

Experimenting with *Sound and Silence*: sonorous bodies, sonic selves, acoustic topographies and auditory histories of schooling¹

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Abstract

This article deconstructs some of the underlying assumptions that inform projects in Paynter and Aston's 1970 book, *Sound and Silence*. Foucauldian and Deleuzian technologies of power and technologies of desire are used to frame an argument that Paynter and Aston's projects play into the fabrication of sonorous bodies and sonic selves but also provide potentialities for the creativity of the subject. Sound and silence as material-in-flux is analysed through notions of temporality and affect to argue for a context of hope in acoustic topographies and auditory histories of schooling.

Keywords: sound, silence, temporality, affect

Introduction

In their 1970 project book *Sound and Silence: Classroom Projects in Creative Music*, John Paynter and Peter Aston unfold a creative approach to music education based on the interplay of sound and silence that draws on a variety of sound sources, including both 'purely musical materials' and 'sounds from the natural world'.² These sound-sources are to be made available for investigation by whole classes, groups of pupils, or by individuals, using a method that Paynter and Aston term 'empirical composition', which they explain 'means going directly to our materials'.³ Pupils are to experiment through improvisation with various instruments or musical ideas until they have fashioned a piece of music through the trial-and-error process of selection, re-

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² John Paynter and Peter Aston, *Sound and Silence: Classroom Projects in Creative Music* (Cambridge: Cambridge University Press, 1970).

³ Paynter and Aston, *Sound and Silence*, 12.

jection, and evaluation. Teachers are to guard against stifling 'the child's 'innocent eye or ear' and killing 'the music's spontaneity' through notation.⁴ Paynter and Aston draw analogies with Herbert Read's approach to art education,⁵ Peter Slade's view of bodily movement within creative drama,⁶ and with how Sybil Marshall,⁷ Margaret Langdon⁸ and David Holbrook⁹ frame children's writing. Paynter and Aston argue that working with elements of sound and silence mirrors ways in which contemporary composers work on ideas, and they stress the importance of 'cultivat[ing] the artist within ourselves' because the arts provide important ways of 'saying what we feel' and knowledge is acquired 'as much through feelings as from information'.¹⁰ Having set in motion 'trains of thought' through 'some kind of experiment with actual sound-sources' or 'made in the abstract', teachers are to provide opportunities for children to listen to pieces of music by composers using similar techniques, but only after children have first experimented themselves.¹¹

Although Paynter and Aston's text was aimed at secondary school pupils I used both the underlying principles of their work and project material from their *Sound and Silence* book when employed in the early 1970s to travel around primary schools in the north of England and introduce creative approaches to music.¹² Working in so-called 'deprived' areas with teachers and their classes in schools that often lacked musical instruments we augmented the scant supplies of instruments with wooden, stone, vitreous, metallic and human sound materials that were readily available in different sizes, shapes and densities - wooden floors, nut casings, pebbles, windows, bottles, keys, bottle tops, membranes over tins and plant pots, voices, the reso-

⁴ Ibid., 13.

⁵ Herbert Read, *Education Through Art* (London: Faber and Faber, 1943).

⁶ Peter Slade, *Experience of Spontaneity* (London: Longmans, 1968).

⁷ Sybil Marshall, *Adventure in Creative Education* (London: Pergamon Press, 1968).

⁸ Margaret Langdon, *Let the Children Write: An Explanation of Intensive Writing* (London: Longmans, 1961).

⁹ See, for example, David Holbrook, *Creativity and Popular Culture* (London: Associated University Presses 1994).

¹⁰ Paynter and Aston, *Sound and Silence*, 6.

¹¹ Ibid., 11.

¹² I worked for two years in 18 infant, junior and primary schools (9 schools in year 1 and different 9 in year 2).

nances of body parts, and the ‘sounds of silence’ (breath, wind, drips of water, and sounds outside the room). Children often worked collaboratively on projects that were interdisciplinary (in various combinations of music, dance creative writing etc.) and made explicit the co-ordinated use of the senses that do not ‘slice-up’ along lines of sensory pathways.¹³

Working experimentally with sound and silence provided an exciting context of hope for the potential of children’s imaginations;¹⁴ but I was conscious of a number of contradictions. There were illusions of experimentation, for sonic¹⁵ projects were often initiated along lines that I sparked and often developed around questions and suggestions that derived from my background as trained musician. I felt the tug of ‘freedom’ and ‘control’ - that working experimentally with sound as material contained potential for disruption that necessitated tight grammars of classroom control and clear rules about acceptable and unacceptable sonic behaviour. And teaching with sonic projects was a very physical experience. Thirty children often worked simultaneously with sound in groups, generally on the floor of halls as schools tried unsuccessfully to quarantine sound’s acoustic¹⁶ horizons in buildings not designed for the ‘noisy’ activities that constituted the 1970s ‘patchwork of ... acoustic dimensions’.¹⁷ I needed to develop relaxation techniques to accommodate the physical hammer blows of sound’s vibrations as they encountered and entered my body.¹⁸ I was curious about how children could appear oblivious to this effect as they focussed on composition activities when other groups often worked nearby; and the next class appearing at the door spoke to the regularity of a temporality that could punctuate sonic experimentation in uncondusive ways.

¹³ Tim Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (London: Routledge, 2011), 136.

¹⁴ For Paynter and Aston’s role in the development of music education in England see John Finney, *Music Education in England, 1950-2010: The Child-Centred Progressive Tradition* (Farnham: Ashgate, 2011).

¹⁵ Chambers dictionary defines sonic as relating to or using sound or sound waves. I use sonic to refer to both materials of sound and to ways in which bodies and selves relate to or use sound in their becoming and being.

¹⁶ Chambers dictionary notes that acoustic relates to producing or operated by sound.

¹⁷ Cathy Burke and Ian Grosvenor, “The Hearing School: An Exploration of Sound and Listening in the Modern School,” *Paedagogica Historica* 47, no.3 (2011): 323-40, here 335.

¹⁸ Brandon LaBelle, *Background Noise: Perspectives on Sound Art* (London: Bloomsbury Publishing, 2015), xi.

To hone into this confluence of hope and unease that remained intuitively known in my experience of working with sound and silence during the 1970s, I deconstruct some of the underlying notions that inform Paynter and Aston's projects. I focus on elements of the nature-culture debate as they relate to sonic activity. I highlight technologies of power that work through acoustic topographies of schooling as sound and silence become woven in the fabrication of bodies and selves through processes of subjectivity and subjectification. I also argue that engaging with sound and silence as medium holds the potential to deflect lines of disciplinary technologies through realms of temporality and affect that foster creativity and desire on the side of the subject.

In the section entitled 'technologies of power and the sonic', I re-read three of Paynter and Aston's project descriptions for traces of the audible¹⁹ pasts of music classrooms. I focus on projects one and two from their book in which they introduce pupils to basic notions of sound and silence, and on project six because it works explicitly with the notion of silence. I unpack tensions that play out in these projects around complex assemblages that constitute bodies (human and non-human) and worlds. I draw on critiques of how sound has been seen to be more intimately related to the 'interior' of the body than has been the case for sight²⁰ to look at ways Paynter and Aston deploy notions of sonorous bodies and sonic selves as natural entities 'released' through opportunities to engage experimentally with resources of sound and silence; and I examine their notions of sonorous bodies and sonic selves schooled through auditory experience. I use this analysis to argue that technologies of power around sound and silence play into

¹⁹ Chambers dictionary notes that auditory derives from the Latin *audire* to hear, which underpins meanings of auditory and audible related to processes of hearing. The term *aural* began its history in 1847 meaning 'of or pertaining to the organ of hearing' but did not appear in print denoting something 'received or perceived by the ear' until 1860. In referring to an 'audible past' and to 'auditory histories' I follow Sterne, *Audible Past*, in seeking the idea of the aural and of its historical inflection (here in schooling).

²⁰ See Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham: Duke University Press, 2003), 16ff; and Ingold, *Being Alive*, 137 for how sound has been thought to enter the body through notions of ears as 'holes in the skull', while the visual has been oriented towards a point distanced from the body around notions that leave us to 'reconstruct the world inside our heads'.

the fabrication of the attentive child (with the listening ear) that educationists have long sought to direct.

In the section, 'technologies of desire - 'feeling' like a composer, I pick up on Paynter and Aston's stress on the arts as ways of 'saying what we feel', and their view of feelings as a way in which knowledge is acquired. Here I immerse the child as artist within the 'flux' of sound and silence to explore how *Sound and Silence* projects link with temporal and affective aspects and notions of becoming (other than what one already is). I develop an argument around affect and temporalities that opens a space of hope for resistance and creativity on the side of the subject through ways in which sound and silence 'ensound'²¹ bodies and selves through technologies of desire that have the potential to deflect technologies of power.

Although I deconstruct projects that I myself have used, I position myself as researcher through an auditory experience that is at once always already an interpretation as well as in need of interpretation.²² This contrasts with Murray Schafer's view of 'earwitnessing' that would situate me as 'earwitness' to the projects that I analyse. But accounts based on 'earwitnessing' do not take into account sufficiently how constructions of subjective and collective meanings of sound-noise, and hearing-listening can inform researchers' assumptions. In 'tuning into auditory histories of schooling', I outline interpretive elements from the work of Christopher Small, Tim Ingold, JQ Davies, and Jonathan Sterne that I deploy to analyse audition²³ and sound and silence as material. I relate these to the operation of technologies of power and technologies of desire in acoustic topographies of schooling, as materials and practices of sound and silence are woven into the arrangements of the natural-artificial-physical (topographical) features of the school.

²¹ Ensound is a term I take from Ingold, *Being Alive*, 135

²² Paraphrasing Joan W Scott, "Experience," in *Feminists Theorise the Political*, ed. Joan W Scott (London: Routledge, 1992), 22-40, here 37.

²³ Sterne, *Audible Past*, 10.

Tuning-in to auditory histories of schooling

I conceptualise music education as a specialised (and idealized) instance of schooling's acoustic horizons²⁴ in which sound, space, materiality and the body intra-act in the the play of emotional, affective, social and 'mindful' registers.²⁵ Small's notion of 'musicking' frames my understanding of music in terms of action and what people do as they play, sing, listen, compose, dance etc. Musicking is a social understanding of music that does not mean the same as 'to perform' or 'to make music'. It contests the isolated self-contained 'reality' of art to which Walter Benjamin and John Dewey alert.²⁶ Benjamin and Dewey draw attention to how Western understandings of classical music as self-contained 'reality' play out in notions of music as work of art, object, and abstraction. From this perspective the 'thingness' of music inheres in the self-contained autonomous notated musical score as material object to be 'executed' as performance to a private and 'passive' individual listener, whose task is to try to understand the music and to respond to it but without contributing to its meaning and without disrupting other listeners.²⁷

Musicking, in contrast, is conceptualised as social, situated event and is synonymous with an expanded meaning of the verb 'to music'. It includes the event and all who participate, whether composing, practicing, performing and listening to whatever degree. This socially and physically situated understanding of 'musicking' encompasses the creative 'doing' of the

²⁴ See Brandon LaBelle, *Acoustic Territories: Sound Culture and Everyday Life* (Bloomsbury: Academic, 2010) for music as idealised instance of sound. At a simplistic level acoustic horizon refers to the farthest distance in every direction from which sounds may be heard, but this differs according to the 'hearer' and by ways in which sound as vibration is 'heard' - see discussion below of Sterne and 'tricky' definitions of sound.

²⁵ Karen Barad defines intra-actions as 'nonarbitrary nondeterministic causal enactments through which matter-in-the-process-of-becoming is iteratively enfolded into its ongoing differential materialisation ... iterative intra-actions are the dynamics through which temporality and spatiality are produced and iteratively reconfigured in the materialization of phenomena and the (re)making of material discursive boundaries and their constitutive exclusion'. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), 234.

²⁶ Walter Benjamin, *The Origin of German Tragic Drama* (London: Verso, 1963), 55; idem, "The Work of Art in the Age of Mechanical Reproduction," in idem, *Illuminations* (Houghton Mifflin Harcourt), 217-252. John Dewey, *Art as Experience* (New York: Penguin), 8.

²⁷ Christopher Small, *Musicking: The Meanings of Performing and Listening* (Wesleyan University Press, 2011), 5.

child as artist, as well as children's performance of their compositions, whether individually, to each other in a group, by the group to the class, by the class to the school, or to parents. Performance occurs in a physical and social setting as an 'encounter between human beings that takes place through the medium of sounds organised in specific ways'.²⁸ I use the notion of 'musicking' as overarching frame through which to defract understandings of *Sound and Silence* projects as both 'work' and 'event'. This includes 'empirical composition' and the social and physical everyday worlds of engagement with sound and silence in schools' acoustic topographies.

'Empirical composition' points to the 'intimate' histories of hands and voices²⁹ as children go 'directly' to the 'materials'.³⁰ In the section entitled 'technologies of power and the sonic', I draw on Davies and Sterne in my argument that Paynter and Aston see the body as both a natural entity *and* schooled through audition. Davies espouses an approach to the body in which bodies and voices are not simply 'naturally' performed but are 'acquired, theatrical and *real*'.³¹ From this point of view, bodies are not simply activated to 'sound' or to 'hear' 'naturally'. Davies argues that there is no such thing as unmediated embodiment (and so no 'innocent ear' waiting to be released in a form of musical disembodiment). Davies sees the expressive competence for music making based in 'a corporeality that is both artful and actual, shaped from the outside in as well as the inside out'.³² The voice, then, is 'vibrating air, but vibrating air that is recognised as particular political and physical articulations of the body' that are socially and ideologically contingent. For Davies, this body is no natural 'primordial essence'. Rather it 'offers up a whole panoply of potential expressive truths, all of them available to assiduous cultivation, placement and discrimination' and to claims on them that might be personal, civic, pedagogical, commercial, aesthetic, educational and political.³³ In illuminating aspects of

²⁸ *Ibid.*, 10.

²⁹ JQ Davies, *Romantic Anatomies of Performance*, (Berkeley: University of California Press, 2014), 5.

³⁰ Paynter and Aston, *Sound and Silence*, 12.

³¹ Davies, *Romantic Anatomies*, 6.

³² *Ibid.*, 5.

³³ *Ibid.*, 7.

Paynter and Aston's arguments that assume the body as natural, I draw on Davies' discussion of how bodies learn to 'play by themselves'.³⁴

Like Davies, Sterne interrogates paradoxes of nature-culture around audition in ways that inform my argument about Paynter and Aston's assumptions around the hearing-listening body. Sterne deploys Marcel Mauss' notions of bodily techniques and regimes of the body to place audible pasts within a history of the education and shaping of audition in an account of how the senses are cultivated or brought into being.³⁵ Sterne argues that treating sound as a natural phenomena exterior to people is based upon an anthropocentric view.³⁶ He points to the impossibility of 'merely describing' the faculty of hearing in its natural state and to ways in which the language that we use to describe sounds and hearing is weighed down by cultural baggage, so that the idea of the aural and our understandings of sound themselves are the result of historical transformations. Sterne argues that the 'elusive inside world of sound', the 'sonorous, the auditory, the heard, the very density of sonic experience', emerges and becomes perceptible only through its exteriors.³⁷ For Sterne, the corollary of there being no 'mere' or innocent description of sound is that there is no 'mere' or innocent description of sonic experience. On this basis, Sterne eschews transhistorical constructs of sound and hearing as a basis for a history of sound. Arguing that even phenomenologies can change, he turns away from an attempt to recover and describe people's interior experience of listening and towards the social and cultural grounds of sonic experience and to the exteriority of sound as a contextualist endeavour.³⁸ As Sterne notes, this requires particular attention to listening as directed learned activity and cultural practice (and to what Paul Carter terms the intentionality and cultural work

³⁴ *Ibid.*, 10, 45.

³⁵ Sterne, *Audible Past*, 2, 13.

³⁶ *Ibid.*, 11. Chambers dictionary describes anthropocentric as 'having or regarding mankind as the central element of existence'.

³⁷ Sterne, *Audible Past*, 13.

³⁸ *Ibid.*, 10.

of listening with its power dynamics.).³⁹ Listening requires hearing (an ‘individual sensitivity to sound in its many forms received concurrently’)⁴⁰ but is not simply reducible to hearing. Listening points to how the sonic self as figure is embedded within a sphere of cultural and social habits⁴¹ in which the meanings of both hearing and listening shift across place and time as they take on different meanings.⁴² This aligns with what Richard Cullen Rath terms ‘soundways’, or the ‘ways people come to express their relation to sound and its circulation’.⁴³ ‘Soundways’ in turn, point up the importance of the auditory in the constitution of the self in relation to concepts of space, where the resources of the ear are fashioned to give density, and dimension to accounts of produced and social space.⁴⁴

Sterne points to tricky definitions surrounding whether sound is a class of vibration that *might* be heard or is a class of vibration that *is* heard. He argues that because ‘the hearing of the sound is what makes it’, human beings reside at the centre of any meaningful definition of sound’ irrespective of whether anyone is there to hear a sound or not, or whether vibration is felt by touch, or whether we are talking about human and non-human animals. But from Ingold’s perspective this type of argument sets up a division between mind and matter. For Ingold, sound is neither mental nor material but a medium through which we move.⁴⁵ Ingold sees sound as a phenomenon of our experience, a process of immersion in and commingling with the world in which we find ourselves.⁴⁶ Rather than sound enfolded into the body in processes of embodiment, for Ingold the body is ‘launched into’ the ‘generative fluxes’ of sound and swept

³⁹ Paul Carter, “Ambiguous Traces, Mishearing and Auditory Spaces,” in *Hearing Cultures: Essays on Sound, Listening and Modernity*, ed. Veit Erlmann (Oxford: Berg, 2004), 43-63, here 44.

⁴⁰ Burke and Grosvenor, “Hearing School”, 338.

⁴¹ LaBelle, *Acoustic Territories*, xx.

⁴² Burke and Grosvenor, “Hearing School”, 338

⁴³ Richard Cullen Rath, *How Early America Sounded* (Ithaca: Cornell University Press, 2005).

⁴⁴ Steven Connor, “The Modern Auditory I,” in *Rewriting the Self: Histories from the Middle Ages to the Present*, ed. Roy Porter (London: Routledge, 2002), 203-223; idem, “Sound and the Self,” in *Hearing History: A Reader*, ed. Mark M Smith (Atlanta: University of Georgia Press, 2004), 203-223. See also Henri Lefebvre’s perceived, conceived and lived spaces in *The Production of Space* (London: Wiley, 1992).

⁴⁵ Ingold, *Being Alive*, 29, 138.

⁴⁶ *Ibid.*, 137

into its currents in ways analogous to the body's immersion in the wind.⁴⁷ In 'technologies of desire - 'feeling like a composer', I frame children's musicking as an immersion and commingling in sound and silence for all who participate, whether composing, practicing, performing or listening to whatever degree. I explore how this opens the musicker to temporalities and affect that Suzanne Langer sees playing into processes of change through the body's perpetual becoming (otherwise than what it already is).

I situate temporal and affective process of becoming as technologies of the self: 'the 'everyday practices historically and culturally constituted that subjects strategically deploy in becoming what they are'.⁴⁸ I explore bodies and selves tuned-in to sonorities through Foucauldian technologies of power, where the sonic self is 'an effect of the interweaving of historical and cultural practices ... to be analysed and deconstructed from within'.⁴⁹ I explore the 'ensounding'⁵⁰ of bodies and selves in the flux of sound-and-silence-as-material through Deleuzian technologies of desire, where the sonic self is 'threshold, door and becoming',⁵¹ and sound and silence is material with the potentiality to deflect technologies of power.

Below I outline three of Paynter and Aston's project descriptions, which I then interrogate for underlying assumptions about 'natural' and 'cultural' aspects of audition and sonority. I identify instances when Paynter and Aston portray the body as 'natural', as well as instances where intra-actions of sound-noise-silence-music as sonorous material and acoustic event(s) and invocations of hearing-listening together constitute technologies of power in the acoustic topographies of schooling.

⁴⁷ Ibid., 139.

⁴⁸ Maria Tamboukou, *In the Fold between Power and Desire: Women Artists' Narratives* (Newcastle: Cambridge Scholars, 2010), 84.

⁴⁹ Maria Tamboukou, "Interrogating the 'Emotional Turn': Making Connections with Foucault and Deleuze," *European Journal of Psychotherapy & Counselling* 6, no. 3 (2003): 209-23.

⁵⁰ Although I deploy the term 'ensounding' from Ingold, *Being Alive*, 135, I recognise that he argues against ideas of embodiment.

⁵¹ Tamboukou, "Interrogating the 'Emotional Turn'".

Technologies of power and the sonic

In the *Sound and Silence* book's first project, 'What does Music say?' teachers are advised to tell pupils that just as a picture can be 'about' paint, music can be 'about' sound:⁵²

The materials of music are sounds and silences. They can be explored like any other materials ... and they can be used as a language when we have something to say [which] may be concerned with something in life around us, some feeling about something seen or heard or imagined ... Something we have to say may well be 'about' the material themselves, sounds and silences - perhaps some particular sounds, or sounds made on a particular instrument.⁵³

Introducing this project, Paynter and Aston draw a distinction between music and noise:

In the first place, noise just happens: it's around us all the time and we don't control it. Music on the other hand, is the result of a *planned* use of the materials, even though this planning may be largely intuitive at least to begin with. The process may be one of trial and error - so it is for anyone trying to say something ... We should give the finished piece a sense wholeness of belonging together, and to this end we must reject anything which in any way destroys the wholeness. This part of the process will be easier if we impose some limitations on ourselves before we start.⁵⁴

Pupils are to be told about the need to be able to control sounds sufficiently in order to use them to make a piece of music and that they might tape-record the whole piece when satisfied with its shape and content.⁵⁵ Examples for children to listen to from the discography include a group of children playing four cymbals with a variety of sticks and bows which produce shorter

⁵² Paynter and Aston, *Sound and Silence*, 25.

⁵³ Ibid.

⁵⁴ Ibid., emphasis in the original.

⁵⁵ Ibid.

and longer vibrations that the class of children are invited to recognise. The discography also includes work by contemporary composers Charlos Chavez and Karl Heinz Stockhausen,⁵⁶ whose work focuses on non-representational use of sound.

Project two, 'The music within us', is based on the expressive possibilities available to man [sic] in the 'sounds he could make with his voice and in the natural rhythms and pulses of living'; and it highlights instruments as an extension of bodily music.⁵⁷

The true resources of music are within each one of us and they are part of the business of living ... Essentially [music] is a language - a means of expression... it may help us to come closer to the essential nature of music if we momentarily shrug off some of our sophisticated post-renassissance concepts of music ... using as our material the most fundamental resources we have: the silence around us and the noises we can hear in the silence.⁵⁸

Children are to create a piece of music by starting with 'silence':

In the silence we can hear our own regular breathing... Ancient peoples thought of breath as the very stuff of life itself... here, then is an elemental sound from within us, and it can become material for music. The thud of our heart-beat is also musical material⁵⁹

Children are to begin by counting out the pulse beat of one member of the group and then join this to the 'elemental breath sound', gradually adding to the breath sound 'some more definite vocal quality, such as a the vowel sound Ah, Oo or Oh', before incorporating other natural

⁵⁶ Ibid., 26.

⁵⁷ Ibid., 35.

⁵⁸ Ibid.

⁵⁹ Ibid., 36

sounds (wood, stone etc) against the basic pulse and building up ‘a musical continuity’ using these sounds.⁶⁰

Project six, ‘Silence’, encourages children to create a piece of music that ‘makes extensive use of silence’ and then with the same resources to make a piece of music ‘about’ silence (‘i.e to convey the *feeling* of silence’).⁶¹ Inventing rhythmic patterns that use only four notes they are to work in groups and improvise contrasted patterns. The aim here is to ‘get a transparently clear texture’ and to think about how silence is being used.⁶² Examples for children to listen to include the piano music of John Cage,⁶³ who aimed to liberate all sounds from ‘the representational grip of musicality’⁶⁴ and who has declared: ‘Music is sounds, sounds around us, whether we’re in or out of concert halls’ and whose piece *4,33,3 Silence* comprises only the sounds external to the composition itself.⁶⁵

Taken together, these three projects work within the nature-culture paradox by drawing at different times on understandings of sound as interior and/or exterior to the body. The encouragement to children in project two to create music through listening first to their own breathing ‘as the stuff of life’ and the ‘elemental breath sound’ engages with one of the commonly-held understandings of sound as ‘interior’ and ‘natural’. It draws on a phenomenology of presence, a transhistorical universal human subject, and a ‘view of the body as ‘natural’ and ‘unmediated’, waiting for ‘expressive release’,⁶⁶ encapsulated in notions surrounding the ‘birth-cry’.⁶⁷ It signals elemental understandings of breath as life-giving act that links to a long history of the divine, and the vocal (in the beginning the Word made flesh, the Word shines a light

⁶⁰ Ibid.

⁶¹ Ibid., 61, emphasis in the original.

⁶² Ibid., 25.

⁶³ Ibid., 62, 64.

⁶⁴ LaBelle, *Background Noise*, 51.

⁶⁵ R Murray Schafer, “Soundscapes and Earwitnesses,” in Smith, *Hearing History*, 3-9.

⁶⁶ Davies, *Romantic Anatomies*, 5.

⁶⁷ From a different perspective see Jean-Luc Nancy, *Listening* (New York: Fordham University Press, 2007), 27.

in the darkness etc.). It embraces a sonic experience that is 'idealised as a kind of pure interiority'.⁶⁸

In all three projects, sound and silence are also situated as 'essence' on which musical experience builds in relation to social space. While a notion of product, and so of music as object, inheres in the projects, they also operate within a 'here and now' of improvisation and empirical composition that leaks out of the idea of music as solely a relation to the finished project. Musicking with sound as vibration in the 'here and now' speaks to multiplicity - to sound always in more than one place, invading space and disrespecting borders.⁶⁹ Rather than simply sound at its source, the striking of the cymbal in project six illustrates sound as spatial event;⁷⁰ for as the sound wave travels it is changed by each interaction with the environment, including among bodies. The sound between the bow and the surface of the cymbal is heard but also within the room as it reverberates back to the source of the sound.⁷¹ Here, sound and space 'converse by multiplying and expanding the point of attention, or the source of sound'. As Brandon LaBelle argues, in such processes, the materiality of a space shapes the contours of sound through processes of reflection, absorption, reverberation and diffraction, with the result that the echo around the room of the cymbal describes an acoustic topography of space from a multiplicity of perspectives and locations and 'the sound wave arriving at the ear is the analogue of the current state of the environment'.⁷² Such examples, as Sterne argues, demonstrate that hearing has many spatial aspects and possibilities to which we do not normally attend. So, too, with the play of silence. Silence in *Sound and Silence* projects is not cast as privation (and loss of 'voice') but as an arrangement of resonance, an encoding of 'promise': silence as a vital space for expanded listening that gives value to quiet environments in the acoustic horizons of

⁶⁸ See Sterne, *Audible Past*, 16ff

⁶⁹ LaBelle, *Background Noise*, 25.

⁷⁰ *Ibid.*, xii.

⁷¹ *Ibid.*, xi, xii.

⁷² *Ibid.*, xii.

acoustic topographies in which all sounds may gain greater depth and clarity.⁷³ In the *Sound and Silence* classroom, silence becomes something to be ‘mastered’ [sic]⁷⁴ in ways that align with understandings of the pursuit of broader academic performance.

The sonic resonances of *Sound and Silence* projects also speak to relationality and phenomena that operate within and through space to send the air oscillating and the body moving, animating acoustic topographies of schooling.⁷⁵ Modes of spatiality loom as continual input into forms of listening as sound escapes rooms, vibrates walls, accumulates reverberations, ‘boundless on the one hand and site specific on the other, always inhabiting more than one place’.⁷⁶ Sound as the spacetime of duration (embracing past-present-future):

... emanates, propagates, communicates, vibrates, and agitates; it leaves a body and enters others; it binds and unhinges, harmonizes and traumatises; it sends the body moving, the mind dreaming, the air oscillating. It seemingly eludes definition, while having profound effect.⁷⁷

Here, sound as relational aligns with a self based on relationships between organisms (human and non-human) and their environments⁷⁸ in an ecological matrix picked up and processed by the senses⁷⁹ in which which organisms and environments are always in a condition of mutual dependence.⁸⁰

⁷³ LaBelle, *Acoustic Territories*, 54.

⁷⁴ Burke and Grosvenor, “Hearing School”, 338.

⁷⁵ LaBelle, *Acoustic Territories*, xvii.

⁷⁶ LaBelle, *Background Noise*, xiv.

⁷⁷ *Ibid.*, xi.

⁷⁸ Gregory Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology* (Chicago: University of Chicago Press, 1972). Feminist scholars and scholars of colour have pointed to how conditions of inter-dependence are intersected by webs of power relations operating at multiple levels in ecological approaches. See, for example Rosi Braidotti, *The Posthuman* (Cambridge: Wiley, 2013), 212.

⁷⁹ Small, *Musicking*, 54.

⁸⁰ June Boyce-Tillman, *Experiencing Music - Restoring the Spiritual: Music as Well-being* (Oxford: Peter Lang, 2015), 212.

While project two refers to the body's interiority, and project one encompasses the notion of an 'essence' of sound, all three projects speak to the body's exteriority and to particular political and physical articulations of the auditory that contest the body as natural. In the acoustic topographies of the school, the *Sound and Silence* classroom constitutes an environment to foster and hone listening as an active component of bodily regimes of audition. The three *Sound and Silence* projects enjoin a form of listening that targets individual children's ears as they take-in sounds corporeally in the space of their environment and are asked to discriminate (listen differently), including within the resonances of 'silence'. An auditory rhetoric of cultural discrimination invites children's engagement on the basis of a distinction between sounds that are improvised with the aim of control through 'technique', planning and the repetition deemed necessary for the 'performance' of what is thereby constituted as music (and hence as cultural production); for teachers are to advise children to learn to 'control' sound. This is counterpoised to the 'uncontrolled' sounds of the environment. 'Uncontrolled' sounds are abjected as heard 'noise', as excess, in ways that align with 'interruptions' within the acoustic politics of sound as environmental pollution and noise abatement.⁸¹ This double abjection of noises (sounds until further qualified) into 'noise' (a reaction and judgement)⁸² speaks to sounds of modernity that assail and pervade, to alterity and vulnerability of the self,⁸³ to noise in the system of schooling, to noise as register of unlicensed behaviour, to the potentiality of disruption in the classroom, and to a lack of teacherly 'control' that pedagogic practice around the management of sound in schooling has often sought to eliminate.⁸⁴

The rhetoric of audition that hones listening by distinguishing between sound as planning and control, and noise as unorganised/uncontrolled, has wider pedagogical import for technologies fashioning the attentive child, a figure who, as Noah Sobel argues, has been central to educational thought and practice from the Enlightenment onwards as educationists sought

⁸¹ For noise, sound pollution and environmental policies see LaBelle, *Acoustic Territories*.

⁸² Paul Hegarty, *Noise Music: A History* (London Bloomsbury Academic, 2007), 3.

⁸³ Connor, "Modern Auditory I", 209.

⁸⁴ Burke and Grosvenor, "Hearing School", 329.

how best to capture, direct, and enhance children's abilities to pay attention.⁸⁵ Paynter and Aston note that 'children can often work [on sonic projects] in groups around a hall without distracting one another'.⁸⁶ Rather than relying (solely) on psychological mechanisms,⁸⁷ *Sound and Silence* projects work to shape an embodied competence whereby the child can 'cut-out' 'unwanted' noise in order to concentrate on what is deemed to matter. Here, nature is tamed in the cause of audition, and sonority works to fashion the figure of the child who can call up the 'listening ear', can be 'all ears', and in being attentive can 'overhear' without being distracted by 'unwanted noise'.⁸⁸

The materials of sonority draw attention to technologies of power in the fabrication of the attentive and listening subject that enfold sound in processes of embodiment and in shaping schools' acoustic topographies. But the sonic resonances that accumulate vibrations and leak out of rooms to circulate and inhere in more than one place also point to sound-as-flux into which children launch and immerse as they work with sonic projects. This draws attention to the potentialities of sound as material and context of subversive resolution, self-determination and creativity on the side of the subject.⁸⁹ In the section, 'feeling like a composer', I deploy Ingold's notion of immersion in the generative fluxes of sound along with thoughts about temporalities and affect from the philosophy of Suzanne Langer to develop a line of thinking about processes of change around the body's becoming (otherwise than what it already is). This underpins my argument that when invoking notions of 'the artist within' and knowledge acquired 'as much through feelings as from information', Paynter and Aston's projects provide space for the potential of resistance and creativity on the side of the subject.

⁸⁵ Noah W. Sobe, "Concentration and Civilisation: Producing the Attentive Child in the Age of Enlightenment," *Paedagogica Historica* 46, no. 1-2 (2010): 149-60.

⁸⁶ Paynter and Aston, *Sound and Silence*, 16.

⁸⁷ Schafer, "Soundscapes".

⁸⁸ See Burke and Grosvenor, "Hearing School", 329ff. Teachers tended to grapple with this in new ways in 1960s-1970s England as primary schools increasingly adopted 'open-plan' arrangements.

⁸⁹ This article also works within some of the paradoxes that are highlighted in Roland Sintos, Coloma Alexander Means, and Anna Kim, "Palimpsest Histories and Catachrestic Interventions." In *Postcolonial Challenges in Education*, edited by Roland Sintos Coloma (New York: Peter Lang, 2009), 1-22.

Technologies of desire - 'Feeling like a composer'

Sound and Silence projects are framed within notions of music as a language.⁹⁰ But Paynter and Aston warn against the long-standing approach to the language of music based on notation and a particular relation of eye and ear that came to denote the pupil with the 'good ear'. This was the pupil who had been inducted into reading music's symbolic notation in specific forms of aural training, developed in class music lessons in England in the interwar period, when pupils learned to unpack and work with music's symbolic grammar. For pupils with a 'good ear', able to 'observe with the ear' and 'hear with the eye' music resounds in the interiority of the body through 'mental' or 'inner' hearing, while sound as exteriority is silenced.⁹¹

The 'audible' but silent reading of music propagated through this form of aural training is not the same experience for the pupil as the silent reading of a book; for with 'physical' hearing even when 'attentive' listening is practised, a certain amount of 'irrelevancy' of noise/sound always seeps through. Langer argues that 'mental' or inward hearing of music is a work of the imagination (an imagined sense experience), supported by symbolic devices (the guidance of printed scores, the specific though minute muscular responses of breath, individual tonal memories and other references to experience). While Langer maintains that with 'inner hearing' the structural elements of the music are generally not missed, she argues that other elements are only imagined, such as the music's volume and the length of tones, which are not always 'heard' though understood because they are dependent on a highly articulate bodily gesture - a physiological feeling for the tone in the muscles set to produce it (the muscular imagina-

⁹⁰ Paynter and Aston, *Sound and Silence*, 6.

⁹¹ Joyce Goodman and Andrea Jacobs, "Musical Literacies in the English Inter-war Secondary-school Classroom," *Pedagogic Historica* 44, no.1-2 (2008): 153-166.

tion of the tone). But inward hearing, Langer argues, usually stops short of ‘just that determinateness of quality and duration that characterises the actual sensation’.⁹²

For Langer, the elements of music are moving forms of sound in the realm of what Henri Bergson calls duration. This is ‘lived’ or ‘experienced’ time - the passage of life measurable only in terms of sensibilities, tensions, and emotions that has an altogether different structure from practical, scientific, or ‘common-sense’ versions of time through which public and practical life proceeds.⁹³ Langer argues that for practical purposes we co-ordinate incoherent temporal data - inward tensions and outward changes, heartbeats and clocks, daylight and routines and weariness - by letting the clock predominate. This clock time, time as pure sequence, is symbolised in a one-dimensional continuum amenable to synchronising practical affairs, dating past events and constructing some perspective of future ones. Here the underlying principle of time is change, measured by contrasting two states of an instrument, and construed in terms of their difference. But clock time is an abstraction from the direct experiences of time and not the only possible one. Much temporal experience - that is intuitive knowledge of time - is not recognised as ‘true’ because it is not formalised and presented in any symbolic mode. Langer notes: ‘we have only one way - the way of the clock - to think discursively about time at all’.⁹⁴ This is the ‘learned time’ that Antonio Viñao sees as cultural and pedagogical construct, and ‘cultural fact’⁹⁵ in which music teaching as component of schooling has been (and continues to be) implicated.

But music, says Langer, suspends ordinary time and uses the lived and virtual temporalities of duration as an element of expression.⁹⁶ It is this different mode of temporality - a time of *passage*, or transience - that Langer argues music lays out as audibility. Whereas clock

⁹² Susanne K Langer, *Feeling and Form: A Theory of Art Developed from Philosophy in a New Key* (London: Routledge and Kegan Paul, 1953), 137.

⁹³ *Ibid.*, 109.

⁹⁴ *Ibid.*, 111.

⁹⁵ Antonio Viñao, “History of Education and Cultural History: Possibilities, Problems, Questions”, in Thomas Popkewitz, Barry Franklin and Miguel A Pereyra (eds) *Cultural History and Education: Critical essays on Knowledge and Schooling* (London: Routledge, 2013), 125-50, here 135.

⁹⁶ Langer, *Feeling and Form*, 110.

time is simple and can be treated as one-dimensional, the experience of time in music is complex, and its *passages* (duration) 'voluminous'.⁹⁷ This is the temporality that Antonio Novoa and Tali Yariv Mashal refer to as the width and thickness of time, which 'makes us live, simultaneously, different temporalities overlapping in such a manner that time is no longer a single 'thread' (the arrow of time) but is represented with a string in which many threads are intertwined.⁹⁸ For Langer the concurrent tensions that comprise the dense fabric (the volume) of duration (each a measure of time) are physical, emotional or intellectual, and their ways of building-up and breaking, diminishing or merging into longer and greater tensions make for a vast variety of temporal forms. These tensions, in turn, act as the model for the virtual time created in music - transferred into 'the sonorous passage of time'⁹⁹ as rhythm joins music intimately to the emotional life of human beings as a relation between tensions in what Bergson terms 'lived time'.¹⁰⁰ This temporality inheres in the generative fluxes of sound and its currents into which children launch and immerse as they musick experimentally with materials of sound and silence.

For Langer (unlike for Paynter and Aston) music is not a language with a vocabulary,¹⁰¹ for 'tones lack the very thing that distinguishes a word from a mere vocable, or 'dictionary meaning'.¹⁰² Instead, the structure of music is 'isomorphic'¹⁰³ with emotive life, making music expressive in a non-specific sense of the emotive life as a whole. Because music's significant forms have an ambivalence of content that words cannot have,¹⁰⁴ Langer argues that music is not expressive of individual specific emotions; so, when children are called to work with sonic pro-

⁹⁷ Ibid., 112.

⁹⁸ Antonio N6voa and Tali Yariv-Mashal, "Comparative Research in Education: A Mode of Governance or a Historical Journey?" *Comparative Education* 39, no.4 (2003): 423-438, here 433.

⁹⁹ Langer, *Feeling and Form*, 113.

¹⁰⁰ Ibid., 114.

¹⁰¹ Susanne K Langer, *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite and Art* (Cambridge: Harvard University Press, 1942), 228.

¹⁰² Langer, *New Key*, 194.

¹⁰³ Isomorphism refers to the apparent similarity of form between two entities. For critiques of the step from isomorphism to symbol in Langer's work see: Ernst Nagel, "Review of Philosophy in a New Key," *Journal of Philosophy* XL (1943): 324-327 and Monroe C Beardsley, *Aesthetics: Problems in the Philosophy of Criticism* (New York: Harcourt Brace, 1958), 335-337, both cited in Peter Kivy, *Sound Sentiment: An Essay on the Musical Emotions* (Philadelphia: Temple University Press, 1989).

¹⁰⁴ Langer, *New Key*, 243.

jects ‘like a composer’ and to ‘say what [they] feel’ through sound, and to ‘express feelings in music’, on Langer’s terrain they are musicking in ways *expressive of* emotion or feeling and learning to *recognise* emotions as features of music, to deploy intuition and to *perceive* the ‘felt life’ of the artist’s expression’. From Langer’s perspective musicking moves children into the territory of affect’ - ‘the visceral forces beneath, alongside or generally *other than* conscious knowing’,¹⁰⁵ that, while tending to be ephemeral in effect, may also ‘leave a residue ... that produces particular kinds of bodily capacities’.¹⁰⁶ For Langer, the imagination that responds to music is ‘tinged with affect, tinged with body rhythm, tinged with dream’, with a ‘wealth of wordless knowledge ... of emotional and organic experience’.¹⁰⁷ In the generative fluxes of sound and its currents’,¹⁰⁸ affect plays into the body’s perpetual becoming (otherwise than what it already is).¹⁰⁹ It links body and mind, reason and passion, intelligence and feeling,¹¹⁰ and composes bodies and worlds simultaneously.¹¹¹ But it does so within configurations of reality that resonate with the ‘sayable’ and the ‘seeable’ at particular moments within the formulation of forms of conduct and of forms of populations¹¹² that Jaques Rancière terms the ‘distribution of the sensible’.¹¹³

Affective notions of multiplicities and possibilities of becoming chime with what Lawrence Grossberg calls valuing what is embedded as the ‘virtual’ in the ‘actual’. This recognises that a ‘contingency about the world opens up possibilities’,¹¹⁴ which Grossberg sees providing an approach to change that is not utopian but which proceeds step by step, figuring out what

¹⁰⁵ Melissa Gregg and Gregory J Seigworth, “An Inventory of Shimmers”, in *Affect Theory Reader*, eds. idem, 1-28, here 1.

¹⁰⁶ Megan Watkins, “Desiring Recognition, Accumulating Affect,” in *The Affect Theory Reader*, 269-288, here 269.

¹⁰⁷ Langer, *New Key*, 244.

¹⁰⁸ Ingold, *Being Alive*, 139.

¹⁰⁹ Gregg and Seigworth, “An Inventory of Shimmers”, 1.

¹¹⁰ Michael Hardt, “Foreward: What Affects are Good For,” in *The Affective Turn: Theorizing the Social*, eds. Patricia Tincineto Clough and Jean Halley (Durham: Duke University Press, 2007), ix-xii, here xi.

¹¹¹ Gregg and Seigworth, “Shimmers”, 6.

¹¹² Lawrence Grossberg, “Affect’s Future: Rediscovering the Virtual in the Actual,” in *Affect Theory Reader*, 309-338, here 313-4.

¹¹³ Jacques Rancière, *The Politics of Aesthetics* (London: Bloomsbury, 2013), trans. G.Rockhill.

¹¹⁴ Grossberg, “Affect’s Future”, 318.

the context is and then taking another step. Michael Fielding and Peter Moss, too, view transformation in education as a ‘cumulative, piecemeal process that rejects both ‘necessity and determinism’ in moving steadily but surely, aiming for accessible way-stations or intermediate steps and stages, adjusting direction in the light of experience and circumstances and focussing on ‘desirability’ and ‘viability’.¹¹⁵ In the realms of temporality and affect, sonorities of sound and silence point to potentialities for figuring out next steps, for creativity, for change on the side of the subject, and for deflecting technologies of power in acoustic topographies of schooling.

Conclusion

Technologies of power that rework notions of nature and culture around sound-noise-silence and hearing-listening and implicate sound and silence in the fabrication of bodies and selves, illuminate aspects of my experience intuitively known when working with *Sound and Silence* projects in the 1970s. Notions of sound as interior and/or exterior to the body, encodings of silence as promise, and rhetorics of audition that hone listening through distinctions of sound as planning and control by abjecting noise as unorganised/uncontrolled, all speak to wider processes of schooling around teacherly control, the attentive child, and competencies thought conducive to broader academic performance.

Langer’s theorisation of temporalities and ‘feelings’ provides glimpses of elements conducive to creativity and self-determination that also chime with my *Sound and Silence* experience. In framing affect and aesthetics as a bridge to the ‘not yet’ of becoming (other than we already are)¹¹⁶ I recognise a political intent in my account that aligns technologies of desire with my orientation towards a ‘context of hope’ when employed as state-school teacher. In the fluxes of sound and silence that inhere in the sonic is material of indeterminism to counter the ‘necessity and determinism’ of prevalent education arrangements.

¹¹⁵ Michael Fielding and Peter Moss, *Radical Education and the Common School: A Democratic Alternative* (London: Routledge, 2011), 136.

¹¹⁶ Gregg and Seigworth, “Shimmers”, 14.

Whether working through technologies of power or technologies of desire, sonority animates both bodies and environments. It illustrates relationships between organisms (human and non-human) and environments that co-exist and intra-act in conditions of mutual dependence and change. The ecological matrix of intra-actions among and between sonorous bodies, sonic selves, and acoustic topographies, provides stepping stones and way-stations towards future integrated histories of senses that explore the play of emotional, affective, social, political, and mindful registers in schooling.