Rustications: Animals in the Urban Mix

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Abstract

When animals become audible in the city, it is often annoying, sometimes unnerving, but also now and again a kind of annunciation. Animals are an anomaly in the urban soundscape, which seems to be populated and made intelligible to itself exclusively by sounds of human origin. And yet cities have never become free of animals, which are all the time finding ways of recolonising urban space, and insinuating themselves into the syntax of its sounds. This lecture aims to listen out for and amplify the animal signatures in different urban soundscapes. Dickens wrote of underground stables 'where cart-horses, troubled by rats, might be heard on a quiet Sunday rattling their halters, as disturbed spirits in tales of haunted houses are said to clank their chains'. But perhaps the sonic infiltrations of animals are not so much a haunting as a harbinger of a new, more convivial world-city.

Overhearings

What is a soundscape? It is a word that we seem to have been able to do without until it was coined by R. Murray Schafer in 1969. At the beginning of *The Tuning of the World* (1977), Schafer defines a soundscape as 'any acoustic field of study', whether that be 'a musical composition', 'a radio program' or 'an acoustic environment'. Schafer makes the point that a soundscape is not capturable in the same way as a landscape can be captured in a photograph. Unlike a camera, a microphone samples details: 'It gives the close-up but nothing corresponding to aerial photography' (Schafer 1977, 7). Where a map provides a representation of a landscape that one may easily learn to read, making sense of the many different kinds of sound notation required to document a given soundscape requires both much more information, and much more training. And, where maps are iconically congruous with what they represent (they are a visible representation of a visual scene), the notations of soundscapes are translations of sound into visible or legible form.

The success of the idea of the soundscape is suggested by the promotion of the term into the title of Schafer's *Tuning of the World* when it was reissued in 1993, the year that marked the foundation of the World Forum for Acoustic Ecology, followed in 2000 by the first issue of *Soundscape: The Journal of Acoustic Ecology*. It was not just that the concept of the soundscape has been elevated to star billing in Scafter's 1993 book: it is that giving the book this title means that the book itself was now itself conceivable as a kind of soundscape, that is, as a certain gathering-together or taking-to-be of the whole field of modern sound that may itself count as a kind of

soundscape. Indeed, we might note that, though there is a great deal in Schafer's book about individual elements of the soundscape, whether natural or human – waves, winds, birds, bells, cars, electric fans – relatively little is said about their fields of interrelationship, perhaps because it is the book itself which constitutes that field. For a soundscape, like a landscape, is the outcome of a particular act of associative attention, an effort or aptness to hear certain sounds as consonant, though we will see that there are markedly different forms of synopsis, or synaudience, for the 'sounding together' of sounds.

It should not be a surprise that the two definitions of the word soundscape offered by the *OED* – '(a) a musical composition consisting of a texture of sounds; (b) the sounds which form an auditory environment' – should associate the ideas of a composition and a disposition, a sound arrangement made, and a sound arrangement to be made out. The making out of a soundscape, whether in the mode of construction or construal, involves, first of all, a disaggregation of an ensemble of sounds from the contexts of action and significance in which they are embedded (in which, odd though it may seem, they may be heard, but not heard as 'sound' at all), and second a new aggregation of these disjoined sounds with each other, in such a way that they may seem to be brought on to a single plane of expression and intelligibility.

There is a curious effect of advancing and recession involved in the composition of a soundscape. A soundscape must be pulled out, or 'foregrounded' from a previously formless condition, or rather something which is not in any kind of 'condition', formed or formless, at all. But, insofar as it is in fact a soundscape, what it is foregrounded as is a kind of background, making it the making manifest of an implicitness. It is for this reason that the kinds of musical compositions that tend to be called soundscapes are ones that suggest reservoirs or repertoires of possibility, environments of sound, against which other kinds of sound might stand out, rather than specific actualisations of sound. There is something loose and latent in the idea of a soundscape, which is always somehow in advance of its collection as sound. A soundscape is therefore a kind of precomposition, a score rather than a performance.

In fact, the word soundscape has expanded its meanings considerably. Claire Launchbury uses the term to refer to the process whereby, during the German occupation of France in the Second World War, BBC broadcasting helped to construct a French 'cultural soundscape' which was the means of preserving cultural memory, a term about which Launchbury is no more sceptical than anybody else. Such a use of the term removes the idea of soundscape very largely both from a particular place and from a particular point of audition (Launchbury 2012). Launchbury writes that the creation of 'aural tours of the landscape' demonstrates 'the extent to which identity is forged out of location', though the fact that we are talking about a sequence of sounds broadcast on radio suggests that actual location has only a small part to play in this (Launchbury 2012, 169, 168). In works of literary and cultural history, the soundscape comes closer to a kind of grammar or libretto of the sonic constituents of an historical period, as for example John Picker's *Victorian Soundscapes*, or Mark M. Smith's construction, in *Listening to Nineteenth-Century America*, of 'Northern' and 'Southern' soundscapes during the American Civil War , which Smith describes as a study of 'how people heard the principal economic, cultural and political – hence social – developments of the United States in the nineteenth century' (Smith 2001, 6). In her study of sound in early French literature,

Brigitte Cazelles is interested, not so much in 'sounding out', or constructing a kind of soundtrack from the evidence of the literary texts she considers, as using references to sound to 'assess the meaning and value they impart to the sense of hearing in conditioning experience of the world' (Cazelles 2005, 2)

One could be forgiven for assuming that a *-scape* implies the operation of the eye, or a spatial distribution of sounds in some kind of visual field. There can be little doubt that *-scape* words, formed on the model of *landscape*, respond to the pressure of *-scope* words, deriving from Greek *scopein*, to look. But in fact the *-scape* of *landscape* and *soundscape* is from a family of words that give us the suffix *-ship*, as in *hardship*, *kinship* or *kingship*. This suffix signifies sometimes like the general quality or condition of being something or other &ndash, or its quality of exemplifying some particular characteristic.; its *ness*ness, we might almost say. Perhaps in this sense *soundscape* should be understood as 'soundship', 'soundhood', or 'soundingness' – not, therefore, the arrangement of sounds in a setting, but the 'set towards sound' of a particular group of phenomena, their capacity to be apprehended or regarded in their sonorous aspect, or as held together by specifically – though never exclusively – sonorous relations.

All this makes the efforts of researchers like Mei Zhang and Jian Kang, no matter how earnest or well-intentioned they may be, to take into account all the possible facts and factors that might be relevant to the measurement of a soundscape, including, for instance, 'temperature, humidity, wind, sun, luminosity and glare' (Zhang and Kang 2007, 77), somewhat off-beam. The idea persists that soundscapes are objects in the world, that can be identified, collected, conserved and recovered. Oddly, despite the fact that the idea of soundscape is so closely associated with the project of what is called 'acoustic ecology', the most important feature of the ecology of the soundscape, namely that it is constituted rather than merely apprehended by its listeners, is much less in evidence than one might hope.

Animals

There is an added complexity that comes when the sounds involved are those of animals. For most the sounds that constitute a soundscape are sonically autonomous, existing as pure and distinct sounds, with a purely contingent relation to other sounds in the environment. The sound made by an aeroplane coming in to land may have a relation to the sound of the highway I can hear in the distance in that the highway will get me to the airport to meet a passenger on the incoming plane, but this is a relation between the things making the sounds, not between the making of the sounds. If there is a dialogue between highway and skyway it is one that takes place because of my act of attention. But if I hear a blackbird at its sweet rippling ruckuss on the gable of the house opposite, and then a second or two later a call from another blackbird that seems to answer it, a response that may then prompt a further bawling sally from the principal, then I am hearing a diaphony that has a specifically sonorous relatedness. Here I am not just knitting together a soundscape out of the coincidence of my attention, I am apprehending a pattern of sonorous interaction that is already in itself, to borrow the Ignation formula, a kind of 'composition of place'. Once one starts to hear the call and response, one begins to hear the periods of suspended song as hollowed out by listening. The interlacing of

action and latency forms a sonorous field that is, in Sartrean locution, 'for-itself' as well as being 'in-itself', or 'in-itself-for-me'. Listening to animal sounds is therefore, in a replete sense, an 'overhearing', or hearing to the second degree, in that in it I lend an ear to other listenings, I listen in on the knitting of a soundscape by anf for other ears than my own. A soundscape is a disposition of points and sounds that is referable to a particular point of audition: a soundscape populated by animals is polycentric, a disposition of dispositions, that listens and replies to itself. The sound of animals gives to a soundscape interiority, even saturation – for it includes other centricities or points of audition. This is one of the many features of a soundscape that renders it something that is not simply available either to be captured, or let be, or both, as in the dreams of acoustic ecology. In a soundscape in part populated by auditory actants, my very listening is an active and productive part of the soundscape.

There is another sense in which animal sounds signify a circuit of produced and heard sound. Just as the interrelations of animal sounds make silence sonorously positive, so the hearing of animal sounds signifies the retreat or diminution of human sound, as in Eliot's evocation:

> Houses live and die: there is a time for building
> And a time for living and for generation
> And a time for the wind to break the loosened pane
> And to shake the wainscot where the field-mouse trots (Eliot 1969, 177)

Trotting suggests a kind of gallivanting that perhaps only an untroubled mouse will display, since mice usually scoot much more purposefully and silently in inhabited houses. If you live in a Victorian terraced house as I do, you know abstractly that you have never really evicted all the mice from your abode, since the creatures can come and go through your neighbours' cellars and attics. If you have a cat, you can persuade the mice to lie a little lower, or prefer a neighbour's house to nest in or under, that's all. Before the arrival of our rocdenticidal cat Leila, the sign that the numbers of mice had really got to infestation levels was our starting to hear them. Mice, in my experience, do not squeak so much as issue a kind of miniature toot, of a lower frequency than it seems their small bodies can be capable of. On one occasion, one such alto mouse had got into a plastic carrier bag we used to store bags of potato crisps, hung from a cuphook in the larder (hung up in this way, of course, to keep it out of the reach of mice). We heard the incautious mouse crunching through the crisps, perhaps as much in search of nesting material as nutrition. As we approached, the crunching stopped. After we had stopped and listened motionlessly for some time, the scrunching began again, amplified by the bullfrog-like air-sac of the bag, then stopped again as the mouse heard us venture a little closer. The urban animals that live in closest proximity to us listen out for us so intensely, that hearing them is the sound of our own silence, and their silence the sound of our approach. So often the silence we hear is the quelling of animal sound by our own thunderous approach.

This rhythm of our own remission is often accordingly what we hear in animal sound, especially in the roaring urban circumstance. Among the 'Thirteen Ways of Looking at a Blackbird' offered by Wallace Stevens are some ways, not of looking, but of listening, or looking at listening:

> I do not know which to prefer,
> The beauty of inflections
> Or the beauty of innuendoes,
> The blackbird whistling
> Or just after. (Stevens 1990, 93)

So soundscapes are more than sounds – they are sounds joined by relations, whether these are external, as when one assembles sounds into a soundscape by an act of listening, or internal, as when sounds reveal themselves to be produced in interchange. If a tree falls in the forest with nobody to hear it, it may well make a sound, but it cannot be part of any kind of soundscape. A soundscape is a sound plus a certain kind of relation. The sounds in a soundscape must always be for-me, in something of the way that a landscape must always be for me; but, buried within that relation, they must also always be for-each-other-for-me, made consonant with each other by being included within the scope of my auditory attention. This has an important and often overlooked consequence. It means that sound is not enough to constitute a soundscape. For a soundscape is sound plus relation, and that relation need not be fully and in itself sonorous. The being-for-me of an urban soundscape is not of the order of the sonorous, precisely because it is a relation, even though it may be a relation between sounds. In fact, I think we have to take a further step, and say that it is necessary that there be this ontological adulteration. For sound to be heard *as sound* it must paradoxically be denatured, or taken out of its being. A soundscape must be composed of sound, and only sound; but it can only be so composed through something that is not itself sonorous. A soundscape is formed autonomously of unaccommodated sound; but that autonomy is heteronomous, for what is essential in the making of a soundscape is this anacoustic element of relation – not inaudible, but rather not of the order of the audible.

One way in which this may be understood is though the mediation of the idea of landscape in the idea of soundscape – the extra cohering element in the idea of a soundscape is in fact borrowed from the idea of visual coherence, hence the mistaken associations with *-scoping*. But in fact, not even a landscape is free from this paradox. For just as the relations between sounds that establish them as a sonorous field are not themselves acoustic, so the relations of the elements in a landscape are not themselves of the order of the visual – otherwise, for example, they would be self-evident. When, in the *Meno*, Plato shows the slave a square and then how to construct from it a square with exactly twice its area, by using its diagonal as the side of a second square, what the demonstration shows is in fact that mere showing is not in fact enough (otherwise the relations between the squares would spontaneously have shown themselves to the slave before Plato explained them). For the relations have to be said before they can be seen. So the relations that make up a landscape are in fact extrinsic and anoptic (not invisible, but rather not of the order of the visible) in the same way as the relations, internal or external, that make up a soundscape are anacoustic. This may be thought of as another kind of overheaaring, different from that which I have already distionguished – the spilling over of sound into something else, something beside sound, that puts sound beside itself.

This accounts for but may also help to relieve a certain embarrassment that afflicts the study of soundscape. Writing of birdsong, Murray Schafer says:

> It is obvious that to whatever extent the birds are deliberately communicating, it is for their own benefit rather than ours that their vocalizations are designed. Some men may puzzle over their codes, but most will be content merely to listen to the extravagant and astonishing symphony of their voices. Birds, like poems, should not mean, but be. (Schafer 1977, 31)

But this condition of self-sufficient beingness is precisely what nothing has until something else apprehends it under conditions for which the nature of being can be some kind of issue. Pure being is pure by dint of an act of elaborate subtraction, the subtraction of all the predicates that might normally follow the articulation of the verb 'to be' – being tall, contented, constipated, rectangular or mauve. Far from being primal, pure being has been a very long time in the making, for it requires creatures like us, full of our conceptions of all the different things that things can be, for it to come to be at long last as pure being.

This imbrication of 'pure sound' and 'sound heard as pure' is often at work in literary evocations of sound, which may exploit their own dual embodiment as sound and letter. We can take as an example of the literary composition of a soundscape Edward Thomas's 'Adlestrop'. When the express train draws up unexpectedly on the little platform, there is a kind of suspension of human sound, signalled by a transition from sound to the printed name of the station:

> The steam hissed. Someone cleared his throat.
> No one left and no one came
> On the bare platform. What I saw
> Was Adlestrop – only the name (Thomas 1979, 46)

But then that silent suspension is filled with a sound that would otherwise be entirely inaudible, the sound of a blackbird:

> And for that minute a blackbird sang
> Close by, and round him, mistier,
> Farther and farther, all the birds
> Of Oxfordshire and Gloucestershire. (Thomas 1979, 46)

If we work hard we can do something approximating to 'hearing' birdsong in the assonance of 'mistier', 'Oxfordshire', and 'Gloucestershire'. Yet it is patent that neither 'Oxfordshire' nor 'Gloucestershire' sound remotely like the song of a blackbird, or at least, would be exceedingly unlikely to strike anyone in this way outside the context of this poem. Perhaps what we really recognise here is the iconic parallel between the half-rhyme of the word 'Oxfordshire' and the word 'Gloucestershire' and the idea of the assonance of the sounds of all the blackbirds who might be singing at the same moment, in imaginary circles receding concentrically from the single bird heard on the platform. So we are at least in part 'hearing' something like a visualised sound form – the form, in fact, of a ripple moving outwards from a centre. We know this because one of the things we are made to 'hear' by this sequence is precisely the decay, or fading out of earshot, of the sound – because, beyond 'Oxfordshire' and 'Gloucestershire', there could be 'Worcestershire', 'Herefordshire', and so on (I am ordinarily as foggy about the counties in this part of England as I am about the borders of the countries in South-

East Asia, but I have looked it up). Here we are encouraged to hear the bird as at the centre of a network, dense, but dissolving at the edges, of interconnected sound, in which the quality of the sound is that it is melting away from the actuality into the idea of sound. We move from hearing to 'hearing'. Can you hear in inverted commas, exactly? Well, of course you can, because to hear is always to hear-as. You cannot hear inverted commas, which is why lecturers are at such pains to signal them with various styles of air-hook, or rabbit-ears; but we surely in fact hear in inverted commas all the time, and perhaps most of all in thinking or speaking of soundscapes. So the poem's suggestion of a soundscape seems to rely upon concatenation of hearing and 'hearing',

First of all, human beings enclosed wild animals, drawing them into shared habitation through domestication; then, without any manumission, the growth of citites has led to a banishment of animals, out of sight, hearing and mind of the urban dweller. To speak of the urban is to seem to evoke a place emptied of animals. This is a much more recent phenomenon than we may tend to assume. The gradien of the approach roads to London bridges was defined by the need for horses to be able both to draw the conveyances they were pulling up to the level of the bridge, and their capacity to resist the forward impulsion of their loads on the way down. London is full of water troughs provided by the Metropolitan Drinking Fountain and Cattle Trough Association, set up in 1859 to provide free drinking fountains, and then extended in 1867 to the provision of troughs for horses and cattle. Their ubiquity in London, with particular concentrations in the City of London as one gets closer to Smithfield Market, is a reminder of what prodigious numbers of animals one might encounter in the heart of the largest and most powerful city in the world in the second half of the nineteenth century. Many of these were horses, who provided almost all of the transportation, but huge numbers of animals were driven through the city to the market for slaughter and sale. Charles Dickens Jnr estimated that 'a single trough has supplied the wants of 1,800 horses in one period of 24 hours' (Dickens 1882, 96).George Bills left a bequest in 1927 which led to the manufacture of horse troughs throughout southern Australia for a similar purpose. These troughs strike me as imaginary receptacles of vanished animal sounds

A remarkable passage from Beckett's story 'The End' testifies to a sound that will have been heard more and more rarely in Northern Hemisphere cities after the 1930s, the sound of a horse drinking:

> My bench was still there. It was shaped to fit the curves of the seated body. It stood beside a watering trough, gift of a Mrs Maxwell to the city horses, according to the inscription. During the short time I rested there several horses took advantage of the monument. The iron shoes approached and the jingle of the harness. Then silence. That was the horse looking at me. Then the noise of pebbles and mud that horses make when drinking. Then the silence again. That was the horse looking at me again. Then the pebbles again. Then the silence again. Till the horse had finished drinking or the driver deemed it had drunk its fill. The horses were uneasy. Once, when the noise stopped, I turned and saw the horse looking at me. The driver too was looking at me. Mrs Maxwell would have been pleased if she could have seen her trough rendering such services to the city horses. (Beckett 1984, 54-5)

The passage alternates noise and looking; silence means that the speaker is being looked at by the horse, the shale-like gurgle of its drinking means that the narrator can retreat intermittently into invisibility, or at least unobservedness. Animal noise here signifies absorption, the suspension of the noise signifies the unease or uncertainty of the arbitrary, the *de trop*. This is one of a number of moments in which Beckett narrators experience what may be called a kind of animal acknowledgement; there is the world of Mrs Maxwell and the driver, making rational provision for the horses, and there is a kind of unreflective animal existence, not the meaning of being, but the being of unmeaning. The narration oscillates between the two, in a mechanical see-saw that is very common in Beckett's writing. The oscillation between sight and sound is an oscillation between significance and existence, meaning and being, with the animal forming the hinge between them.

With the replacement of horse-drawn transport with cars, and the progressive eviction of slaughterhouses from the centre of cities, the city has become increasingly emptied of animals, apart from domestic pets, which is to say, almost exclusively cats and dogs. Unowned animals live surreptitious or parasitic lives. There are very few sounds of animals to be heard in the city, but the animals that do dwell in the city will tend to make themselves known predominantly through sound, precisely because that is what is left to them. Perhaps it is the sound of animals that most impresses us with the sense of a specifically sonic field of action and awareness, precisely because the sound of unowned animals is usually separated from visual confirmation. Whether it be the whirr of cicadas, the twittering of birds or the hum of bees, the animal sounds that we hear are normally separated from their sources. It is as though the sounding species had not somuch occupied a niche within an ecology of sound, but had been drawn into the niche of sound itself.

Non-domestic animals do not dwell in the city, so much as haunt it, and their disembodied cries and whispers are a sign of this haunting. Dickens anticipates this haunting from the midst of the horse-drawn city, in the passage evoking the neighbourhood near Todgers's in chapter 9 of *Martin Chuzzlewit*. The passage reads the dense and illegible labyrinth of the commercial city as a kind of otological maze, an ear-nose-and-throat assemblage that is at once congested and convulsed by secret sound:

> Among the narrow thoroughfares at hand, there lingered, here and there, an ancient doorway of carved oak, from which, of old, the sounds of revelry and feasting often came; but now these mansions, only used for storehouses, were dark and dull, and, being filled with wool, and cotton, and the like – such heavy merchandise as stifles sound and stops the throat of echo – had an air of palpable deadness about them which, added to their silence and desertion, made them very grim. In like manner, there were gloomy courtyards in these parts, into which few but belated wayfarers ever strayed, and where vast bags and packs of goods, upward or downward bound, were for ever dangling between heaven and earth from lofty cranes. There were more trucks near Todgers's than you would suppose a whole city could ever need; not active trucks, but a vagabond race, for ever lounging in the narrow lanes before their masters' doors and stopping up the pass; so that when a stray hackney-coach or lumbering waggon came that way, they were the cause of such an uproar as enlivened the whole

> neighbourhood, and made the bells in the next churchtower vibrate again. In the throats and maws of dark no-thoroughfares near Todgers's, individual wine-merchants and wholesale dealers in grocery-ware had perfect little towns of their own; and, deep among the foundations of these buildings, the ground was undermined and burrowed out into stables, where cart-horses, troubled by rats, might be heard on a quiet Sunday rattling their halters, as disturbed spirits in tales of haunted houses are said to clank their chains. (Dickens 1984, 113-14)

In his book *The New Soundscape*, Schafer uses the superseding of horse-hooves and bird-song as a measure of the replacement of complex information with pure urban noise:

> Consider, for instance, two composers, one living in the 18th century and the other in our own. The former travels everwhere in a carriage. He can't get horses hooves out of his mind and so he becomes an inventor of the Alberti bass. The latter travels everywhere in his own sportscar. His music is remarkable for its drones, clusters and whirring effects... Or compare the aircraft with the object it imitates: the bird. The arabesque of the sedge-warbler, for instance, is so intricate that a hundred hearings would not begin to exhaust its fascination for us. Even the separate notes of the song-thrush are more tuneful than any machine man has thrown into the air. (Schafer 1969, 58)

There are significant variations across cities in different parts of the world however. Indeed, the sounds of animals may be one of the only identifying soundmarks in the increasingly homogenous sound of traffic. The chatter of monkeys may be one of the only sonorous features that would identify the city of Kohlkata, while the growl of prowling bears has become a common urban noise in some North American and Canadian towns. The first time I travelled to Australia, I was astounded to hear, above a busy Melbourne street, the wheeling screech of a flock of lorikeets, a sound that has become for me a kind of sound signature of Australian cities. In fact, one is nowadays likely to hear similar technicolor calls in any part of London near to woodland or cemeteries, habitat favoured by the many parrots who have escaped and bred in the ever milder London climate.

Birdsong

Since Rachel Carson, the survival or silencing of birdsong has become a sonorous measure of the degradation of environments. In fact, however, there is some reason to believe that we may be forcing birds to become louder rather than quieter. Hans Slabbekoorn of Leiden University studied the songs of great tits in a number of Northern European cities, and found that they routinely sang faster and higher, incorporating fewer low-frequency notes than birds in the wild. It seems very likely that this is in order to compensate for the low-frequency hum of traffic that would otherwise mask their song. This is no mere behavioural adaptation – in that such birds would be unlikely to be able to mate with members of their own species from rural areas who would sing in a different register, the birds may be undergoing a kind

of acoustic respeciation. In many species of bird, females seem to prefer males with lower-pitched songs, which may well put such birds at a double disadvantage, in having to expend more energy on overcoming noise while also not attracting as many mates. The sheer quantity of competing noise is not the only feature of the urban environment with which birds have to contend. Other studies have suggested that birds are responsive, not just to raw noise levels, but also to the acoustic features of their physical environment. Hard, impervious surfaces like brick and concrete reflect and scatter more of the sound energy of birdsong, this effect being more marked in high-frequency signals than low frequency. As this can make the signal unintelligible, it in its turn exerts pressure on birds in urban environments to lower rather than to lift the frequency of their song. Since highly reverberant surfaces and high levels of low-frequency noise often coexist in urban environments, this may create paradoxical pressures – if a bird sings at higher frequencies and with shorter stabs of song in order to overcome the masking effects of low-frequency noise, this may in turn make the song more vulnerable to acoustic scattering from highly reflective surfaces (Dowling, Luther and Marra 2012).

Another of the ways in which birds have adapted to city life is through time-shifts. The European robin has taken to singing at night in order perhaps to compensate for the restriction of its opportunities to establish territory during the day. If you hear a nightingale singing in Berkeley Square, the chances are that it will be singing much louder now than in 1939 In fact the toning and tempering of the time of the city is one of the most important of the ways in which animal sounds interact with, rather than simply struggling through or standing out against urban noise.

The acoustic ecology movement inspired by the work of Murray Schafer has stressed the need for conservation of acoustic environments, and, to the extent that this undertaking has helped to preserve the sources of those sounds and to resist the creeping uniformity of lo-fi urban and industrial noise – holding back the tide of sonorous 'sludge', as Schafer called it – its labours are to be welcomed and encouraged. There are extremely good reasons why we might wish to mitigate urban noise, and in particular the noise of transport and machinery, and to rescue the urban air from being treated, as Murray Schafer calls it, as a 'big sound sewer' (Schafer 1969, 58). To a very large degree, we can assume that what is good for bird diversity is also agreeable for human beings.

Despite the many features in play in urban birdsong – frequency, amplitude, phrasing, syntax, patterning, redundancy – the model governing ecological studies of urban birdsong is predominantly that of a zero sum game involving only two parameters, that of the bird's song which is either obstructed by or overcomes urban noise. This is because the question driving such research is, principally, how are birds doing in noisy towns?

This model is surely too simple. It would be a mistake, for example, to counterpose 'urban' and 'rural' environments in such a way as to suggest that the former are always noisy and the latter always soothingly serene. In fact, the very capacity of birds to adapt their songs – whether through singing differently, selective pressure on the transmission from adult to chick of different kinds of song, or selective pressure on breeding – derives from the fact that there are many sources of noise in the natural world. The theoretical prediction that a bird singing against masking noise might increase the serial redundancy of its song (repeating its song more often,

just like somebody shouting through a gale or over a poor phone-connection) has been borne out in studies of chaffinches living near waterfalls (Brumm and Slater 2006). There may be a great deal of noise to contend with in urban environments, but this should not imply that there is no noise in 'natural' environments.

For there is noise everywhere; what is more, there is no information without noise. The birds who adapt their songs in cities may be there because their songs have been formed in circumstances in which very similar kinds of noise – wind, water or the sounds of other species – have to be overcome (Ríos-Chelén 2009, 155). The dawn chorus, often taken as an image of the orchestral plenitude of nature, is in fact an extremely stressful acoustic environment, an order that is formed in and through competing noise. Signal is the opposite of noise, but information is found in the emergence of signal from noise, and therefore in a certain signal-noise coupling. So there is no signal without noise, and there is noise in and around every signal. In fact, this is the very reason for the importance of birds and birdsong in human history – since birdsong represents the very principle of meaning amidst noisiness, and the intensification of meaning that comes from the intensification of noise.

There is one kind of creature with whom cities have a positive affinity, namely insects. Murray Schafer suggests that insects provide a rare example in the nonhuman world of what he calls 'flat-line' sounds, sounds involving repeated automatic processes, in humming, buzzing or stridulation (Schafer 1977, 78). Where the sight and sound of other animals may strike the city-dweller as an anomaly or annunciation, insects in a certain sense are the city. The beehive has long been taken as a metaphor for the structure and operations of the city, and it is indeed the case, that, at a time when bee colonies are under intense pressure worldwide, bees are often healthier in the city than in the surrounding countryside, partly perhaps because of the diversity of plant species available to them to feed on, compared to the condition of grimly depleted monoculture that characterises many rural locations. Even where insects are not physically present or audible, they are evoked in the metaphors of humming and buzzing which are so often applied to the background sounds of city life. My suggestion is that this metaphorical texture is in fact part of the animal soundscape of the city.

However, it has become clear that the work of conservation can less than ever be conceived simply as a work of holding back, piping down and letting be, important though all of these are. Soundscapes are always constructed, and the construction of soundscape should be regarded as part of the larger work of what Peter Sloterdijk has usefully called the work of 'explicitation' in modernity (Sloteridjk 2004, 87). Insofar as explication means the bringing into the foreground for the purposes of management and design of what had previously been merely given or implicit, and since the soundscape must be defined as a foregrounding of a background phenomenon, the making of a field into a figure, the construction of soundscape is part of the huge effort of rethinking the relations between the human and the natural that must characterise our future. In a world in which, as Michel Serres has repeatedly said, 'we depend on what depends on us', there seems no possibility of returning to a condition of immanence or innocence.

Serres provides a more hopeful vision than most of this possible future, and it is one in which sound plays a central role. *Hominescence* (2001) is the first of an informal tetralogy of books; it was followed by *L'Incandescent* (2003), *Rameaux* (2004) and

Récits d'Humanisme (2006), to form a sequence which Serres has suggested, in a note to the last (Serres 2006, n.p.), might have the collective title *Le Grand Récit*. In the first book of the series Serres describes the 'hominescent rupture' represented by the decline in the human involvement with agriculture, which Serres, himself the product of a rural upbringing in the Garonne region of South-West of France, sees as the most dramatic event of recent human history. But Serres reads this development as the replacement of one kind of shared home – that of the domestication of animals, in which human beings brought certain species in from the condition of wildness – to a second, shared habitat, in which human technology and knowledge create a kind of global home of knowledge, encompassing – and having responsibility for – all species. He argues that, while the relation with other animals has always been at the root of human knowledge (he glosses 'conscience' as 'knowledge-with', Serres 2001, 127), now, in the 'second domestication' (Serres 2001, 115), extending to all the species of the earth, which are held between the conditions of extinction and protection, the earth has become a 'farm of knowledge' (Serres 2001, 115). This means that, in a certain sense, we have gone beyond the condition of habitation, as this has traditionally been understood, meaning the necessity of exclusive belonging to a particular place, habitat, or niche. We are in the process, Serres believes, of constructing a global new domain that is the integral of all particular niches, taking us decisively beyond the Heideggerian necessity of 'being-there' that has always attached to embodied creatures. Such an expansion will disturb our traditional understanding of the subjects and objects of knowledge, even to the point of making us the mediators of a kind of 'autocomprehension' (Serres 2001, 153) of the world by itself. Serres represents this as a kind of interception of signals, an integration of the noise of animal perceptions in many different modalities, whether it is the epic din of shrimps and krill in the ocean, which is loud enough for submarines to hide behind them to avoid detection by enemy sonar, the thermoception of the rattlesnake, the sensitivity to ultrasound of bats, the tympanic bubbles of whales and dolphins which make out a three-dimensional map of the ocean far superior to human sonar (Serres 2001, 144). All these constitute specific channels of communication, representing the special kind of tuning of each animal to its existential and communicational niche. But the human body differs from the bodies of animals in its huge extension of its communicative powers, not just in the exhausting, ear-splitting racket of our communications with each other, but in our ways of listening-in to the communications of other creatures:

> What may we say of our body? That henceforth, it is sensitive to ultrasound and infrared, electromagnetic waves and thermal agitation. Bathythermography is part of the basic instruction of the submariner and the spectrum of the invisible and the inaudible fans out for the senses of the atsrophyicist. Our underwater hearing detects, for example, calculates, understands and transacts with the enormous background noise of shrimps and krill, as with the messages exchanged between whales and dolphins. We listen in on the murmur of anthills.(Serres 2001, 145)

Serres suggests that we have not only ourselves moved out of the sensory and communicational niche provided by our biological bodies, but may have become a kind of diaphragm or switchboard to connect up signals from different species, to make 'the ensemble of signals of every kind accessible as signs by the ensemble of living creatures, as the sum total of habitats which each species, including our own

and each individual of our own species, detaches from its environment' (Serres 2001 145). Serres calls this new interspecific collective body, made out by knowledge and reciprocal overhearing, the Biosoma (Serres 2001, 146).

In the first couple of millennia of the metropolis, the city has been a means not for the concentration in space of populations, resources and knowledges, but also a concentration of experience into space. But we can readily anticipate a diffusion of the city, away from particular spaces. If the process is carefully enough considered and managed, the process of moving from metropolis to mundopolis, the city of the world, need not be a process of desertification. Animal adaptations to the sounds and spaces of the city may provide a model for the adaptation of the city to the space of the world. It is ultimately this that is producing 'the end of place, of locality, the end of the *hic*, of the here and now' (Serres 2001, 246).

In his 2011 book, *Musique*, Serres represents this process in terms that at once refer this new body of knowledge, or epistemogony to sound, and yet also go beyond it, suggesting 'a new and unheard of epistemology of hearing' (Serres 2011, 161). What Serres calls 'music' is the mingling of energy with information, the hard with the soft. His is perhaps a new Pythagoreanism, which does not simply subdue the complexity and contingency of existence to abstract models, but orders it immanently, without reduction, creating an informational music, and a 'philosophy of mixed bodies (Serres 2011, 161) that emerges from and integrates noise without annulling it (Serres 2011, 159). 'If there are vibrations in every domain, in a sort of universal acoustics, then music and information, both in a sense universal, ought to be able to constuct an epistemology founded on hearing at least as easily as that which since Plato we have founded on vision. Such a universal acoustics would allow us to hear at last the song of the world and its enchantment' (Serres 2011, 98).

I began by suggesting that the concept of the soundscape both draws our attention to the particularity of sound and also draws us away from sound, or places sound beside itself. I then proposed that the audible presence of animals in urban sound is both a kind of haunting and a hollowing out of the tinnitant self-enclosure of human sound. Even as it points to the eviction of animals from the characteristically urban spaces of the modern world, the anomalous sounds of animals in the city point to a new, delocalised, even evaporated kind of urbanism, one in which the the urban and the rural interpenetrate each other. This haunting serves to point us away from the cramping idea of location, of the factitious and reactionary notion of the here-and-now that hovers around every notion of the soundscape, and to adumbrate a newer, more complex and convivial auditorium of the world.

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