

Case Study: Soundscape Composition – listening to context and contingency

John L. Drever

j.drever@gold.ac.uk

Introduction

Soundscape composition does not easily qualify as a delineated genre with clear aesthetic or procedural criteria, rather it represents a common set of attitudes and values that emerge out of the themes, methods and strategies associated with the study of the *soundscape*: itself, a circa 50-year-old subject area that has perpetually undergone development and subsequently revivification by allied disciplines (such as acoustics, biology, geography, ethnomusicology, sociology, etc...). In the same vein, any meaningful exploration on *soundscape composition* should nurture and prompt action and experimentation across disciplines, not nostalgically cling to the preservation of ossified art genre specifications. In this regard, the most comprehensive and I think enthralling definition of soundscape composition that primes practice, has been articulation by Hildegard Westerkamp, a soundscape artist and activist, who also resists pinning it down too tightly:

[...] its essence is the artistic, sonic transmission of meanings about place, time, environment and listening perception. (Westerkamp 2002: 52)

It goes without saying that such all-encompassing themes have great resonance with commercial sound design, however the soundscape composer is permitted to dedicate all their efforts into their exploration, not subservient to an external narrative or the strictures of film sound clichés, etc. Westerkamp leads by example: soundscape compositions such as the stereo acousmatic works, *Talking Rain* (1997) and *Kits Beach Soundwalk* (1989) and the 8 channel,

Into the Labyrinth (2000), each address and activate the above themes in a continuously creative and context responsive manner. These works don't only present edited, juxtaposed and superimposed field recordings, but they enquire into the methods and modes of their construction, and most importantly they are not exclusively framed through Westerkamp's highly-attuned listening, they involve, include and inform the listener in their practices of listening and sonic ways of knowing.

This chapter will explore the amalgams of orthodoxies and orthopraxis of those salient soundscape concepts that are exercised in manifold configurations in soundscape compositions and related practices. By naming, attending to, and more deeply examining these aural vicissitudes, it is hoped, will inform future expressions of sound design practice in a deeper manner, as habitually experienced by our *everyday listening* and encountered in our *everyday soundscape*, a discussion that should provoke the sound designer's ever increasing dependency on tried and tested *stock sound effects*.

Ambient / immersive / atmospheric soundscape

Within its comparatively short life, the term *soundscape* has become a somewhat nebulous descriptor, customarily used in conjunction with *ambient*, *immersive*, or *atmospheric*, it loosely refers to a ubiquitous presence of an unceasing, ateleological sonic dimension (i.e. not fatalistically heading towards an inevitable end like a Beethoven symphony or a rock ballad) of a suggested environment(s) be that enclosed or boundless, vague and indeterminate or clearly articulated, identifiable and/or particular. It is not contained within a focused zone within the surrounding sphere of audible space, rather a soundscape is spatially permeable or diffuse, or the combination of co-presences of multiple conflicting (perhaps contrasting or expanding, or blending over time) dimensions of spaces. A soundscape is never a void, rather

it tends to imply presence and activity, even if it teeters on the thresholds of awareness. A singular fixed implied pulse, a fluctuating polyrhythmic palimpsest, a randomly, yet controlled texture of background/ foreground peppering or ebb and flow or interweaving of layers, it often resides at the margins of auditory perception. Quietly affecting and informing but not drawing attention to itself due to its predictable nature, this *keynote sound* becomes the setting for *figure* activities and behaviours to be situated and enacted (Truax 2001: 24-5). And inescapably, this sonic texture plays a crucial, yet intrinsically subliminal role in the perception of acoustic atmospheres: “the character of a space is responsible for the way one feels in a space” (Bohme 2017: 128).

When we talk of *soundscape composition*, in happenstance we may be putting much of the above into play, however there are notions, strategies and tendencies (some explicit others tacit) that inform the makeup of what constitutes a *soundscape*, much of which originates from a transdisciplinary field, acoustic ecology from the late 1960s early 70s and subsequent developments.

It is axiomatic that the process of listeningⁱ, a sense of placeⁱⁱ, and this slippery term, soundscape, are deeply and richly intertwined. So, in place of a fanfare to herald our case study on soundscape composition, there is no better place to start than to practice and reflect on our individual listening wherever we may be located. As it happens, we are all soundscape experts!

Everydayness Listening Exercise

Everydayness is more or less exclusively associated with what is boring, habitual, mundane, uneventful, trivial, humdrum, repetitive, inauthentic, and unrewarding. At

everyday level, life is at its least interesting, in opposition to the ideal, the imaginary, the momentous. (Sheringham 2009: 23)

With these underwhelming adjectives in the above epigraph in mind, have a listen to your *everydayness*. Wherever, whenever, whatever, whomever,... temporally step out of that habitual or assigned mode of activity you find yourself. This is environment is now you designated field of study.

The goal, is to reconsider your *background listening* behaviour – “It occurs when we are not listening for a particular sound, and when its occurrence has no special or immediate significance to us” (Truax 2001: 24).

You could be sharing the experience, somewhat akin to an audience attending a classical concert, or a take a hermetic approach, whichever, it is important to find a means of discouraging verbal social interaction for the duration of this exercise. It may be beneficial to set you smart device to the Do Not Disturb option.

You may be mobile, travelling through the acoustic environment or in a fixed location allowing the prevailing acoustic environment to swell and unfold around you. You may prefer an open time period, or a specific duration, you can decide.

Nota bene, please ensure you are not putting yourself or others into a greater state of risk or hazard than you otherwise would be.

The instruction, or better still, the invitation, is the humble and physically and cognitively undemanding task: Listen!ⁱⁱⁱ

So, how was your listening experience?

For what it is worth, this is my commentary, written following the exercise, not during, so as to not interrupt the flow of listening experience during the exercise.

I chose the fixed location option: my office at work in South London, and gave myself four minutes and thirty-three seconds duration, unashamedly borrowed from John Cage's titular, three movement composition, *4'33"* (1952). The exercise commenced at 13:10 on a Wednesday lunch time in mid-July.

I'm seated in smallish office on the first floor of a converted terraced house, perpendicular, to a sash window to my left, level with my head and torso. I endeavour to give my 100% concentration to the task, which is always difficult when I am at my place of work. I attend to and imbibe the prevailing acoustic environment, allowing my erstwhile perception of background and foreground to intermingle. What I mean is, I consciously attempt to shift my *everyday listening* behaviour, a highly filtered personalised listening predicated on "listening to things going on around us, with hearing which things are important to avoid and which might offer possibilities for action" (Gaver 1993:2).

It is remarkably quiet, almost all I can hear beyond my breathing is what an acoustician may refer to as noise ingress – the environment outside is buzzing. Beyond the barely audible muffled voice of a colleague talking with a student in the office below, the predominant ingress

arrives from the window, through the air gaps or transferred through the glass. I open the window, and a rich spatial profile extends from my left ear. I'm placed in two contradictory acoustic architectures, to my left, expansive, and open, to my right, enclosed and dry.

I find myself mentally mapping out the expansive external environment from this auditory information: the nearby primary school playground populated by the joyful (albeit piercing) cries of kids, the main road whose full length is articulated and demarcated by an assortment of different sirens from individual emergency services that are taking some time to pass in and out of earshot. The trainline is on the horizontal perimeter of the *acoustic horizon* (i.e. how far I can hear) (Truax 2001:67), which makes itself present a couple of times, and there is almost continual aerial presence of aircraft overhead, whose incessancy makes it hard to differentiate between individual airplanes, as the subtly fluctuating drone with a pitch sweeping flange effect intermittently cuts through the strata of white noise. I hear the planes *high-up* in my mind, and of course I know that the planes are elevated in the sky, but what are the acoustic cues that are telling me that, none?

I am reaffirming socio-spatial, topographical knowledge that I have acquired due to physically traversing the terrain for more than ten years, and beyond that my auditory life to date of acquired spatial environmental knowledge.

The hand held school bell is rung a couple of times, an unbroken *sound signal* from my own childhood and way before. I wonder if it is an adult or child who has been given the power to sound it, probably an adult due to the assuredness of the gesture.... in response, the children's voices steadily diminish. I have a strong memory of my playground jollities being interrupted by the One O'Clock Gun fired from Edinburgh Castle, jolting my auditory perception, never

failing to get the adrenaline going. Returning more than 2 decades later to the same playground, I failed to register the gun. It transpires that in 2001 the calibre of the gun was updated from a 25 pounder to a 105mm Light Gun, the gun no longer penetrates the south of the city any more, rendering it a *disappeared sound* and remaining only as a *sound romance* to be retold by an *aural witness* such as myself.

A lorry reverses, signalled by an automated warning beep. These intermittent sound of bells, beep and sirens (automated and manual) are examples of consciously designed sound, not haphazard by-products, but sounded with the clear intention of drawing attention to themselves and their concomitant message. I'm conscious that this tonal bleep beep reversing *sound signal* is under threat, with the preference for more acoustically sophisticated directional multi-frequency/ white noise based signal. Will anyone regard its demise nostalgically as a *sound romance*?

As my commentary implies, I find myself psycho-spatially arranging and compartmentalising "remote physical events" (Gaver 1993: 285), I'm putting them in boxes: playground, aircraft, trains, cars voices, and that helps me to disentangle them from each other. This is independent of their spectral similarity or my localisation¹ of their attributed cause, i.e. my perception of the physical location of "sound-producing events" (Gaver 1993: 288), but rather due to what J G Gibson calls their *affordances*:

The *affordances* of the environment are what it *offers* the animal, what it *provides* or *furnishes*, either for good or ill. (Gibson 1986:127)

I need to get beyond my predilection for hearing *affordances* which are hijacking my listening. I need to refresh my listening. George Perec's advice, who was more preoccupied with the visual rather than the audible on this matter, is it to, "exhaust the subject":

Make an effort to exhaust the subject, even if it seems grotesque, or pointless, or stupid. You still haven't looked at anything, you've merely picked out what you've long ago picked out. (Perec 1997: 50)

In this endeavour, in his series of *Practical Exercises* from his *Espèces d'espaces* [Species of Spaces] (first published in 1974) he encourages us to: "decipher", "distinguish", "describe", "apply yourself", "note the absence of...", "force yourself to write down what is of no interest", "detect a rhythm", "deduce the obvious facts", "set about it more slowly, almost stupidly", "strive to picture yourself, with the greatest possible position". (Perec 1997:50-4)

This rigour of first-person sensory analysis of what Perec calls the *infra-ordinary* (as opposed to the extra-ordinary), is in stark contrast to Cage's dictum on *New Music: New Listening* in his article on *Experimental Music* (first presented in 1957 and published in his collection of writings *Silence*):

Not an attempt to understand something that is being said, for, if something were being said, the sounds would be given the shapes of words. Just an attention to the activity of sounds. (Cage 1987: 10)

I resume my listening. I endeavour to recalibrate, from attribution of sources to the physical features of the space that those sounds have encountered on their journey to my ears. An adult

voice ricochets off the corrugated façade, the direct and reflected voice are blended, obscuring speech intelligibility. This building was erected several years after I moved into the office: I imagine how this voice may have carried when this was an open space. I'm reminded of Murray Schafer's voice calling out into the desolate winterscape of Manitoba, in the soundscape composition, *Winter Diary* (WDR, 1997) in collaboration with sound recordist Claude Schryer. We hear the close-by crunching of snow from his footsteps as he passes across the spatial image of the stereo microphone. There are no planes, trains or cars within earshot. He calls out, but there is no ricocheting or echoing, the voice is unimpeded by surfaces bar the absorbent flat snowy ground.

I consider the effect of masking: what sounds are blocking other sounds, rendering them inaudible from my position, and how does this change over time. I know trains also pass by regularly, but why is their audibility so infrequent – is that due to masking? It is a fine day, wind and rain would quickly add a blanket of broadband white noise, curtailing my acoustic horizon and masking the subtle details of acoustic information I am currently perusing.

I am suddenly aware of the presence of a bird call, a sparrow, close-up, and then another; had they been calling throughout the duration of my listening, that only now had come into my consciousness as my attention shifted? I was recently reading of a study done by ornithologists on the challenges of age related hearing loss and bird surveying, with a particular regard to bird calls in the upper frequency range such as Goldcrest and Treecreeper (Tucker, Musgrove & Reese 2014). I think about how my age and sex are irrevocably acting as an EQ. I imagine what a spring time dawn chorus would be like here, having never been in my office at 4:30, before the daily aircraft activity.

I now hear what I think is the recycling of glass bottles being dropped into a container, although I am not certain, I don't remember hearing this from my office window before, so I question my assumed attribution of source to cause. I know there is building work going on, maybe it pieces of scaffolding being dropped into a skip. Oh and now someone is whistling and coming close to my office window, and then stops. And now I hear the front door of my building opening and closing.

What I have failed to mention is a constant high pitched pure tone hitting my right ear. I know this sound well; this is the tinnitus that accompanies the right side hemisphere of my listening. Sure, it is a phantom sound, but is it a *bona fide* feature of my soundscape?

And then I hear another emergency service vehicle making its steady passage along the main road. Visitors are often distressed by the regularity of the audible presence of emergency services here. Its sheer omnipresence throughout the day has dulled my response, it has become necessary to place them into the *ground* of my (un)conscious, but I'm reminded how after the London bombing of July 2005, they had moved back into the *figure* – they had got louder! When I went to record this augmentation with the sociologist Les Back, equipped with a directional shotgun mic, for the duration of our recording my microphone did not register any sirens, in fact it picked up the clip-clop of hooves from mounted police, which listening back to, suggested a pastoral scene, incongruous with the view. Back remarked: “You never hear what you are listening for”. (Back 2007: 118)

Out of the blue, I now hear a continuous texture of a combination of bubbly and whirring sounds, looking out the window I assume it is the air extractor fan from an adjacent building.

Now I can't stop hearing it. This task has drawn my attention to features that are clearly present that I was erstwhile unaware.

On some level, the setting is predictable, the architecture and infrastructure is not going to suddenly mutate, and I can reliably predict what I will hear, and yet what I do hear is wonderfully surprising and capricious and constantly shifting. Noise as unwanted sound has no meaning in this exercise (if I was trying to lecture or study this would be a different matter), everything I hear is information rich, it has a story to tell, and is sonically fascinating. Cage's oft repeated quote comes to mind:

Wherever we are, what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain. (Cage 1987: 3)

I could go on... What I am describing is the soundscape, as heard, felt and made sense of from a first-person perspective, within a specific time bracket, and as such is unrepeatable. Contrary to my introduction, the exercise is certainly not mundane or minimal, it is expansive and infinitely transdisciplinary. This complexity coupled with the paucity of the instruction "Listen!", presents a conundrum: how am I listening and can I actively choose how to listen? And pivotally, despite borrowing Cage's randomly generated time brackets, the soundscape attitude is far from satisfied with, "Just an attention to the activity of sounds" (Cage 1987: 10).

As I am reading back through the text, I become acutely aware how unreliable and partial a listener I am. There is so much to hear, and it appears that not only are sounds coming and going, but my hearing is perpetually fluctuating, notwithstanding my digressing mind. The

homogeneity or heterogeneity of the soundscape seems to be contingent on my attention. And I am extrapolating discrete information from the overabundance of incoming sound from multiple sources and events? We have the remarkable capacity to selectively attend to certain aspects of the acoustic environment, whilst electively deafening our ears to specific signals. This is particularly effective with regards to attending to completing human voices, whilst our attention can be hijacked on hearing our name mentioned in a neighbouring conversation. This capacity is called the *cocktail party effect* (Cherry 1953). Vigilant not to be auraltypical with my pontifications on aural perception, with the onset of my own age related hearing loss, specifically limited high frequency sound perception, this is a skill that will be increasingly diminished (Drever 2017). In contrast to the context of my *Everydayness Listening Exercise*, a good sound designer knows that the cocktail party effect within the fixed stereo image is limited. With a pragmatic concern for the limits of perceptual and cognitive load on the film goer, the great sound designer, Walter Murch judiciously selects the amount of auditory information within the audiovisual mix he presents to the listener.

There is a rule of thumb I use which is never to give the audience more than two-and-a-half things to think about aurally at any one moment. Now, those moments can shift very quickly, but if you take a five-second section of sound and feed the audience more than two-and-a-half conceptual lines at the same time, they can't really separate them out. There's just no way to do it, and everything becomes self-cancelling. As a result, they become annoyed with the sound and it appears "loud" even at lower levels. (Murch 2018)

The everyday soundscape doesn't function like this. When is there only two-and-a-half things being sounded? The soundscape is not rarefied or meticulously controlled, ultimately it is

haphazard and inherently complex. All soundscapes are in a sense are digetic^{iv} but there is no master guiding narrative, and like the running shower in Hitchcock's *Psycho*, the soundscape is generally *anempathetic* - "it seems to exhibit conspicuous indifference to what is going on" (Chion 1994:221). Their presence in the soundscape is not due to some figure of irony, metaphor, metonymy or synecdoche.

Despite the wonders of audition such as the cocktail party effect, on the other hand, cognitive psychology tells us of our slothful predilection to *auditory change blindness*:

The latest research on the phenomenon of auditory change blindness unequivocally shows that in the absence of attention, people simply have no conscious awareness of the majority of the auditory stimuli around them. (Spence & Santangelo 2010:266)

And the more familiar the *ground* the more hidden from your perception it may be. As well as unmediated listening exercises such as the above, the use of sound recording can be helpful in reconfiguring our habitual auditory change blindness. In *City as Classroom*, McLuhan, Hutchon and McLuhan (1977) developed an exercise of recording everyday sounds from familiar locations, editing them down into short compositions, and exchanging them with colleagues:

Try to transmit the feeling of being there, not the impression of a 'trip through': avoid story-lines sequence (*figure*) in order to concentrate on the *ground*. (McLuhan, Hutchon, McLuhan 1977:12)

Finally, and yet most troubling, my ostensibly benign listening experience has highlighted a somewhat troubling issue: what is the ethical dividing line between overhearing and eavesdropping.

Discovery of the Social

When Luc Ferrari – a composer fired-up by Cage’s radical adoption of chance procedures yet schooled in Pierre Schaeffer’s *musique concrète* – a compositional approach founded on the manipulation of recorded sound and phenomenologically orientated auditory perception – stepped into the Paris streets with a Stefan Kudelski Nagra III Tape Recorder (one of the first commercially available high quality mobile tape recorders, launched in 1958), he discovered a new dimension to his compositional palette:

As soon as I walked out of the studio with the microphone and the tape recorder, the sounds I would capture came from another reality. That led to the unexpected discovery of the social (Caux 2012:129)

Whilst Cage espoused the disappearance of the “social, political, poetic, and ecological” (Kahn 1997: 557) from his listening, like the scales that fell from Paul’s eye on the Road to Damascus (apologies for the negative blind metaphor see Hull), the social, that had always been there, had become audible through this subversive *musique concrète* composer’s tools of sound recording, taken out of the sequestered recording studio and onto the streets. And now out into *the everyday*, Ferrari was opened to an array of arts practice fixated with reframing the objects they encountered such as the Duchampian *readymade*, the Bretonian *objet trouvé* (found object), and the *collages*, *décollage* and *assemblages* of the *Nouveau réalisme* typified by Daniel Spoerri’s *Tableau Piège (Snare-picture)* a series of works that he commenced in 1960:

objects, which are found in randomly orderly or disorderly situations, are mounted on whatever they are found on (table, box, drawer, etc.) in the exact constellation they are found in(...). By declaring the result to be a tableau, the horizontal becomes vertical. For example: the leftovers of a meal are mounted on the table and the table is then hung on a wall (...) (Spoerri 2018)

Ferrari went on to create a wide range of sonic works, most radically within the community of *musique concrète* composers at the *Groupe de recherches musicales* (GRM), his *Presque Rien* series of works, that embraced often raw field recordings as a central pursuit engaging with the social often on a playful and idiosyncratic level. In his *Presque rien n° 1 ou le lever du jour au bord de la mer* (1967–70), the listener is presented with what at first glimpse appears to be unedited field recordings, which he tells us depicts seamlessly edited highlights of the daybreak recorded from a fixed position by a fishing harbour on the island of Korcula in Croatia. At the time he was unaware of the term soundscape, and had adopted the term *anecdotal music* to his practice, but retrospectively recognised his affinity soundscape. His colleague at the GRM François-Bernard Mâche named this approach *phonography*.

The idea of a possible sound equivalent with the prestige that photography had been able to acquire for itself (Mache 1992:191).

Mâche cites Walther Ruttmann's *Weekend* (*Wochenende* 1930), a film work with a blank screen accompanied by a sound collage of fragments resembling weekend-type activities of Berliners, as the pioneering work. Of course we can find many early examples of recorded location sound / field recording that could correspond with soundscape themes.

Before the invention of the mobile tape recording, field recording was very limited and cumbersome. An early example of urban field recordings is *London Street Noises* (1928), produced by Columbia Records in collaboration with the tabloid newspaper, the Daily Mail to spearhead a discussion on increasing noise in the streets of London. The producers felt it necessary to include a running commentary, so a Commander Daniel introduces the date, time and location, and comments on the activities, fittingly his voice is momentarily masked by passing traffic.

The *Mass Observation* infused use of everyday location sound in Humphrey Jennings' GPO documentary film work such as *Spare Time* (1939) and his Crown Film Unit war time documentary of everyday life in *Listen to Britain* in collaboration with Stewart McAllister are fascinating examples where the image is cut to the location sound. Or the African savannah brought to life through the juxtaposition of field recordings made in London Zoo by Ludwig Koch (who became synonymous with bird song recording) in his sound book, *Animal Language* (1938), made with biologist Julian Huxley.

It was the New York radio producer, Tony Schwartz, who liberated field recording from the shackles of a recording van. With his own specifications for a battery powered portable taper recorder, he was out recording in the street and into people's homes. One of his most powerful yet beautifully simplistic concepts is *History of a Voice* included on his *Folkways* LP of 1962, *You're Stepping on My Shadow* (9 Sound Stories Conceived and Recorded by Tony Schwartz). We hear the story of Nancy's voice from a neonate to a strongly opinionated 9-year old. Schwartz also introduces us to "her voice's family tree" with the introduction of her parents and grandparents' voices.

With the availability of mass produced tape recorders such as the Grundig, Minivox and Telefunken, in the 1960s there was a huge blossoming of amateur tape recording, evidenced by magazines such as *The Tape Recorder* and *Amateur Tape Recorder* and recording clubs.

Definitions of Soundscape

Functioning as a qualitative counter to wholly pejorative concept of environmental noise, the term *soundscape* was resolutely presented to the world in a series of pamphlets by the composer R. Murray Schafer, first directed towards music teachers drawing on his radical expansive approach to music education, such as *Ear Cleaning* (1967) and *The New Soundscape* (1969), and then coalescing in the summation of his soundscape thinking, *The Tuning of the World* (first published in 1977 and republished as *The Soundscape: Our Sonic Environment and the Tuning of the World* 1994). In his *Book of Noise* (1998, first published in 1968) moving from the classroom to the citizen concerned with noise pollution, he describes the soundscape as “the entire acoustic environment of our lives, wherever we may be, at home, at work, indoors.” (1998:4) Music as metaphor and an attitude to sound is always close at hand in Schafer’s world; here in very much an enabling manner, the idea of soundscape is proposed as a symphony:

And we are simultaneously the audience, the performers and the composers. (Schafer 1998:4)

Musical analogies are unsurprising, Schafer is first and foremost a composer, and conspicuously, his research group, based in Simon Fraser University in Vancouver, grandly titled the *World Soundscape Project* (launched in 1971) was overwhelmingly comprised of composers, most notably Barry Truax and Hildegard Westerkamp. The group coined a number

of helpful terms to help analyse, communicate and educate aspects of the soundscape: soundmark, keynote Sound, lo-fi/hi-fi soundscape, sound romance, sound event, ear witness, disappearing sound, etc... And they honed a number of fieldwork methods including soundwalking (Drever 2009), sound mapping, sound diary, the recording of ear witness accounts, the making and archiving of field recordings.

This new term, *soundscape*, etymologically feeds of a more ancient term, *landscape*. Landscape is primarily concerned with the surfaces of the earth, but more than that, its Germanic etymological roots *landshaft* suggests a set of active relationships: the suffix *shaft* denoting a “state or condition of being” (OED 2018). The suffix from related terms such as kinship and friendship, *ship* also deriving from *shaft*. Consequently, landscape concatenates an experiential tie with the notion of land. Crucially this everyday expression comes with baggage, as each pictorial representation and subsequent reading is culturally and historically contingent, bound up in territorial pulls of power and resistance (i.e. exemplified in the practice of cartography). The cultural geographer Denis Cosgrove has unpicked these issues, addressing landscape as an “ideological concept” (Cosgrove 1998:15):

Landscape is not merely the world we see, it is a construction, a composition of that world. Landscape is a way of seeing the world. (Cosgrove 1998:13)

He goes on:

It represents a way in which certain classes of people have signified themselves and their world through their imagined relationships with nature, and through which they

have underlined and communicated their own social role and that of others with respect to external nature. (Cosgrove 1998:15)

Landscape tends to arrive at us via a singular fixed point of view or latterly extended into a panorama, delineated by a quadrilateral frame. The canvases of Friedrich, Turner and Constable come to mind, reinforced by the writings of Goethe, Shelley, Coleridge, Wordsworth...: the spectre of romanticism pervading. We observe a landscape as a spatially detached observer, yet stimulating aesthetic values predicated on latent notions of the picturesque and the sublime.

The analogy with landscape is somewhat tenuous however, for example, according to the pioneering Finish landscape geographer, Johannes Gabriel Granö:

In order for a landscape to be perceived, a given minimum amount of lighting is necessary... Moreover, we must be a given minimum distance away from the landscape if we want to see it. (1997:49, first publish in 1929)

As we all know, the soundscape doesn't stop in darkness and we tend not to listen on to a soundscape, we tend to listen or speak from within the soundscape, a concept taken up by Westerkamp (Westerkamp 1998:55). And of course, despite disciplinary prejudices, as we all know our perception of the environment is always multimodal, we perceive via the sensorium, so we need to be careful not to consider the senses in some kind of independent isolation, with synaesthesia – the involuntary cognitive linkage of senses such as seeing a sound or tasting a words – as a profound example.

In his book *Acoustic Communication* (first published in 1984, 2nd Ed. 2001 Truax), Barry Truax refined many of these concepts. Here, soundscape is predicated on the act of auditory perception and the making sense of that perception:

An environment of sound... with emphasis on the way it is perceived and understood by an individual, or by a society. It thus depends on the relationship between the individual and any such environment. (Truax 1999)

The soundscape is a work-in-progress, as the physical environment is always in flux, and our perception of our surroundings is constantly being formed, rendering it ephemeral. When one's perception ceases so does the soundscape for that person.

In the recently from the codification by an acoustics subcommittee for the International Organization for Standardization (BS ISO 2014), acoustic environment is clearly demarcated from soundscape. Soundscape correspond with Truax's articulation above, where the related term acoustic environment refers to its physical manifestation:

the sound from all sound sources as modified by the environment. Modification by the environment includes effects on sound propagation, resulting for example from meteorological conditions, absorption, diffraction, reverberation and reflection. (BS ISO 2014:2)

Consequently, unlike the soundscape, it is not contingent on the vagaries of the perception of a listener.

In her introduction to *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900- 1933* (2002), Emily Thompson's provides an elaboration on the definition of soundscape which more closely resonates with Cosgrove's notion of landscape:

Like a landscape, a soundscape is simultaneously a physical environment and a way of perceiving that environment; it is both a world and a culture constructed to make sense of that world... A soundscape's cultural aspects incorporate scientific and aesthetic ways of listening, a listener's relationship to their environment, and the social circumstances that dictate who gets to hear what. A soundscape, like a landscape, ultimately has more to do with civilization than with nature, and as such, it is constantly under construction and always undergoing change. (Thompson 2004: 1-2)

This definition reminds us of the inherent snowballing of challenges of grasping, making sense of, or attempting to present some kind of definitive soundscape analysis, if there was such a thing.

Advancing from the somewhat anthropocentric orientation of acoustic ecology, the evolving concept of soundscape has given fresh impetus to pressing new fields of scientific research such as bioacoustics or soundscape ecology:

the collection of biological, geophysical and anthropogenic sounds that emanate from a landscape and which vary over space and time reflecting important ecosystem processes and human activities (Pijanowski et al. 2011)

Soundscape Composition

As we have already mentioned, field recording was an important tool for the WSP. It allowed the team to document and analyse the acoustic environment in the controlled and reproducible environment of the lab, and compare and contrast with other recordings from different locations in the developing WSP archive. Communication with the public had always been central to Schafer's work, field recordings could play an unparalleled role in getting the message out in the era of mass radio and gramophone listening, exemplified in their annotated double LP, *The Vancouver Soundscape* (1973). Falling between public art, social science and education, this publication heralded a new form of sonic composition: soundscape composition. Schafer inserted the following guidance notes to prime the general listener:

To record sounds is to put a frame around them. Just as a photograph frames a visual environment, which may be inspected at leisure and in detail, so a recording isolates an acoustic environment and makes it a repeatable event for study purposes. The recording of acoustic environments is not new, but it often takes considerable listening experience to begin to perceive their details accurately. A complex sensation may seem bland or boring if listened to carelessly. We hope, therefore, that listeners will discover new sounds with each replay of the records in this set - particularly the first record, which consists of some quite intricate environments. It may be useful to turn off the room lights or to use headphones, if available. Each of the sequences on these recordings has its own direction and tempo. They are part of the World Symphony. The rest is outside your front door. (Schafer 1972: 1-2)

Each track took a unique approach to editing, exploring themes, such as *The Music of Horns and Whistles*, specific events such as *New Year's Eve*, aural history or geographical or sociological zones. The copious editing of *sound events* from diverse locations and times is

seamlessly brought together in what would be most easily classed as composition. The programme notes and accompany booklet ensured that the context is adequately disclosed. In track 3, *Entrance to the Harbour*, in just over seven minutes the listener journeys above water through a careful editing of multiple recordings, coming close and closer into *Vancouver Harbour* ending on land and indoors of a waiting room.

Sound Events / Effects

I'm careful to name the individual segments of recordings, *sound events*, rather than *sound effects*; a soundscape recording is not by default a sound effect, although it may turn out to be a highly effective sounds effect. A *sound effect* has little to do with the everyday. Sound effects correspond to “the ideal, the imaginary, the momentous” (Sheringham 2009:23). A successful sound effect is highly efficient, unambiguous / stereotypical, sonic shorthand representing or evoking an activity, an event, an environment or location and its desired mood, and like a meme is extremely promiscuous, and has a high propensity for deterritorialization. Dating back to the earliest days of theatre and radio drama (see Frank Napier’s guide to Noise Off from 1936 for example), the semiotic power of the sound effect is so successful, it almost functions as a lingua franca across radio, theatre, cinema, TV, and computer games, augmented reality, VR, its power never waning.

The perception of a *sound event* in contrast is not necessarily immediately audible or readable. It is dependent on knowledge of its territory is was abstracted, including all ‘social and environmental’ (Truax, 1999) aspects of its original “spatial and temporal” (ibid.) context:

a nonabstractable point of reference, related to a whole of greater magnitude than itself (Schafer, 1994, p. 274).

The sound event is a context-specific phenomenon:

whether foreground or background in perception, only acquires meaning through its context, that is, its complete relationship to the environment (Truax, 2001, pp. 52--3).

And it is fundamental that the remediated material is a document of an *actual* spatial-temporal occurrence. Or in the language of Peircian semiotics (Peirce, 1955), it pertains an indexical relationship where sound, or a moment of relative silence does not refer to itself, rather it functions as an initial sign in the service of another sign in terms of causation. There is an umbilical-like contiguity between what is re-presented (that is, the selective sensuous translation of vibrating air molecules) and what gave rise to that sound: its cause, for example, school hand bell. The quality of the recording does not compromise its stasis as sound event. The audio technology and its routing, and my damaged hearing for that matter, is all part of the context.

For the Academy of Urbanism's *2015 Great Place Award*, I composed short soundscape compositions of each of the three short listed places (Academy of Urbanism 2018). My task was to examine and present the role the soundscape played in the nature of great place making. One of those locations was St Pancras Station in London, which is marketed as both "Europe's Destination Station" and a shopping and cultural venue in its own right. Once permission was granted by the station's management, and I acquiesced to various constraints related to safety, such as the restriction of booms, I traversed the station from very much a human scale perspective of commuter and traveller. I did not go with the aim of capturing sounds, rather to

record what I encountered throughout a day, contingent on all the possible factors that come into play in such a location, which I presented back in an edited-highlights fashion. Despite my efforts of faithful representation, if you were making a radio drama which has a departure scene set in St Pancras, unless you ascribe to Dogme 95, you may well not want to use my recordings, as on the whole they don't exude train station-ness, even my recordings of the electric Eurostar trains don't particularly sound like trains, none of that muscularity or romance is evoked. The recordings have the authenticity of documentary, and they tell you about that specific place at that specific time, not an idealised or completely fictional notion of it. Although the worlds tend to seep into each other, as the ingrained sound effect takes hold of your imagination, dictating what things should sound like.

Mark Vernon played with this ambiguity between the sound event and sound effect in his LP record *Sonograph Sound Effects Series vol. 1: Sounds of the Modern Hospital*. The LP mimics the presentation and form of a 1970s sound effects record, with the tongue-in-cheek guidance "The Recordings are issued for amateur purposes only", however all 33 tracks recordings are actual location recordings, including informative titles, such as Side A, track 10 *Anaesthetic Machine* – Two one-way valves rattle in tandem as patient inhales and exhales. There is no attempt to be evocative or compositional with the editing. The LP includes the note:

Whilst every effort has been made to record the subject in as great a degree of isolation as possible, the sound recordings you will hear on this LP record were made in a busy working hospital and not under controlled conditions. Therefore, on occasion, you may hear some unavoidable background noise, conversations and other extraneous sounds.
(Vernon 2013)

As sound can't always seek for itself, and veers towards ambiguity, some soundscape artists feel the need to provide voice over commentary or detailed annotations accompanying the work. In his *Sounds from Dangerous Places* (2012) project, Peter Cusack included a book with pictures and factual details in prose. For Cusack, it is important that we have an understanding of the context of his recordings, as it is fundamental that he has a thorough and sensitive understanding of the context he is re-presenting. For example, on discussing the field recordings from inside the Chernobyl Exclusion Zone he states, it is necessary:

to inform myself as far as possible, but also to listen to the small voices, to the environment itself, to those whose personal knowledge of the area goes back generations, to those on the front line and to those whose lives have been changed forever by events over which they have no control. (Cusack 2012: 18)

Conclusion

It is not just about having the right kit and knowing how to use it, meaningfully rich soundscape composition is the result of persevering and diligent work. For Jana Winderen, an artist who spends many arduous hours recording ice and underwater creatures in difficult to access environments, such as the North Pole or coral reefs in the Caribbean, she has no means of seeing what she is recording through the hydrophones, and yet it is imperative for her to concentrate fully on the act of listening whilst making the recordings. Significantly, she works closely with biologists on these projects in a mutually informative manner. She marvels in these complex sonic textures, and helps communicate these sounds worlds to a larger public, but there is also a serious biological research dimension to this work.

There is the field recordist who rushes through environments in hunt of fugitive sounds, never before heard or recorded by human. As they already somehow know what they are looking for, this Indiana Jones-like character will miss those ground sounds, and will not build up a meaningful relationship with that environment.

Perhaps it is necessary to collaborate or co-compose soundscape composition in order to generate that meaningful connection, and open up ownership of the recordings and the process. Sonic Postcards, an education project led by Sonic Arts Network, facilitated soundscape activates in primary schools in the UK, resulting in the making of hundreds of short soundscape compositions of the environments that the pupils inhabit. This was followed up by the exchanging of the sonic postcards with classes throughout the country who live in radically different sonic environments. An invaluable experience that one could imagine being part of the permanent curriculum for all school children.

Soundscape composition is a complex and challenging field, there are no disciplinary givens, and the potential research implications could be overwhelming, but it is through opening up to the context and contingency of the environment that makes this kind of sonic work so enriching and an activity of perpetual learning.

Bibliography

Academy of Urbanism

Accessed July 2018

<https://www.academyofurbanism.org.uk/acoustic-ecology-of-great-places/>

Back, Les (2007). *The Art of Listening*. Oxford: Berg.

Böhme, G., 2017. *Atmospheric Architectures: The Aesthetics of Felt Spaces*. Ed. & trans. Engels-Schwarzpaul, A., –Chr. London: Bloomsbury.

Cage, J., 1987. *Silence*. London: Marion Boyars Publishers.

Caux, J. 2012, *Almost Nothing with Luc Ferrari*. Trans. Hansen, J. Berlin: Errant Bodies Press.

Cherry, E.C., 1953. Some Experiments Upon the Recognition of Speech with One and Two Ears. *Journal of Acoustical Society of America*, 25: 975-9.

Chion, M., 1994. *Audio-Vision: Sound on Screen*. New York: Columbia University Press.

Cresswell, T., 2004. *Place: A Short Introduction*. Oxford, UK: Blackwell Publishing.

Cosgrove, D.E., 1998. *Social Formation and Symbolic Landscape*. University of Wisconsin Press.

Cusack, P., 2012. *Sounds from Dangerous Places*. ReR MEGACORP & Berliner Künstler Programm des DAAD.

Drever, J. (2007). "Nostophonics: Approaches to Grasping Everyday Sounds from a British Perspective." In Ros Bandt, Michelle Duffy and Dolly MacKinnon (eds.), *Hearing Places* (pp. 173-185). Newcastle upon Tyne: Cambridge Scholars Press.

Drever, J.L. 2017 The Case for Auraldiversity in Acoustic Regulations and Practice: The Hand Dryer Noise Story. Conference Proceedings: ICSV24, The 24th International Congress on Sound and Vibration. London

Drever, J.L. 2002. Soundscape Composition: The Convergence of Ethnography and Acousmatic Music. *Organised Sound* 7(1), Cambridge University Press. Pp. 21–7.

Drever, J.L. 2009. 'Soundwalking: creative listening beyond the concert hall', in Saunders, J. (ed.), *The Ashgate Research Companion to Experimental Music*, Ashgate. pp.163-192.

Drever, J.L. 2017: 'Field Recording Centered Composition Practices: negotiating the “out-there” with the “in-here”', in *The Routledge Companion to Sounding Art*, Cobussen, M., Meelberg, V., Truax, B. (eds.), Routledge.

Gaver, B. 1993. What in the World Do We Hear?: An Ecological Approach to Auditory Event Perception. *Ecological Psychology*, 5(1), Lawrence Erlbaum Associates, Inc., pp. 1-29

Gaver, B. 1993. *How do we Hear in the World?: Explorations in Ecological Acoustics*. *Ecological Psychology*, 5(4), Lawrence Erlbaum Associates, Inc., pp 285-313

Gibson, J.J., 1986. *The Ecological Approach to Visual Perception*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Gorbman, C., 1980. *Narrative Film Music*. In Rick Altman (ed.), *Cinema/Sound*, Yale French Studies, No. 60, pp. 183-203.

Granö, J.G., 1997. *Pure Geography*. Baltimore: The John Hopkins University Press

Halone, K.K., Cunconan, T.M., Coakley, C.G., Wolvin, A.D., 1998. Toward the Establishment of General Dimensions Underlying the Listening Process. *International Journal of Listening*. Volume 12, Issue 1.

BS ISO 12913-1:2014 Acoustics - Soundscape -- Part 1: Definition and conceptual framework.

Kahn, D., 1997. John Cage: Silence and Silencing. *The Musical Quarterly*, Vol. 81, No. 4 (Winter, 1997), Oxford, UK: Oxford University Press, pp. 556-598

Mâche, F-B, 1992. *Music, Myth, and Nature, or, The Dolphins of Arion* trans. Delaney, S. Harwood Academic Publishers, Chur Switzerland.

Murch, W.

Accessed July 2018

<http://filmsound.org/murch/waltermurch.htm>

McLuhan, M., Hutchon, K. & McLuhan, E., 1977. *The City as Classroom: Understanding Language and Media*. Agincourt, Ontario: The Book Society of Canada Ltd.

Napier, F. ,1936. *Noises Off*. London: Frederick Muller.

Oliveros, P., 2005. *Deep Listening: A Composer's Sound Practice*. New York: iUniverse, Inc.

Perec, G., 1997. *Species of Spaces and Other Pieces*. London: Penguin Books.

Peirce, C. 1955. *Logic as semiotic: The theory of signs*. Dover Publications, Inc. New York

Schafer, R.M., 1994. *The Soundscape: Our Sonic Environment and the Tuning of the World*. Rochester, VT: Destiny Book.

Schafer, R.M., 1992. *A Sound Education: 100 Exercises in Listening and Sound-Making*. India River, Ontario: Arcana Editions.

Schafer, R.M., 1969. *The New Soundscape*. Ontario: BMI Canada Ltd.

Schafer, R.M., 1967. *Ear Cleaning*. Ontario: BMI Canada Ltd.

Schafer, R.M. 1998. *The Book of Noise*. India River, Ontario: Arcana Editions.

Schafer, R.M. 1996. *The Vancouver Soundscape 1973*. Vancouver: Cambridge Street Records.

Sheringham, M., 2009. *Everyday Life: Theories and Practices from Surrealism to the Present*. Oxford: Oxford University Press.

Spence, C. & Santangelo, V., 2010. *Auditory Attention*. in The Oxford Handbook of Auditory Science: Hearing. Ed. Plack, C.J. Oxford, UK: Oxford University Press. pp. 249-70

Spoerri, D.

Accessed July 2018

http://www.danielspoerri.org/web_daniel/englisch_ds/werk_einzel/05_fallenbild.htm

Thompson, Emily (2002). *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900-1933*. Cambridge, MA: MIT Press.

Tucker, J., Musgrove, A. & Reese, A. 2014. *The ability to hear Goldcrest song and the implications for bird surveys*. *British Birds* 107, April 2014, 232–233.

Truax, B., 2001. *Acoustic Communication*. 2nd Edition. Westport, Connecticut: Ablex Publishing.

Vernon, M., 2013. *Sonograph Sound Effects Series vol. 1: Sounds of the Modern Hospital*. Meagre Resource Records.

Westerkamp, H., 2002. *Linking soundscape composition and acoustic ecology*. Organised Sound 7(1), Cambridge, UK: Cambridge University Press. Pp. 51–56

ⁱ Psychologists regard the act of listening as a 5 dimensional process: (a) cognitive, (b) affective, (c) behavioural / verbal, (d) behavioural / nonverbal, and (e) behavioral / interactive dimensions provide a conceptually meaningful framework for explicating the listening process. (see Halone, Cunconan, Coakley, Wolvin 1998.

ⁱⁱ Concepts of *Place* should not be treated a given. For on key theories place see discussion on Creswell 2004.

ⁱⁱⁱ From 1966 Max Neuhaus presented a range of art works using the work *LISTEN* in uppercase as a prompt to the audience (see Drever 2009). There are a number of collections of Listening exercises, for example see Oliveros 2005 and Schafer 1992.

^{iv} “Narratively implied spatiotemporal world of the actions and characters.” (Gorbman, C. 1980)