Landscape, Music and Sonic Environments.

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INTRODUCTION
From film soundtracks to folk song, music is often thought to invoke particular landscapes, their moods, textures, beauty, grandeur and tranquillity. The apparent naturalness of sound and its defuse and pervasive character seem to echo the perceived naturalness of landscape itself. Yet the relationships between music and landscape are not nearly as simple and direct as music promoters and marketing designers would like us to believe. Powerful as the associations seem today, only since the mid-nineteenth century has music been written in direct depiction of landscape. In many respects it is the move towards more personal experiential expressions of landscape in the arts characteristic of developments in nineteenth century culture that make musical depictions of landscape both possible and popular. However, the qualities of sound also encourage a conception of landscape as subjective engagement rather than distant visual perspectives. Sounds mask, envelope, echo at a distance and reverberate deeply within bodies, they intensify and fade and have distinguishing properties of attack and decay. Thus listening favours our sense of time, whilst also providing distinctive senses of proximity and distance, intimacy and spatial arrangement. Listening is always therefore a process rather than a momentary snapshot, a temporal event in which arrangements in space unfold. Landscape too is increasingly thought of in this way.

Landscape forms a terrain on which musical and extra-musical sounds interact. This has been important for the ongoing transformation of what is considered acceptable and unacceptable musical sound since the early twentieth century. These developments have challenged conceptions of music and landscape based in cartographies of nature and culture and approaches derived from visual perspective. Yet composers, musicians and audiences continue to seek ways of using landscape to provide vivid, vital, immediate and immersive experiences of landscape. Today landscape and music interpenetrate in so many ways as taken for granted divisions break down, for example between classical and popular, performer and audience, environmental and composed sounds, music and noise. Environmental sound composition, site specific works, installations and interactive performance juxtapose sounds and environments in ways which challenge established ways of understanding relationships between music and landscape. This paper examines some of the ways scholars in musicology, social science and the humanities have understood the relationships between music, sound and landscape. It concludes that sonic composition and attentive listening might now be thought of as making its own positive contributions to revised conceptions of landscape as practice and event.
MUSIC AND LANDSCAPE

In the history of ‘serious’, ‘art music’, depiction of people, places and environments so called ‘extra musical associations’ have conventionally been frowned upon as irrelevant to the development of musical expression founded in the working of abstract form, melody, harmony and structure. Only in the twentieth century have landscape and music become increasingly closely connected. It is possible to understand this in terms of two related sets of changes; one related to developments within music itself and the other to issues of technology and media. Firstly, the development of musical romanticism in the mid-nineteenth century (works such as Mendelssohn’s Hebrides Overture Op.26 1830) and subsequently varieties of musical impressionism and the tone poem (see for example Strauss’s symphonic poem An Alpine Symphony Op.64 1915 or Bax’s Tintagel 1919) forged increasingly explicit connections between landscape and music. Secondly, the development of recording technology and broadcast media has brought landscape and music together in a variety of new cultural forms (Bull 2000; Connell and Gibson 2003). These range from the cinematic experience of film which brings together music and moving images and outdoor music festivals which rely on amplified sound, to the soundtrack provided by personal music systems in cars, and whilst walking, jogging or taking public transport.

Most frequently music is connected to landscape through the lyrics and words of songs, the soundtracks to movies or drama, scene setting and libretti of operas and musicals. Providing an appropriate setting for words, the sounds of music often reflect and invoke landscape at a distance, supplying rhythm, melody and harmony to support and set the scene for description in words, narratives and images. Because music appears, as Chanan (1994) says, to be a “semiotic system without a content plane”, great difficulties present themselves when trying to relate the meaning of musical sounds to the environments and social practices which produce those sounds. Meanings and practices seem to be held apart in a state of flux and indeterminacy by the multiple and contingent qualities of musical meaning. One key area in which this ambiguity has been played out is in the relationship between natural and musical sounds which map through complex sets of value judgements on to constructions of nature and culture. In a key text Jacques Attali (1977) examined these relationships in music through painting as what he called a cartography of sound. Landscape has proved important for marking out this terrain. There are analogies here with what Richard Leppert has called the struggle between authorized and unauthorized sound (Leppert 1993: 18).
Such moral and aesthetic judgements are informed by complex historical and political ideas and ideologies. In this way Matless examines the sonic geography of the Norfolk Broads as a ‘nature region’ during the 20th century. He asks the questions:

Moral geographies of conduct turn on such questions as: Which sounds should be present in the public open air? Does nature demand quiet? Are certain musics in the regional cultural grain? Which styles of voice belong in the landscape? Does nature make music, noise, both or neither? (Matless 2005:747)

In answer to such questions Matless draws on a range of writings by naturalists, topographers and novelists to show how the increasing leisure use of the Broads bring into hearing a highly political and class divided landscape in which a sing-along to banjo and piano, or popular dance music on the radio is unacceptable, but the performance of folk music and the ‘natural music’ of wind, reeds and bird song become highly valued. These sonic judgements he argues are central to the cultural valuation of this regional landscape. Such controversies continue into the 21st century and are evident in debates about rural tranquillity and the appropriateness of rock, pop and dance music in the countryside; in for example the conflicts sometimes generated by the increasing number of rural festivals such as that at Glastonbury in Wiltshire, or the attempts by government and police during the 1990s to stop rural rave parties, or indeed conflicts over traffic and aircraft noise (Stewart etal. 2011; Bijsterveld 2008).

One of the most enduring sets of conventions which link music and landscape in western culture is derived from the classical pastoral (Mellors 1987). Through the pastoral, music is located in landscape at the intersection of nature and culture in a manner similar to that highlighted by Attali, Leppert and Matless (Revill. 2000). The pastoral has been important for music in a variety of historical periods. Daniels (2006), for example, examines the Beatles’ double A sided single Strawberry Fields forever/Penny Lane in terms of a suburban pastoral which for Lennon and McCartney was steeped in layers of idealised personal memory. Though the pastoral may be seen as fundamental to the development of music in its most abstract forms, the traces of realism the extra musical references symbolised in imitation, quotation, allegory and the like have enabled the pastoral to form a powerful resource within nineteenth-century romanticism and in the schools of nationalist composition evident in Europe and elsewhere from the 1830s (Bohman 2004). For nationalist cultures, the fusion of idealised realism with the historical symbolism of mythology in the pastoral provide a powerful set of musical resources which map on to the imaginaries of cultural nationalism its poetic spaces and mythic places (Smith 1997). Focused on the memory of a golden age and set within a range of idealised though metaphorically translocatable places, garden,
orchard, pasture, city and village, the pastoral provides a range of representational resources suitable for the musical culture of nationalism (see Dahlhaus 1989:52-72). A key work of European national music Ma Vlast/ My Country (1874-9) a set of six symphonic poems by the Czech nationalist composer Bedrich Smetana (1824-1884) illustrates this point. Ma Vlast depicts a series of key locations and natural landscape features important to the Czech nation.

In his study of the Norwegian nationalist composer Edvard Grieg, Grimley (2006) warns against simplistic one to one readings of the depiction of landscape in his music. He concludes ’the association between Grieg’s music and the Norwegian landscape is not a natural one’ but rather a kind of complex spatial and temporal space in which history, biography and politics come together to produce something synthetic, inward looking and abstract rather than pictorial and representational. In his consideration of the music and writings of the Alaskan based composer John Luther Adams (b1953) concerned with landscape and environment, Grimley (2005) highlights the complex chains of association by which music represents landscape. He also emphasises the ambiguous relationship between music and nature suggested by the mathematics of harmony and proportion call into question the process of composition. Grimley shows how for Adams, like the Finnish nationalist composer Jean Sibelius 1865-1957) known for drawing inspiration from landscape and history, landscape is not purely concerned with patterns of association, or with purely visual modes of perception, but with deeper structural resonance between music and environmental processes. For Grimley (2005: 671,) the danger is that privileging the apparent truths of nature inadvertently valorise a conception of the composer as romantic genius, ‘the shamanistic guardian of a natural truth or spiritual order’ (see also Rehding 2009).

TRACKING SONIC LANDSCAPES
As shown in the previous section, for critical musicology, cultural history and geography, the relationship between music and landscape is rarely one of simple depiction. Rather, it is a complex of overlapping musical and extra musical elements, traces and influences. However, more direct approaches to music and landscape which explore the spatiality of sound draw concepts and terminology directly from the study of visual landscape. Following the pioneering work of R. Murray Schafer, soundscape studies suggest an easy translation of the conceptual schemas of landscape directly into sound. The term ’soundscape’ was coined by R Murray Schafer in the mid 1960s, and developed by him and those involved in the World Soundscapes Project through the 1970s resulting in a large number of individual studies and a wide range of publications. The study of sonic landscapes if not the term itself does, however, have a longer history. Porteous traces the idea of

As formalised by Schafer in his 1977 book *The Tuning of the World* the vocabulary of soundscapes studies or acoustic ecology as it is otherwise known is adopted from visual landscape enabling researchers to account for the spatiality of sound. Background sounds are defined as "keynotes" in analogy to music where a keynote identifies the fundamental tonality of a composition around which the music modulates. Foreground sounds intended to attract attention are termed "sound signals". Whilst, analogous with landmarks, "soundmarks" are sounds that are particularly regarded by a community and its visitors. Natural examples of the latter include geysers, waterfalls and wind traps while cultural examples include distinctive bells and the sounds of traditional activities. (Schafer, 1977). Schafer's terminology helps to express the idea that the sound of a particular locality, its keypoints, sound signals and soundmarks, can express a community's identity in parallel with local architecture, customs and dress, to the extent that settlements can be recognised and characterised by their soundscapes.

The term 'soundscape' is also used in the context of anthropological studies which focus on the phenomenology of environmental experience and archaeologically concerned with reconstructing the traces of sacred places and spiritual practices (Devereux 2001, Samuels et al 2010). In this context, the term soundscape is drawn more broadly from specific environmental experiences and testimonies. Amongst the most notable use by anthropologists concerned with the relationship between means of communication, social organisation and ways of worldmaking. Feld, for example, shows how, for the Kaluli people of Papua New Guinea, the auditory represents a primary means of ordering the world. He shows how the aesthetic organisation of their musical practices represented by the idea of 'lift up over sounding' is both derived from the practical experience of living amid tropical forest and is used to expresses and justify a cultural disposition to the world which connects aesthetic preferences to established modes of social organisation (Feld 1996:62). For the anthropologist, the idea of soundscape provides a useful way of addressing the engagement between auditory experience and sonic communication. The auditory makes sense and is made sense of within a nexus of ritual and work routine, dance and gesture which are as much visual and somatic as they are aural. In fact, as Stokes suggests the way forward for an engagement between anthropology and the auditory would be to stress, for example, musical practices as integral to social organisation, 'music not just in society but society in music' (Stokes 1994:S2). However, it is
primarily an environmentalist agenda concerned with fragile biotic and cultural ecologies which provides common ground between soundscape studies in ethnomusicology and acoustic ecology.

One of the most productive aspects of the soundscapes approach is its focus on attentive listening as a mode of sensory environmental engagement. However as critiques of R Murray Schafer’s formulation suggest there can be problems and pitfalls. For Schafer soundscapes are a way of reclaiming the auditory environment from what he perceives as the descent of the sonic experience from pre-modern, or rather early modern ‘High Fidelity’ to modern ‘Low Fidelity’ environments. The former is typified by church bells, bird song, folk singing, town criers and is valued as a high quality and desirable auditory set of auditory experiences. The latter is typified by piped musak, the background hum of traffic, air conditioning systems, mobile phones and is considered as low quality and undesirable. The former denotes an area ‘possessing a favourable signal-to-noise ratio’, with ‘discrete sounds’ clearly heard above a ‘low ambient noise level’, the latter an ‘overdense population of sounds’ where ‘perspective is lost’ (1977: 43). As Matless (2005) suggests, Schafer deploys the distinction in part to idealise a particular rural soundscape and criticise the racket of the city. These ideas are largely in keeping with both ‘conservative’ traditions in music and cultural criticism and defenders of modernist authorial authority and high art such as Theodor Adorno (Labelle 2008:203). Though Schafer conceives this as a formal and technical vocabulary and as the basis for a profession of ‘sound architects’ working within a new discipline akin to landscape architecture, the danger here is that attentive listening can become merely a means of excluding sounds rather than extending a non judgemental sensitivity or ethnography as Drever (2002) calls it to sonic landscapes and auditory environments. In this context Drever (2002:25) prefers a reflexive soundscapes methodology closer to what Feld calls ‘acoustamology’.

Drawing inspiration from Schafer’s provocative assertions, soundscape studies or acoustic ecology have formed a productive territory for creative musical composition using samples and recordings made in specific landscapes, environments and places. Two themes dominate this work firstly the recovery, documentation and preservation of what are perceived as high quality sonic environments of the past; and secondly the exploration of place identity created through characteristic sound worlds. Exemplifying this twin focus are the Five Village Soundscapes made during a European tour of the World Soundscape Project led by Schafer in 1975. This work mapped and recorded the sonic environment of five rural settlements in Europe including Finland, Italy and Scotland using a variety of sonic and graphic techniques and strategies. The villages in Finland were revisited in 2009 in order to chart changes brought by ‘urbanisation’. However as Hildergard Westerkamp , a founding
members of the World Forum for Acoustic Ecology, says; practitioners of soundscape studies need to recognise that their practice is culturally creative rather than simply a form of empirically neutral description and documentation. For Westerkamp sampled and recorded environments are always creative even if only because a recording of a specific place and time ‘can only speak specifically of that moment and place’. She also acknowledges the aesthetic judgements made by soundscape composers who bring their own aesthetic musical language and to meet the language of recorded sounds, ‘in the process of composing ’ (Westerkamp 2002; see Labelle 2008: 201-15). For Westerkamp, soundscape composition is an environmentally sensitive and sensitising art form which ‘can and should create a strong oppositional place of conscious listening-that is, in the face of widespread commercial media’ (Westerkamp 2002: 53).

In this context some authors have adopted the soundscapes vocabulary to critically examine historically constituted moral cartographies of sound, music, noise and landscape, nature and culture, described for example by Leppert, Matless and Grimley. Although she uses the term soundscape, Thompson’s work is closer to that of the historian Alan Corbin, whose study Village Bells (1998) traces the sonic spaces of cultural and political change in rural France. Corbin shows how by the end of the 19th century church bells were physically louder because of new design and casting technology, but ironically much quieter in terms of their local social and cultural meaning. For Thompson (2002: 2), like Leppert and Matless, a ‘soundscape, like a landscape, ultimately has more to do with civilisation than with nature’. Emily Thompson’s study of New York’s soundscapes during the early twentieth century is concerned with both technology and modernity and explores the ways which sounds and noises become designated musical and non-musical. It examines the transformation of urban sound through its legal control, technological measurement, architectural and electronic design, through battles between noisy neighbours, the endeavours of scientists, engineers, broadcasters and city officials. She shows how increasing human management and control of the soundscape simultaneously distanced and clarified sounds transforming an unmanaged sonic landscape into the packaged and controlled urban soundtrack typical of modern life. To this extent Corbin and Thompson tell stories which are congruent with the worst fears of R Murray Schafer. Yet as Thompson also shows in her discussion of Charles Ives symphonic work Central Park in the Dark (1906), music has increasingly engaged with landscape in order to celebrate rather than simply reject the sounds of modern life. In this music orchestral instruments represent the cacophony of the urban street, its shouts, whistles and car horns profoundly questioning the relationships between noise and music in the experience of landscape. This work helped set an agenda for generations of twentieth and twenty-first century composers who continue to question
and explore the boundaries of music, noise and musicality, transforming taste and listening practices in the process. A key figure in this process was the French avant-garde composer Pierre Schaeffer (1910-1995) who pioneered ‘music concrete’ the recording and use of environmental and extra musical sounds to create abstract modernist compositions. Ironically given R Murray Shafer’s concerns about modern sound worlds such work has paved the way for precisely the sort of soundscape compositions championed by the World Forum for Acoustic Ecology.

SOUND ART AND THE ECOLOGY OF LANDSCAPE
Music concrete, as formalised by Pierre Schaeffer, abstracts sounds from their worldly sources in order to create new acousmatic materials as a vocabulary for composition. Whereas the work of R Murray Schafer and others associated with the World Forum for Acoustic Ecology often seek out the depth and detail of real world sonic environments in order to engage with the textures of environmental experience. Though they might appear to be pulling in very different directions, each is concerned with modes of attentive listening and together these two creative currents provide important routes into a broader engagement between sound, landscape and music. Where music concrete directs attention primarily to the pure structure of sound, Acoustic Ecology stresses its contextual and worldly making. These approaches begin to find common ground in compositional techniques of sonic framing which highlight and isolate sounds and sound fields for listener attention. They also share a concern with chance, circumstance and context specific improvisation as key components in making works as performed events rather than finished scores (Richards 1992).

The increasing use of terms such as sonic landscape, sound world or sound field in electronic, computer based, ambient and electro acoustic composition to describe the spatial and temporal arrangement of sounds within a composition provides an important set of resources. Such terms now act as a vocabulary linked to a set of digital tools enabling composers to isolate, combine, juxtapose, overlay, articulate, build and refashion sounds within a spatio-temporal reference frame designed specifically for sonic art and performance (Toop 1995: 130).

Though not a composer conventionally identified with environmental concerns beyond the organisation of sound itself, it is important to recognise the seminal importance of John Cage (1912-1992) in pioneering experimental music which develops these techniques. Early use of the term ‘sonic landscape’ is certainly evident in work by Cage dating from the 1940s. Though not necessarily typical of his later output, work such as his Imaginary Landscapes 1, 2, 3 composed between 1939 and 1942 and indeed his short piano work In a Landscape (1948) adopt the term landscape to evoke a sense of ambient spatiality that remains important for site specific composition and sound art. The
work of David Tudor (1925-96) expressed most aptly in his Rainforest series (1968-73) is also a landmark example of sonic landscape as a performed, site specific installation. Tudor was a pianist and notable interpreter of Cage, though he later turned to electro-acoustic composition. Rainforest IV is an installation where sounds are made to resonate through objects of different sizes and materials including metal springs and wine barrels. Tudor says the sounds have their own spatial presence:

*It becomes like a reflection and it makes, I thought, quite a harmonious and beautiful atmosphere, because wherever you move in the room, you have reminiscences of something you have heard at some other point in the space (Hultberg 1988)*

Yet as Cameron and Rogalski (2006: 910) suggest, this work was indeed experienced as a Rainforest. Quoting an account of a performance of the work in New York 1975 they report: ‘Walking across the space did seem a bit like walking through a rainforest, with a dense undergrowth of different sounds coming from all directions.’ In this context, sonic landscape as a term for the organisation of sounds becomes both a simulacra for worldly landscapes and a poetic point of departure from which listeners can bring their own environmental experiences and expectations to bear in making sense of the work's sound world.

Developments since the 1960s in land art, environmental, site specific and performance based art and sculpture have also had their effect on music and sonic based art. The orientation of artistic practice towards a range of issues such as those concerning the environment, climate change, habitat loss, pollution, resource depletion in addition to those concerning hidden, forgotten and neglected histories and voices, produce a wide range of socially and environmentally engaged creative sonic practices (Richards 2013; Bianchi and Manzo 2016). This is evident in the broad range of art practices including sonic work and composition which highlight processes and consequences of human induced climate change made under the auspices of the group Cape Farewell (see Buckland 2006). Today, the techniques and methodologies of field recording, sound walk, sound installation and site specific work and performance cover a broad spectrum on sound art and music which relates to landscape and environment. Amongst the growing range and diversity it is possible to cite examples ranging from the ecological and scientific showcasing of species diversity issues by Bernie Kruse (2012) and the human-ecological engagements staged in Rachel Jacob’s A Conversation between Trees (2011) based on community work in Brazil and the UK’s Sherwood Forest, to the live streaming of environmental sounds made by Dawn Scarfe as part of her Bivvy Broadcasts project (2013-14). Whilst in terms of specifically human-environmental engagement with landscapes there is also a plethora of methods, styles and purpose. These range from the political environmental sonic
journalism of Peter Cusack’s Sounds from Dangerous Places (2012) documenting locales subject to environmental disaster such as Chernobyl and the Caspian Oil fields; the dramatic place specific sonic theatre of Mike Pearson’s Carlands project (2006) which charts histories of land drainage and agricultural transformation in the Lincolnshire Fens UK; to the sonic landscape sculpture of Alan Lamb, for example Primal Image (1995) made by recording the sound of wind through the telegraph wires in the Australian outback (1995); or the site specific environmental improvisations of the European sound art group Landscape Quartet (see Hogg 2015). Across this spectrum the boundaries between music, environmental recording, sculpture, performance, audience and performer are becoming increasingly blurred. Bianchi and Manzo (2016: x-xiii) for example suggest three important thematic similarities shared by much of a currently very diverse field of sound art. These are firstly: an artistic strategy which appropriates structure, processes, materials, and impulses from the environment around us; secondly, a strong connection to specific spaces, setting and geographical locations; and thirdly an awareness and concern for environmental issues.

Perhaps most significantly in terms of recent developments, Labelle argues that contemporary creative practice in terms of sonic landscape reflect retheorisations of landscape itself. Labelle (2006: xi) believes that the move away from objects to environments, from a single object of attention and toward a multiplicity of viewpoints in theorisations of landscape describes the very relational, spatial and temporal nature of sound itself. In this sense sound is central to the turn in landscape art and theory away from single point perspective and towards senses of multiple and individuated experience and away from landscape as an object and towards accounts which stress the bodily experiences of making and being in landscapes (Ingold 2007, 2011). Drawing on this way of theorising sound Revill (2014) suggests parallels between sound and landscape in his discussion of Chris Watson’s soundwork El Tren Fantasma. Collectively the tracks of El Tren Fantasma develop a language for sonic art which draws on both Watson’s experimental ambient industrial electronic work for example with the Haffler Trio and the place specific documentary style of his wildlife recordings evident in his early solo album Stepping in the Dark (1996). El Tren Fantasma also develops some of the techniques of temporal reduction and intensification explored by Watson in his filmic sonic narrative landscapes Weather Report (2003). Revill argues for commonality in treatment of sound and landscape as process or event based phenomena that mediate worldly experience. Sound carries affective and semiotic meaning but is always embodied in sound waves travelling through materials such as air, wood, metal or stone. Landscape is constituted simultaneously in geology, ecology and topography and the cultural framings that give this meaning. Both act as immersive experiences and means of making sense of the world, both are entities co-
constructed in material and cultural registers. Clearly landscape and sound are not simply commensurable, landscape communicates as a discursive regime, whilst sound is a generic medium of communication. Yet there are important resonances to be drawn when thought together such that sound like landscape is a medium whose properties of communication and expression are difficult to pin down outside the particularity and spatio-temporality of experience. In this context and through the work of cultural theorists, musicians and sound artists, conjunctions of landscape, music and sound now find themselves not merely representing landscapes or reacting to changing understandings of landscape, but rather advancing critical thinking as part of attempts to rework the conception of landscape itself.

**Conclusion**

This chapter has shown how landscape has formed a terrain on which musical and extra-musical sounds interact transforming conceptions of acceptable and unacceptable musical sounds in the process. These developments have challenged conventional and pre-existing conceptions of music and landscape. There are now a diverse range of sonic landscape practices which draw on music concrete and acousmatic music, soundscape studies, site specific performance, improvisation, sound walks and collaborative art engagement strategies. As a result landscape based sound works contribute to rethinking the notion of landscape itself as event. Perhaps what remains constant, both for nineteenth century composers of romantic music and contemporary sound artists, is the fragile and fleeting capacity of sound to generate affective and imaginative conceptions of duration, periodicity, distance, proximity and mood which resonate, articulate and animate the experience of landscape.

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