HEAD
OF ETHICS:

Date:

Checklist of attachments needed:

1. Participant consent form
2. Participant information sheet
3. Full protocol
4. Advertising details
5. NHS Approval Letter (where appropriate)
6. Other evidence of ethical approval (e.g., another University Ethics Committee approval)

Appendix J: TRO Essex Copyright Licence

DocuSign Envelope ID: D57C6E43-FC49-42F4-BD80-5FDF014AC0A6



This will confirm the understanding and agreement between **KENSINGTON MUSIC LIMITED** of Suite 2.07, Plaza 535 Kings Road, London SW10 0SZ and **DAVID SHANNON** of Apt. 9, 2 Stowell Street, Liverpool L7 7DL

1. We hereby grant to you the non-exclusive right and license during the term hereof, to print, reprint, publish, distribute and sell at your own expense, the musical composition(s) listed in the Schedule Clause 1. hereto (hereinafter referred to as "the said musical composition(s)") in the publication(s) specified in the Schedule Clause 3. Hereto via Licensee's university online repository only.
2. You will ensure that the Title(s) and Writer(s) Credit specified in the Schedule Clause 1. hereof for "the said musical composition(s)" concerned shall be printed whenever "the said musical composition(s)" is/are printed.
3. You will ensure that the Copyright Notice(s) specified in the Schedule Clause 2. hereof prominently appears in the manner specified in the Schedule Clause 2. hereof.
4. The rights granted to you hereunder are for the territory specified in the Schedule Clause 4. hereof.
5. This License shall be valid and subsist in perpetuity.
6. In consideration of the rights granted to you as aforesaid you agree to pay us in respect of "the said musical composition(s)" the royalty specified in the Schedule Clause 5. hereof.
7. INTENTIONALLY DELETED
8. We hereby warrant and confirm that we own and control the copyright in "the said musical composition(s)" and that we are fully entitled to enter into the terms of this Agreement.



9. This Agreement shall bind each of us and our respective successors in business and assigns, and cannot be changed, altered, modified or cancelled orally, and shall be interpreted in accordance with the Laws of England.

Please indicate your agreement to the foregoing by signing and returning both copies of this Agreement, and we shall then forward your copy to you.


SIGNED BY:

SIGNED BY:

DocuSigned by:

D89DAFD93CD947F...

For and on behalf of
KENSINGTON MUSIC LIMITED



For and on behalf of
DAVID SHANNON



SCHEDULE

DATE: 20th September 2021

1. **DETAILS OF TITLE(S) AND WRITER(S)**

Composition(s) : **“TIME REMEMBERED”**

Writer(s) : **BILL EVANS**

2. **COPYRIGHT NOTICE(S)**

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of Suite 2.07, Plaza 535 Kings Road, London SW10 0SZ

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3. **PUBLICATION(S)**

Title(s) : **“DAVID SHANNON PHD THESIS”**

4. **TERRITORY**

World

5. **ROYALTY PAYABLE**

In consideration of the right granted by Licensor to Licensee hereunder, Licensee acknowledges that the rights have been granted Gratis based upon its use of the Composition for the use set forth above. If any other licensor receives a royalty or fee for use of a musical composition and/or musical clips, the licensor herein will receive a fee or royalty equal to the highest fee or royalty paid.

Appendix K: Images.

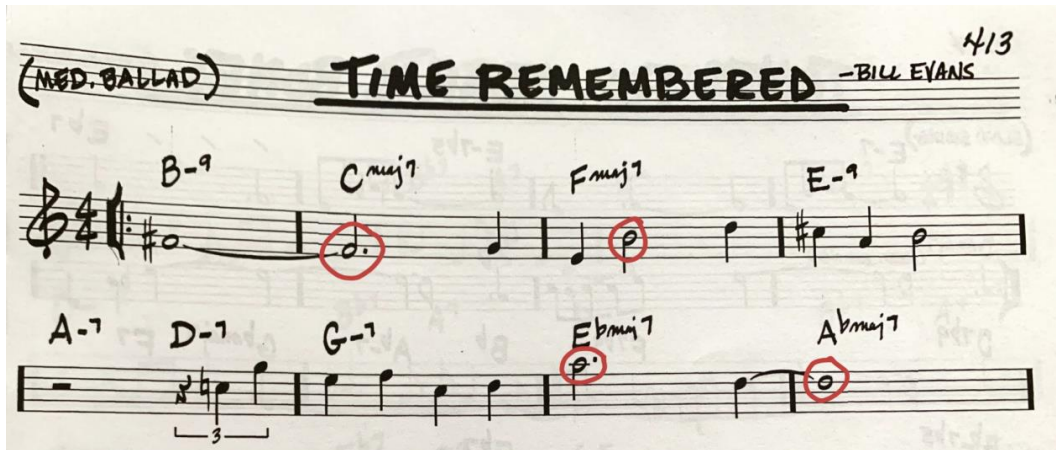


Figure 1. The first eight measures of *Time Remembered* by Bill Evans.

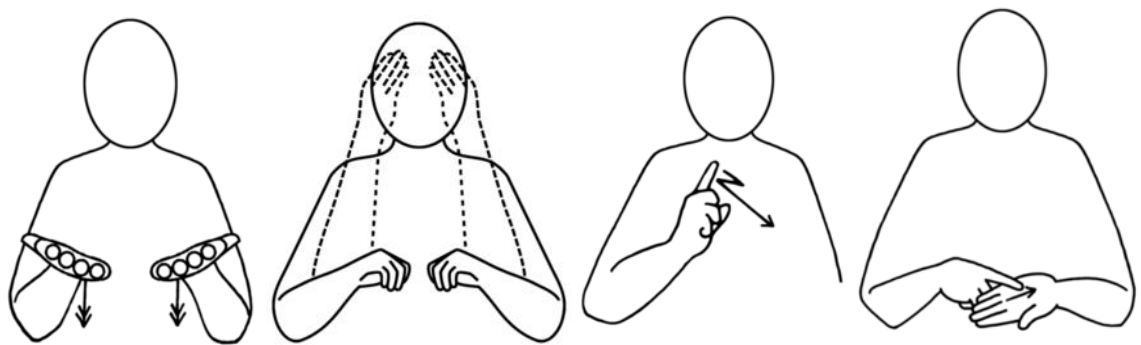


Figure 2 Line drawings of Makaton signs for 'today,' 'learning,' 'electric,' and 'skin.'

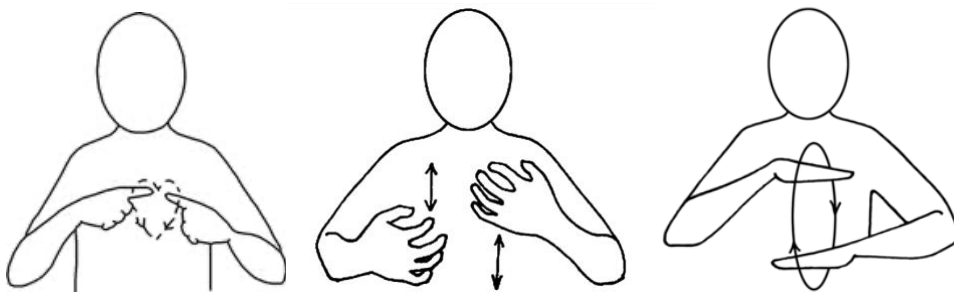


Figure 3. The Makaton signs for the words 'heart,' 'excited' and 'relaxed', presented as line drawings. The sign for 'heart' consists of a heart shape drawn using both index fingers in front of the chest. The sign for 'excited' is clawed hands rubbed vigorously over the body. The sign for 'calm' is of flat hands held vertically in front of the body and gently passed over one another.



Figure 4. Instruments and ear defenders are arranged on a very large grey carpet. The carpet has a large green circle in the middle, with an illustration of a pigeon. The words 'Welcome to Pigeons' are written in black text around the circle. Photograph taken on 22nd November 2018.



Figure 5. The picture shows Walking Scoring Devices. These consist of a toilet roll attached to a piece of thick (approximately 17cm wide and 40cm long) with a length of string, and a bulldog clip

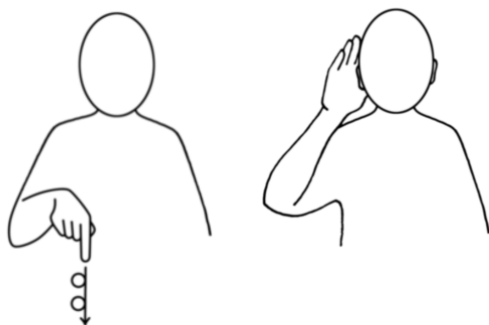


Figure 6. The Makaton signs for the words 'deep' and 'listening' presented as line drawings. Deep is drawn as pointing down with the index finger of the dominant hand, and then spiralling down, and 'listening' is drawn as cupping the ear with the dominant hand.

Appendix L: Artist consent form.

CONSENT FORM (PARTICIPATING ARTIST)

Title of Project: Affect and Neuro-diverse learning in the Early Years: Sound-art as relational pedagogy

Name of Researcher: David Ben Shannon

Please initial all boxes

1. I agree to songs composed as part of the ongoing music research-creation project *Oblique Curiosities* featuring in the researcher's PhD thesis, including links to audio recordings of the songs on *SoundCloud.com/ObliqueCuriosities*. I agree that these will be referred to by the researcher in completing his University course.

SET

2. I consent to descriptions of the process of composing these works featuring in the thesis.

SET

3. I understand that my participation is voluntary and that I am free to withdraw at any time from the research without giving any reason.

SET

4. I give permission to be credited for the music I have co-created with the researcher using my **real name**.

SET

Sarah E. Truman

Your name

14.03.2018

Date



Your signature