

Strings in the Earth And Air

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Strings in the earth and air
Make music sweet;
Strings by the river where
The willows meet.

James Joyce, *Chamber Music*

The opening poem in Joyce's *Chamber Music* evokes an ideal of ubiquitous, sourceless, air-born music that reaches back, via the Aeolian harp, to Pythagoras and the doctrine of the music of the spheres. Joyce himself would give Leopold Bloom the opportunity for a parody of his rather perfumed little volume of poems in the 'Sirens' episode of *Ulysses*, in which he hear-thinks about another kind of chamber music: 'Chamber music. Could make a kind of pun on that. It is a kind of music I often thought when she. Acoustics that is. Tinkling. Empty vessels make most noise... Diddle iddle addle addle oodle oodle. Hissss.' Rather than thinking directly about what, at this time of day, postmodernism might mean in or for music, I want to think about ubiquity, amplitude, spread, diffusion, reach. More specifically, I'd like to think about an antinomy between two principles, both of which have respectable claims to be thought of as characteristically postmodern. The first is the ideal of what might be called a general or unrestricted economy of music – the principle that, having no essence to restrict it, music can and should be anything. The second is the ideal, or at least the prospect, of an auditory ecology, which would insist on an acknowledgement of limit or finitude. I will be using the work of R. Murray Schafer, the great inaugurator of the idea of acoustic ecology in the 1970s, to focus this argument.

In 1992, Murray Schafer proposed that 'it would be possible to write the entire history of European music in terms of walls, showing not only how the varying resonances of its performance spaces have affected its harmonies, tempi and timbres, but also to show how its social character evolved once it was set apart from everyday life' (Schafer 1992, 35). For Schafer, music, like theatre, has become an intrumural occupation, pursued behind closed doors. In a sense, all music has become a kind of chamber music, requiring closed spaces for its performance, and the closure of space itself. Music has become more and more architectural, a matter of infinite riches in a little room. It has required and enacted envelopment,

condensation, convergence, intensity, synchronicity. The orchestra has become the staging of the occupation of space by music and the preoccupation with space in music. The point of music has precisely been that it come to a point, whether that be the tip of the conductor's baton, he stylus, or the play button.

The development of recording technology, which might have been expected to have mobilised and deterritorialised music, in fact made it for a time even more sedentary and sequestered, merely diversifying the occasions of its pocketed apartness. If radio broadcasting allowed music to escape the confines of the concert hall, for example, the music funnelled into and clung around the form of the radio apparatus itself, which, by the 1920s, had achieved its characteristic massiness and monumentality, enjoining a kind of deferentially frontal listening. This frontality is retained in the epic era of stadium rock and outdoor concerts, in which, however huge and diffused the audience may be, the music nevertheless is made to erupt from a kind of vanishing point constituted by the stage. But the expansion in what Murray Schafer called 'schizophonic' apparatuses – for separating sounds from their origins in space and in time – along with the increasing miniaturisation and impalpability of musical devices, has now brought about a vast propagation of the idea and experience of music, which increasingly can arise anywhere and on any occasion.

Just as architecture has itself become more and more suffused with air, so the architecture of music has more and more taken to the air. Murray Schafer wrote in his *Tuning of the World* that 'the blurring of the edges between music and environmental sounds may eventually prove to be the most striking feature of all twentieth-century music' (Schafer 1977, 111). Since the Second World War, music has both experienced and attempted to encompass dissipation, evaporation, exposure. My concern will be not merely with a particular field of music, extending from Satie's *musique d'accompagnement* through to Brian Eno's incidental music, and encompassing the many other forms of ambient, atmospheric, immersive and soundscape musics that have arisen in the last four decades, but rather with the general condition or ideal of the ambient that they instance. One might say that composed and performed music have been drawn away from form into a condition of field. (A larger enquiry might seek to relate field music to the growing concern with fields, rather than forms, which extends from physics, across social theory, biology, literature and so on.)

These more worldly kinds of music suggest what Murray Schafer in 1992 called a sonic 'plenum':

The sonic environment is a plenum, for the world is always full of sounds. They come from far and near, high and low: they are discrete and continuous, loud and soft, natural, human, and technological. They enter and depart in processions as events pass us or we pass them. This is why the music of the streets has no beginning or end but all is middle. (Schafer 1992, 36)

However, Schafer's *Tuning of the World* had offered a rather different understanding of the sonic plenum. The rural or pre-industrial soundscape is, he says 'hi-fi', by which he means that it possesses a favourable signal-to-noise ratio. The principal advantage of this is that it allows for a richly-differentiated experience of sound:

The hi-fi soundscape is one in which discrete sounds can be heard clearly because of the low ambient noise level. The country is generally more hi-fi than the city; night more than day; ancient times more than modern. In the hi-fi soundscape, sounds overlap less frequently; there is perspective — foreground and background. (Schafer 1977, 43)

Modern, especially urban soundscapes, are congested, overlaid, interrupted. The scintillation of the single bird chirruping in a forest of bone-hard frost, Wallace Stevens's 'scrawny cry...A chorister whose c preceded the choir', is macerated in a thick stew of indistinguishable sounds, a kind of sonic mud. The sensation of distance is lost along with the capacity of sounds to stand clear of their backgrounds. In the city, writes Schafer, 'there is no distance; there is only presence' (Schafer 1977, 43). Schafer is appalled by this loss of perspective in sound, which he represents, in a surprisingly physical way, as a Sartrean *visqueux*. It is variously (not so variously) characterised as 'slobber' (Schafer 1977, 98); 'background drool' (Schafer 1977, 110); 'the slop and spawn of the megalopolis' (Schafer 1977, 216). Even the plane-tormented sky has become a 'sound-sewer' (Schafer 1977, 237). Schafer sees a direct correlation to the pollution of sound and hearing and the degradation of intellect and clarity in social life: 'When the rhythms of the soundscape become confused and erratic', he snarls, 'society sinks to a slovenly and imperfect condition' (Schafer 1977, 237).

So there seem to be a dichotomy: in the later Schafer, there is a rebuke to music that sets itself apart from the richness of its ambient soundscape, and an encouragement to musicians and listeners to expand the soundscape; but in the earlier Schafer, there is a valuing in that soundscape of something like the very principles of separation and distinctness of which the traditional quarantining of music might be an expression.

The later Schafer may be acknowledging the tendency of post-war music, which has been emphatically in favour of plenum over perspective. The expansion of musical means, opening music up to noise, as administered by Russolo, Varèse and, most emphatically by Cage and his followers, is only one form of this. What I am calling ‘field music’ seems to engage and encounter those very conditions which for Schafer seemed so toxic, not just to music, but also to aural well-being in general. I am interested in the ways in which musical form, classical, experimental and popular, has responded to these conditions of solubility and permeation, opening itself to, while also finding ways to detain itself in, sonorous diffusion. In thus agreeing, even aspiring, ‘in the destructive element to immerse’, in Stein’s phrase from Conrad’s *Lord Jim*, music both relaxes its vigilance and enlarges its competence, attempting to immunise itself against the conditions which threaten to render it imperceptible and unintelligible.

My first example comes from 1961. After leaving Hungary following the 1956 Soviet invasion and settling in Berlin, György Ligeti undertook a crash course in Western musical developments, especially in electro-acoustic music, and also began expanding the language of that music. *Atmosphères* was the work by which he first came to international attention, though it forms part of a series of breakthrough works, including *Articulation*, *Apparitions* and *Lontano*. In these works, Ligeti developed a highly distinctive use of sound clusters, made up of very detailed massings of tiny variations, which he called ‘micropolyphonies’. The music is impalpable – in the sense that it offers no clearly-distinguishable musical strata or events – and yet also substantial. Ligeti himself has often spoken of his sense of the materiality of his music, which he apprehends in terms of a dizzying repertoire of colours and textures and densities:

Sounding planes and masses, which may succeed, penetrate or mingle with one another – floating networks that get torn up or entangled – wet, sticky, gelatinous, fibrous, dry, brittle, granular and compact materials, shreds, curlicues, splinters and traces of every sort – imaginary buildings, labyrinths, inscriptions, texts, dialogues, insects – states, events, processes, blendings, transformations, catastrophes, disintegrations, disappearances – all these are elements of this non-purist music. (Quoted, Griffiths 1997, 27)

Indeed, one of the most remarkable features of post-War music has been its aptness to be thought of as a kind of sound-stuff. The primary correlative for musical sound is no longer visual, but tactile. Music is conceived, presented and experienced as clustering, conglomeration, swarming, aggregation. At around the same time, Iannis Xenakis similarly proposed a music which attended to and worked with such aggregations of minor or minuscule

events: ‘These sonic events are made up of thousands of isolated sounds; this multitude of sounds, seen as a totality, is a new sonic event.. This mass event is articulated and forms a plastic mold of time, which itself follows aleatory and stochastic laws’ (Xenakis 1971, 8).

Ligeti has recounted an extraordinary dream which gives both a more precise and more melancholy sensory correlate for this kind of music:

In my early childhood I dreamed once that I could not find a way through to my little bed (which was provided with trellises and provided a perfect sanctuary), because the whole room was filled up by a fine-threaded but dense and extremely complicated web, like the secretions of silk-worms, which spin silk around themselves as pupae to cover the whole inside of the box in which they are cultivated. Beside me there were other beings and objects hanging up in the vast network: moths and beetles of every kind, trying to reach the light around a few barely glimmering candles, and big damp-blotched cushions, their rotten filling tumbling out through tears in the covering. Each movement of the stranded creatures caused a trembling carried throughout the entire system, so that the heavy cushions incessantly lurched hither and thither, and so themselves caused a heaving in the whole. Now and then these movements, acting on one another reciprocally, became so powerful that the net tore in various places and a few beetles unexpectedly were set free, only to be lost again soon in the heaving plaitwork, with a stifling buzz. These events, occurring suddenly here and there, gradually altered the structure of the web, which became ever more twisted: in several places there grew great knots that could never be disentangled; in others caverns, in which a few shreds of the originally connected plaiting floated around like gossamer. The transformations of the system were irreversible; once a state had been passed it could never occur again. There was something inexpressibly sad about the process, the hopelessness of elapsing time and of a past that could never be made good again. (Quoted Griffiths, 28-9)

In fact the piece suggested by the specific dream that Ligeti is describing was not *Atmosphères* but *Apparitions*. But the two pieces share a paradoxical constitution of such music: it is both scattered and suffocating; both distracted and dense. The dream is both fascinating and terrifying; it seems to match closely the sense given by the music of a structure (here again, the word texture seems to catch the densely-reticulated openness of the music better than ‘structure’) that is both highly patterned and yet also oppressively unfinished. At the same time, the dream intimates the ache imparted by a new poverty of correlate; it is essentially aural in its enactment of the

essential inadequacy, or non-self-coincidence of sound. Like a referred pain, Ligeti's dream is a material allegory of the ungraspability of the matter of sound. Claire Colebrook yesterday evoked the aspiration of Deleuze and Lyotard for a music that would have an effect that would be 'like matter itself'. But Ligeti's words indicate that there is no 'matter itself'; there are only particular kinds of matter, which represent particular forms of organisation, rather than exposure to unmediated intensity. It *matters what kind of matter* music takes itself to be, and that matter is always in part imaginary. Here the dream-matter of *Atmosphères* seems to involve some mutation or crisis in the imagination of air, which has for so long provided the metaphorical support for imagining the materiality of music. (Perhaps a piece of music is always some kind of air.)

Many discussions of postmodernism are what I have called analogical rather than genealogical, by which I mean that they make out resemblances between musical and other cultural forms, rather than construe a break or dehiscence occurring within music's own history. Discussions of musical postmodernism have often been characterised by an attention to parody, pastiche and other disruptions of stylistic coherence. Postmodern music is therefore said to be characterised by the quality of its internal stutters, its breaks and discrepancies of voice. Its representative figures are accordingly figures like Carl Schnittke and John Zorn, both of whom maximally exhibit the required stylistic fidgets. The atmospheric, immersive or ambient music with which I am concerned here, by contrast, is involutive, or hyper-integrated; rather than picking up the rhythm of the jumpcut world around it, it sucks in everything in its vicinity, inundating and neutralising. Even as some artists have been strongly identified with such work, it is really the degree zero of style, the abatement of name.

These kinds of musical textures move beyond the unit of the phrase. The idea of the phrase encourages parallels between music and utterance, allowing one to register syntactic units and processes on something like the scale of the sentence. We may say that atmospheric music like that of Ligeti substitutes the phase for the phrase, the slowly-decomposing state for the statement. Phases are established and elapse much more slowly than phrases. They can be recognised, if at all, only by a considerable effort of retrospective synthesis, which is constantly eroded by the long decay times. It is much more meteorological than methodical. Instead of expression, there is something like a photographic long exposure. It taxes conceptual understanding by exceeding and attenuating the attention rather than by secreting itself subliminally in the intervals. It is perhaps an instance of the action of 'becoming imperceptible' evoked by Deleuze and Guattari, except that it is achieved not through an extreme of molecularisation but through the long, as it were astronomical imperceptibility of the molar, that moves

too slowly to be seen or heard, like a blizzard, or a fog. This is literally true of a piece like Jem Finer's *Longplayer*, which uncouples the synchronicity of music and the listening ear. Since it is designed to unfold for 1000 years, nobody will live long enough to hear the piece out. When it ends, nobody will be there to cry *encore* or *enfin*.

In 1992, Karl-Heinz Stockhausen received an invitation to write a string quartet. Initially, Stockhausen felt that he would have to refuse the invitation on the grounds that he had always considered music to be intrinsically embedded within its contexts, social, spatial and stylistic, and that the informing context for the string quartet was not his. However, and according to his own account, at least, he then had a dream which showed him how it might be possible to conceive a twentieth-century embodiment and embedding for the string quartet. The idea was this: the members of a string quartet would be introduced to an audience and would then leave the concert hall and take their places in four separate helicopters that were waiting outside. As the helicopters rose simultaneously into the air, the four members of the quartet would begin to play a piece of music, synchronised with their fellow-musicians by means of a 'click-track'. The sound of the four instruments would be mixed first of all with each other and secondly with the sound of the helicopters' rotor-blades. The helicopters would fly above the concert hall for above twenty minutes, and then would return to the ground. The piece would come to an end as the helicopters landed. Accordingly, the piece has three sections: 'Ascent', performed as the helicopters are climbing to their cruising height, the middle section, during which the helicopters fly above the concert hall, and 'Descent'.

Stockhausen set to work to realise his conception almost exactly as he had dreamed it. It came to fruition with three performances on June 26 1995 at Westergasfabriek in Amsterdam. A CD released in 1999 gives a rough, 'live' version of the first of these performances, along with a studio version, this latter made up of a performance of the quartet recorded with the musicians on the ground, but in separate rooms, as they had rehearsed the piece, which was then mixed with helicopter sounds recorded during the original performances on June 26th.

Stockhausen had had intimations of the possibilities of aircraft engine noise long before this, during a hectic period of travelling across the United States in the late 1950s.

I had the feeling that I was visiting the earth and living in the plane. There were just very tiny changes of bluish colour and always this harmonic spectrum of engine noise. At that time, in 1958, most of the planes were propeller planes and I was always leaning my ear – I

love to fly, I must say – against the window, listening with earphones directly to the inner vibrations. And though theoretically a physicist would have said that the engine sound doesn't change, it changed all the time because I was listening to all the partials within the spectrum. And I really discovered the innerness of the engine sounds, and watched the slight changes of the blue outside and then the formation of the clouds, this white blanket always below me. (Cott 1974, 30-1)

Stockhausen's term for the engine noise – 'innerness' – is striking. One might have expected him rather to have remarked upon the otherness, or even outerness of these sounds. Perhaps he is hinting here at a certain mutual envelopment of the inner and the outer under these circumstances.

In his highly idiosyncratic *Ride of the Valkyries*, Stockhausen engineers the most extraordinary conjunction of musical sound and the sound of the air. Of course, it is not strictly speaking the sound of the air at all that we hear, but rather the sound of the air being sliced and pulverised by the battering of the rotors. The provocation and excitement of the piece lie in the way in which music is made to confront something like its own distortion and diffusive defeat in the helicopter sounds, only to achieve accommodation with them, or even win out over them, if only by means of a sort of apotropaic appropriation. The piece itself is scored with intense swoopings, glissandi and tremolos, to imitate, intensify and perhaps outdo the engine sounds. Oddly, the drone of the engines that keep the helicopters in the air provides the 'ground' for the piece, while it is the music that does the aerobatics. (One of the members of the Arditti quartet who first performed the piece remarked that it was easier than he had expected to maintain the unremitting tremolo that the score requires, since the helicopter made it difficult to play in any other way.)

As I snooped around the electronic stores in the airport, among the most alluring items on sale were a range of headphones that promised total noise cancellation. I wondered what it would be like to be able to immure myself in splendid isolation from the washing-machine whine of the 747's engines in order to be able to relish undistracted the mingled and mangled timbres of Stockhausen's quadruple-helix hurdy-gurdy. What, on earth, or elsewhere, might it mean to *listen* to music of this kind?

En Plein Air

Ligeti's *Atmosphères* no doubt owes much of its success to its title, which suggested a music apt for what would very soon be calling itself the 'space age'. It is indeed, to all intents and purposes, a 'spacey' or even 'spaced-out' music, a music conjuring Pascalian apprehensions of cosmic vastness. Partly

because it is in the plural, the title suggests, not only a mundanely respirable atmosphere, but also of alternative, anaerobic kinds of atmosphere, made of electromagnetism, or music, that could exist only in the intervals of interstellar space (and would thus, strictly speaking, be inaudible to air-based human ears). Another mode of evicting or evacuation then, for music.

However, the name also suggests the way in which the atmosphere had most frequently become audible in the age of radio, namely in the forms of electromagnetic interference that in its early days was referred to as 'strays', 'X-s', 'static' and 'sturbs', but, most commonly, as 'atmospherics'. If music is held to be the most 'atmospheric' of the arts, the one most apt to supply a consistent and recognisable mood or ambience, then 'atmospherics' names the liability of the actual physical atmosphere to interrupt that kind of mood-music. The conjuncture between music and atmospheric interference is suggested by the evolution of the word 'jamming', which was regularly used by wireless telegraphers in the early years of the twentieth century to refer to the effects of atmospheric interference on radio (as well as the deliberate blocking of signals). It appears to have passed across into jazz parlance only in the late 1920s, when it signalled the organised accident of a convergence between musicians. (The name 'Kansas City Jam' is given to the parasitic practice of transcribing an improvised piece, learning the score, and then performing it, a dubious practice that Bob Ostertag has more recently turned into a heroically, hilariously pointless advanced technique.) The attempt to understand atmospheric interference, in order to suppress it from radio receiving apparatus, helped create a new understanding of the complex dynamism of the atmosphere – leading, in particular, to the discovery of the ionosphere. It would also lead to the development of radio astronomy, allowing investigators to tune in precisely to the 'atmospherics' of the cosmos and, in 1965, to detect the cosmic microwave background, that low, indefeasible sizzle that turned the Big Bang from a mathematical frolic into an experimental actuality. Predictably, inventors and composers became interested in these new sounds. I will merely mention the theremin, invented by Lev, later Leon Theremin in the 1920s. Originally named the 'etherphone' it seemed to be a way of playing the air itself, which quickly established itself, via Hitchcock's *Spellbound* and the *Doctor Who* theme tune as the signature sound of the weird or extraterrestrial. The theremin arose during a period in which music was opening up to the intrigues and enigmas of unearthly sound; but it played a large part in bringing them down to earth.

The atmospheric music of recent times has a different relation to air, or a relation to a different mode of air. Air, for the Pythagorean tradition of the music of the spheres, was pure, ethereal, angelic, a medium of ultimate transpicuousness. The airiness of music signified this capacity to soar and

permeate. Music was not only airborne, it was itself airy, spaced, constituted by intervals of air. As you will have heard, nobody has meditated more delicately and often spookily on the airy constitution of music, and vice versa, than David Toop, who has suggested that the contemporary fascination with sonorous immersion and ambience, in atmospheres and soundscapes, may instance an ambition to open one's ears to the infra and ultra-sonic atmospheres that surround sound itself, 'to introduce space and air, chance and memory into an otherwise claustrophobic world' (Toop 2004, 100).

But the air, our air, is in the process of becoming denatured, renatured. The air of modern atmospherics is saturated, spasmodic, densely populous. It signifies, not passage and permeability, but crowding, clustering and copresence. The audibility of the atmosphere comes about as part of a process that denatures, or renatures the very idea of the air. As the air has become more and more the medium of transport and transmission, of signals, goods and persons, it has become less and less a voluptuous opulence of the empty, and more and more aggressively colonised.

Diffusion implies a space into which sound, like any other waste product, can expand and slowly vanish. During the twentieth century, the air has gradually been finitised. For us, the air has lost its inviolability, its capacity to dissolve and diffuse any pollution. Itself finite, and therefore vulnerable to damage and corruption, the air no longer provides the promise of universal purification. Atmospheric works sometimes bear out this feature of the air too. Atmospheric works decay into detritus rather than being purified by diffusion. In the 1950s, Friedrich Jürgenson thought he heard anomalous voices on recordings of birdsong. In 1964, the Latvian parapsychologist Konstantin Raudive read of Jürgenson's claims and began working with him to try to detect and record Electronic Voice Phenomena, the voices of the dead, often by tuning a radio to the static between broadcast frequencies, or recording from an untuned diode. The voices, who were often those of recognisable media celebrities, spoke in a polyglot jabberwocky, their preferred mode of address being the gnomish yelp or bark: 'Mark you make believe my dear yes', was Winston Churchill's puzzling admonition. The fantasy of recapturing historically-elapsed sound that is found in Poe, McLandburgh and others gives way to a sense of suffocation, the possibility of being drowned in one's imperfectly diffused emissions. Benjamin's angel of history, gazing down appalled (it's always seemed to me that Klee's painting shows the angel with a sort of idiot smirk, but never mind) at the rising pile of wreckage which history is flinging at his feet, may now be reimagined wearing headphones, which convey to him the hellish tsunami of non-degradable sound.

I seem to have talked myself back into Murray Schafer's view of the pollution of the sound-world by indefiniteness. What might it mean to speak of an ecology of sound and music, that was not merely conservative or protective of the everything-in-its place perspective of Murray Schafer and those in the acoustic ecology movement who have followed him?

I think that one way of constituting an ecology of sound would be to attend to the ways in which atmospheric music might implicate and differently solicit the act of listening. For acoustic ecology, soundscapes are populated by and themselves constitute sound-objects, which have an actual existence, which may be preserved or, sometimes, recaptured from the past. But when atmospheric music makes the act of listening uncertain (which is by no means the case with all forms of atmospheric music, least of all when it is actively sought out and experienced as such) it also makes the status of the object uncertain, revealing that soundscapes are phenomenological rather than natural objects, that are brought into being by acts of listening, which they themselves also reciprocally bring into being. Where the history of music had established it as that which stood out from, or was pulled clear of its background, music now begins to occupy a complex space of transaction. Although many have proclaimed that, under these circumstances, the difference between foreground and background has been dissolved, this may be seen rather as an intensification and thickening of the transactions between foreground and background, signal and noise, hearing and listening. Perhaps we should reserve the term 'music' increasingly for that work in sound which broaches and furthers that transaction and reflection upon it. So it is not a matter simply of nourishing the ear with exotic new sounds, or, alternatively, practising a kind of aural hygiene, which keeps the ear away from noisome contamination. Rather, it is a matter of producing and preserving the possibility of the transactions between listening and hearing.

I have suggested that the opening of music to the non-musical, the taking of music to the air, may be a way for music indefinitely to extend its reach and possibilities, to hold to itself amid an extremity of diffusion. How might a the more complex form of acoustic ecology I am here intimating, one that included the act of paying musical attention, respond to this? Pauline Oliveros famously called for a 'deep listening', which she defined as 'listening in every possible way to everything possible to hear' (Oliveros 2000), a listening that would let nothing escape, would allow nothing to be relegated to the mere condition of background. Perhaps an auditory ecology would have to let more escape. Perhaps in an era when music has embraced ubiquity, there would be advantage in an ecological acknowledgement of limit. Music used to be able to harbour itself in a restricted economy which determined the particular sounds and forms of harmonic and rhythmic

combination that set it apart from natural sounds. It is no longer clear, now that music has become a second nature, what it should necessarily be, or sound like. But an auditory ecology might demand that music should be, should strive to be able still to be, though otherwise, rarity, anomaly, enigma, destitution, prodigy. Music can be anything; but perhaps it should not be everything.

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