Abstract: As a series of yearly exhibitions emerging from an organic process, Sound Proof represented an active cultural memory of the development of the Stratford site of London 2012 from 2008 until the opening of the Games. Through its twenty-eight artist commissions over a five-year period, the series reflected on changes to the site and expressed the evolving mood as the event neared.

Sound Proof had heritage concerns at its core. One of the key aims was to retain a record of a moment in time highlighting the tangible cultural landscape and the intangible dimension of memory while the site was still in a state of becoming. The memories generated during that period are expressed most directly by the seventeen original sound works produced for the series; works which threaded physical sound with sensed experience to convey feeling and intent. The works fall under four general categories: sound as field of interactions, sound as experience, sound as active cultural memory, and sound as memory track.

The key link between the exhibition series as a whole and the individual sound works produced by the artists was the context for the works: the locations, settings and communities that engendered those works. Some key works in the series isolated sound as pure experience. Other works conveyed active cultural memories of the people and the places affected by the arrival of the Olympics. And a number of pieces built up a sense of time passing through the build up of a memory track, unfolding as layered historical records.

Through the various works, Sound Proof developed a comprehensive catalogue during the period 2008 to 2012 preserving sonic memory traces of London 2012 as it evolved over time.

Keywords: sound art, cultural memory, soundscape, sonic mapping, Olympics

Introduction

As a series of yearly exhibitions emerging from an organic process, Sound Proof represented an active cultural memory of the development of the Stratford site of London 2012 from 2008 until the opening of the Games. Through its twenty-eight artist commissions over a five-year period, the series reflected on changes to the site and expressed the evolving mood as the event neared.

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general categories: sound as field of interactions, sound as experience, sound as active cultural memory, and sound as memory track.

The exhibition programme evolved over time; in this way punctuating the direct experience of the site in development. Throughout its commission programme Sound Proof compiled a sonic memory track as the local site of Stratford, the greater locus of London, and the world at large prepared for the arrival of the Olympics to London in 2012.

**Sound: a field of interactions**

The key link between the exhibition series as a whole and the individual sound works produced by the artists was the context for the works: the locations, settings and communities that engendered those works. The soundscape—a term coined by R. Murray Schafer to refer to the interaction of sounds in an acoustic environment—is the most effective means of conveying a sense of place through and for sound. And so it is that the soundscapes produced for Sound Proof became the most emblematic of the landscape that was the focus of the exhibition series: the Stratford site of the 2012 Olympics.

With the theme of sound as cartography, Sound Proof 1 was the most suited in the series of five exhibitions to generate soundscapes, and the ones created by Angus Carlyle and Brown Sierra achieved a powerful sense of sonic spatial mapping—demarcating the area in and around the Stratford site in 2008 via aural strategies.

In his composition 51°32'6.954"N/0°00'47.0808W, Angus Carlyle combined ambient sound, heard conversations, narration and poetic pauses to create a one hour long soundscape that through its treatment, handling and content appeared to scan the periphery of the designated Olympic area and reconfigure the findings into discrete poetic reflections. Through these observations Carlyle commemorated the liminal qualities of the site in the period just before construction began.

The piece begins with birdsong and builds a series of mechanical ambient sounds: planes and traffic, and intermingles them with the sound of footsteps and the quacking of birds. This sets the scene for a spoken word piece narrated by the artist, punctuated by his phonetic expressions of the sounds birds make: tings, thuts and pits, wheals and whines—what the artist refers to as *acoustic explosions*. His observations of the movements of individual birds, quite minute in the level of detail, force the listener to pause and take a break from the constant chatter of the mental space to focus on the details of his precisely described awareness of sonic space. It is a master class in listening, and still, its most important by-product is as a depository of sounds of the local landscape soon to be made extinct by the arrival of diggers and cranes. The handling of the sound work moves our sense of perception around, giving us the feeling of planes up above, the rattling of mechanical equipment below, birdsong all around, traffic coming towards, passing by and moving away, the buzzing of a fly annoyingly close to the sensed headspace.
He also provides lovingly considered descriptions of
the found and discarded objects he encountered on his
visits to what was widely considered a peripheral site.
And follows that with super-imposed conversations
with passersby. An entire sequence is devoted to
the grating, repetitive sounds of machines working,
creating a sense of an ecosystem devoid of any organic
lifeforms, save for the faint birdsong heard at the end of
the sequence. The duel that ensues between bird and
machine sounds underscores the conflicted relationship
humans maintain with nature. With seamless command,
Carlyle provides a three-dimensional perspective on
the landscape through an engrossing composition that
arrests the senses and absorbs our attention.

Brown Sierra constructed a soundscape entitled
Perimeter for the same exhibition that, like Carlyle’s
work, celebrated the discarded, the worn, the found
object. In their case, Brown Sierra focused on the
outside edges of the site, following the line created by
the blue wall erected around the designated area. They
began their process by walking the perimeter of the
site, picking up found cassette tapes, CDs, and other
ephemera along the way. They met people and chatted
with them and recorded conversations overheard from
afar. Ambient sounds—the wind, the rattling of a train
rolling past, the constant swoosh of traffic going by, a
wonky wheel barrow being pushed along—combined
with excerpts of music contained in the found objects
to make up the hour long piece. In his seminal work
The Soundscape, Schafer refers to sound souvenirs as
“indelible memories for the aurally sensitive tourist,
and always in need of protection”(Schafer, 1994[1977]:
240). Interestingly, Schafer was referring to sounds
no longer heard because the objects and tools that
generated those sounds were now obsolete, and so he
spoke of capturing sounds before they became extinct.
In the book Sound Souvenirs, Karin Bisterveld and José
van Dijck expand on Schafer’s initial notion to establish
concrete links between sound and cultural memory
(Bisterveld & van Dijck, 2009: 12). Here I use the term
sound souvenir in a more literal way, as Brown Sierra
found mementos during their visit to the site and then
played those objects—CDs, cassette tapes, vinyl—to
capture the sounds in recordings that would preserve
the memory of their role and function as part of the site.

With the wind in constant hum in the background
and diverse sounds gently folded into one another; this
is not a soundscape that demands our full attention. It
entices us in instead with its unexpected snippets of
exotic sounds—opera singing, Latino rap, strumming
of Indian guitar, a melody played over and over—and
captures our imagination more than our thinking mind.
It is a delicate one hour long construction that allows
the listener to lose herself in the reverie of psychic
reflection (Schafer, 1994[1977]: 4) and feel, through the
process of listening to Perimeter, the magical liminality
of the Stratford site on the eve of construction.

Daniel Jackson’s art work for Sound Proof 2 in 2009
moved the focus from the local to the global, spotlighting
the worldwide interest in the arrival of the Olympics
it played with the broad strokes notions of the event
through the treatment of the five rings as a visual and
the word olympics as a soundtrack. The generative art
piece was constructed by creating a set of instructions
that would work with randomly generated statistics to bring certain rings to the foreground of the visual and prompt an automated voice to sound out certain parts of the word olympics. An extended sequence was recorded and exhibited in the gallery space as a video installation.

The theme for Sound Proof 2 was sound as archeology, and Jackson chose to interpret the theme as an excavation of statistical data relating to the works then taking place at the site. Thus, a set of instructions was coded using data sets of activity in the Stratford site: how many tons of dirt were moved, how many trucks arrived at the site, etc. The numbers were plotted onto a computer program to generate image movement and sound transitions, imposing a rhythmic structure determined by the statistical data. The artwork was constructed over time as a field of interactions—a coded infrastructure applying site statistics as reference points. Playing with such abstract notions, based on numbers relating to physical experience, Jackson ably linked the minutiae of the localised site to the broad strokes notions of the Olympics.

The basis of Marcus Leadley’s piece for Sound Proof 5 was the idea of soundscape as “event heard not object seen”. This definition, set forth by Schafer (Schafer, 1994[1977]: 8), is flexed and expanded in Leadley’s installation Outside In. In this work, the artist arranges sounds from the outside in the interior of the installation as ambient sound, and positions on the exterior wall an internal monologue heard via headphones. As Leadley states, “The work explores many things including the relationship between sonic and visual content, perceptual learning and the awareness of coincidence and synchronicity. It also represents a detailed critique of site and encourages awareness of the body and presence.” (Leadley, 2013) In Outside In Leadley breaks apart inside/outside acoustic aspects of diverse environments through the handling of visual and sonic elements of the installation and fractures the everyday experience into its constituent parts. The result is disorienting. An interplay between what is seen and what is heard is engendered, expressing sound’s pervasive relationship to a complex network of personal experiences and associations that colours our experience of place.

**Sound: an experience**

Isolating sound as pure experience became the focus of a number of the commissioned works. This honing in on a distinct instance of sound—separate from, rather than part of, an event—allowed for a full appreciation of it as a discrete sound object and brought full attention to its unique properties rather than to its interaction with other sounds. To work with Schafer’s metaphor borrowed from perspective drawing: sound was handled here as figure not as ground (Schafer, 1994[1977]: 152).

Two works created for Sound Proof 4 in 2011 embraced the approach of foregrounding particular sounds in order to amplify their qualities and make possible a more considered study of their form and function: Roc Jiménez de Cisneros’ *Rave synthesis* and Leigh Clarke’s *Squash*. Responding to the theme of sound as legacy, both artists chose to express that sense...
of transmission from the past (in the case of Jiménez) and transmission to the future (in the case of Clarke) via the psychological associations connected to a particular sound. Sound Proof 4 linked the legacy aspirations of London 2012 to the legacy left in Barcelona by the 1992 Games, seeking in that comparison a richer understanding of the cultural heritage aspirations of the Olympics in general. There was a playful quality to both works expressing the artists’ personal positions towards legacy (in the case of Jiménez) and towards Olympic legacy (in the case of Clarke).

“We have split the sound from the maker of the sound. Sounds have been torn from their natural sockets and given an amplified and independent existence” (Schafer, 1994[1977]: 90). Schafer wrote this in 1977 as his definition for a phenomenon new to the twentieth century that he named schizophonia. It could also serve as an apt description of Jiménez’s ode to 1990’s rave music entitled Rave synthesis, as part of his Continuum, expanded installation. By zeroing in on particular tones and riffs related to rave music and replaying them in continuous, repetitive sequences, Jiménez was expressing the core values embedded in the music of that time. As well, he was releasing the archetypal qualities inherent in those sounds. With Rave synthesis, Jiménez achieves a hypnotic yet dizzying composition to convey the key legacy of 1990s rave music: its signature repetitive riffs and continuous tones that have an unmistakable influence on the electronic music of today. Adapting a key principle from musique concrète, Jiménez packaged the sound work as a cassette tape—the medium for music of the 1990s—and the sound work could only be heard if played on a cassette player, which was not made available at the exhibition. The cassettes were presented in a simple cardboard box to be taken by visitors. With the tones and riffs separated from their musical context and the sound work itself inaccessible unless you had 1990s technology to play the work, there was a tearing apart of the key components of the piece; lending the work a distinctly schizophonic character.

For Squash, Clarke follows a more traditional trajectory for recording and playing sound objects. He recorded an actual session of playing squash and had the recording looping on headphones within his installation in the exhibition. The installation consisted of a full-size squash court with all the equipment that had been used for his performance on the opening night left intact: racquet, balls, inks and rollers. For the performance, Clarke had inked up the squash wall with lithographic ink and proceeded to make a print by hitting the ball against the wall. Visitors to the space would stand inside the empty squash court, put on the headphones, look at the markings left on the wall and imagine the print being made. Expressing “his passion for art and his frustration with sport” (Clarke, 2011), Clarke made his position quite clear regarding Olympic legacy: he worried about the immediate impact to local residents and businesses and questioned the longterm benefit after the Games left. Listening to the isolated sound of the ball being hit back and forth in the now empty court lent the installation a forlorn and hollow quality, as if it had been left abandoned.

In contrast to those two works, the experience expressed in the sound works by Jem Finer (Sound
Proof 1, 2008) and Jon Fawcett (Sound Proof 4, 2011) is a distinctly human one. Their works give voice to the magical elements transmitted by individuals to one another through sharing an experience. Often not acknowledged, these transmissions form a fundamental part of human experience. Fawcett's work, Radiance, encompassed the greater locus of London. His approach to legacy was on the one-to-one level. And so he created what he referred to as “a huge energy network” (Fawcett, 2011) putting a group of individuals through a hypnotic visualisation that linked them to one another at separate points across the city. For the listener at the exhibition space, the recorded experience could be accessed via headphones—“the ultimate private acoustic space” (Schafer, 1994[1977]: 118)—so that they too could participate in the energy network.

Finer’s The Rise and Fall of the Olympic State is an expression of his experience creating the commission for Sound Proof 1. There was a group visit by bus organised for the artists in the exhibition and Finer himself did a performance at the site involving a troupe of trumpeters. Both of these feature prominently in the work. After an initial segment showcasing a delicate soundscape of the site, Finer followed with a hard-edged digitised reconstruction of the bus guide’s narration during the tour—infusing the recording throughout with a harsh, mechanised sound. He ended the work with recordings from his performance at the site, then surrounded by a massive blue wall. For the performance, he invited a troupe of musicians to march along the perimeter and trumpet down the wall. As they played, they crossed the epicentre of the site for a grand finale in front of the stadium site, where workers cheered and applauded. There was a narrative feel to the work but the absence of segues between segments left the listener more with impressions; allowing the sounds observed, created, and captured by Finer to express more vividly the otherworldly qualities of the site and to articulate as well his own clearly stated objections to the works taking place.

Sound: an active cultural memory

A number of the pieces in Sound Proof conveyed active cultural memories of the people and the places in and around the Stratford site as it was being reshaped into an Olympics complex. Vessna Perunovich’s Nine Stops To Stratford (Sound Proof 1, 2008), John Wynne’s Faster Higher Stronger (Sound Proof 2, 2009), We Sell Boxes We Buy Gold’s archive of interviews (Sound Proof 5, 2012), and Jonathan Munro’s twenty twelve (Sound Proof 5, 2012) each in their own way preserved moments in time and transmitted them as sound works.

These art making actions served to unearth and reveal traces of the cultural heritage of the area and to preserve them as part of the Sound Proof canon of works. Cultural historian Jakob Burckhardt makes an important distinction between messages and traces when discussing heritage transmitted from the past. Messages he sees as direct addresses to posterity—ad campaigns for recognition by future generations. Traces—or better yet unintentional traces—convey cultural memories with a forthrightness and authenticity often lacking in the messages from the past (Assman, 2008: 98). One is massaged and mediated, the other is intact and unadulterated.
For Faster Higher Stronger, John Wynne revealed an alternate side to the Olympics. He featured the dispute and protest at different times and locations around the world by local communities affected by the changes wrought as a result of the Games. These cultural traces are not typically collected or distributed in the official canons by Olympics hosts. So Wynne did the important work of preserving and valuing a perspective often relegated to the heap of cultural forgetting by official channels. Understanding the key role that art plays in cultural memory, Wynne embedded images of subverted Olympic logos along with a soundtrack consisting of booing, hissing, applause and cheering—expressing the dual nature of a global success story with its accompanying problems at the local level.

This was certainly the focus of interviews conducted during 2007-2008 by We Sell Boxes We Buy Gold (WSBWBG) in and around the Stratford site. Focusing on residents and merchants being moved on as a result of works, the artist collective initiated artist walks around the site and recorded the sessions as discrete works. Having produced a comprehensive volume of interviews, WSBWBG presented their archive of works at the last Sound Proof exhibition, which coincided with London 2012. As Aleida Assman explains in Canon and Archive, archives are "storehouse(s) for cultural relics…de-contextualized and disconnected from their former frames which had authorized them or determined their meaning…they are open to new contexts and lend themselves to new interpretations" (Assman, 2008: 99). There is little room in the official canons and little chance that these memories could be included and circulated in society. Efforts by WSBWBG and initiatives like theirs operate actively to keep these memories alive and to maintain a continuous presence for views other than officially sanctioned ones.

Jonathan Munro followed a similar trajectory in twenty twelve, an installation commissioned for Sound Proof 5. He started the piece by organising a group interview by children living in Hull (in the North of England) where they queried each other about their hopes and aspirations in relation to the upcoming Games. From those joyful, hopeful and inspirational conversations, he created a sensor-based installation that would set off different strands of the responses as the listener moved around in the enclosed and darkened space. The sounds would emerge from different locations in the installation depending on where the listener was positioned. Separating out the responses from each other made it possible for them to be recognised as unique gestures rather than as a generalised group texture (Schafer, 1994[1977]: 159). Each voice was given proper weight and recognition as a discrete trigger—expressing through this activation its value as a cultural memory.

Vessna Perunovich’s Nine Stops To Stratford played with a different modality of cultural memory. Rather than positioning itself as a reveal, it quietly expressed the complexity of emotions that surrounded the site as construction works commenced in 2008. Perunovich achieved this by threading one local man’s views regarding the coming Olympics into a twenty minute soundscape; moving freely from the good, to the bad, to the ugly. The man’s excitement about the upcoming Games, his dismay at the loss of businesses
and jobs for local workers as he watched a building being demolished at the site, were all mixed in with his gentle musings about the little things that actually really count. In this way, the piece gently pulled apart different sides of the Olympics story, portraying it more like “a shifting and movable field of tensors and forces”. (Ziarek, 2004: 7) This approach allowed the work to rupture the expected storyline, freeing relations from power structures so that all sides of the elements in the narrative surrounding the Games could be observed and one man’s views into it could be clearly heard.

SOUND: A MEMORY TRACK

There were works in the series that built up a sense of time passing and unfolded as layered historical records. They memorialised a time and a place in relation to themes expressed in Sound Proof and provided unique views into how memory operates. Five works in particular mined the rich territory of sound as memory track: Barbara Held’s Overtime (Sound Proof 4, 2011); Sheena Macrae’s Beginnings, Middles and Ends (Sound Proof 2, 2009); Sara Heitlinger and Franc Purg’s What Is It That Moves Us? (Sound Proof 1, 2008); Miller and McAfee Press’ A Machine Winds On (Year After Year) (Sound Proof 1, 2008), and Isha Bøhling’s Prize (Sound Proof 2, 2009).

For Overtime, Held collaborated with a group of artist musician friends to reinterpret a memory that she held in her mind related to Barcelona 1992. During the time of the Olympics, Held had attended an impromptu live music session by Matt Davis at a venue in Barcelona. The performance had a huge impact on her and she and Davis became longtime friends. For Sound Proof 4, Held revisited Davis’ memorable piece and asked him to write a score for it. She then invited musicians Rhodri Davies, Angharad Davies and Tom Chant to join her and Davis in performing the score in isolated sessions, each interpreting the musical notation in his/her own way. Held’s orchestration of the layered piece—five interpretations of one score—calls to mind an observation by Walter Benjamin about the act of remembering as “an echo awakened by a call” (Birdsall, 2009: 179).

Held made the call and her friends responded with musical echoes. As Carolyn Birdsall explains in Earwitnessing: Sound Memories of the Nazi Period, “as an echo sounds out, it usually reflects off different surfaces, causing it to lose momentum or pick up extra information. As such, the echo allows for alterations produced by its surroundings.” (Birdsall, 2009: 179) And so it is that Overtime reshaped Held’s original memory into new forms, integrating the new and unexpected with the familiar associations already there.

While Held expanded her memory out into multiple reflections, Sheena Macrae compressed hers into a single mass. Working with the theme of sound as archaeology for Sound Proof 2, Macrae brought her mind back to her times long ago in a warehouse studio—a location that in 2009 was being excavated to make way for the Olympic stadium. Her musings regarding the site brought forth many associations from that deep past and combined with more recent memories to eventually bring the artist back to the present. Such crossing over of time frames led to Macrae’s composition Beginnings, Middles
and Ends. For that piece, Macrae folded her memories across time into one another mixing beginnings with middles and ends to convey another type of recall; one where the present contained all time periods at once. The act of bundling the discrete traces together formed a dense core and allowed the artist to express the essence and purity of emotion that the memory of the site held for her.

Moving into a more literal expression of memory track, artists Sara Heitlinger and Franc Purg created a fictitious narrative for Sound Proof 1 that brought into sharp focus their view of the Olympic Games as a tool for totalitarian forces. Entitled What Is It That Moves Us?, the sound work consisted of two tracks; one a narrative of a suicide bomber preparing to detonate during Olympic competition, and the other a monologue by an athlete who just came last in his competition. Heard as a binaural work via headphones, the work operated two false memory tracks at once, disorienting the listener from the expected narratives surrounding the Olympics. The work instead brought into focus the underlying fear of terrorism linked with events of this stature and reminded listeners of the under-reported feelings of failure felt by the losers of Olympics competitions. Through this sonic confrontation, the artists exploded the fears that lie hidden under the shine of the Olympics to reveal a more insidious fear that they sense keeps populations in general pliant to authoritarian regimes.

Also for Sound Proof 1, artist duo Miller and McAfee Press created a piece exploiting the evocative properties of sound to nudge the listener out of thinking and encourage a more focused listening experience. In A Machine Winds On (Year After Year) the artists threaded the theme of time starting with a monotone spoken word piece that gave way to a sonic exploration of the mechanical workings of a clock. The sound of gears in the background functioned as metronome, with the attack of ticks and tocks and rings and bells providing narrative tension to announce shifts and movements. The emphasis of this piece was not so much on time passing, but on how time works; or more precisely, on how we work time. Bringing the listener’s full attention to bear on the automated operations concerned with timekeeping, the piece succeeded in unravelling any search for meaning and content in the work. The artists constructed a work here in which listeners could submerge themselves. In this way the piece tinkered with the memory track properties of time and brought attention to the workings of the track itself.

Isha Bøhlings Prize is a piece that fully engaged with the meaning-making properties of discrete sounds to evoke memory. Working with the subject matter of her grandmother’s career as a kayak champion, Bøhlings explored a range of emotions through the use of two instruments: the actual prizes her grandmother won in competition and the artist’s own voice. The piece begins by the ringing of the prizes as if they were bells. This sequence operates like an announcement or a calling out. In this case, the artist was commemorating her grandmother’s achievements and recognising the sorrow she must have experienced in boycotting the 1936 Olympics for political reasons. Using her own delicate and haunting singing and the chiming of the prizes to great effect, Bøhlings embraced the symbolic resonance of the two sounds to bring the listener into
a well of emotions ranging from joy to nostalgia to a sense of loss. Like a catharsis, the artist released the full gamut of emotion accessible when remembering her grandmother through the act of sound making to produce a work of power and beauty.

**Conclusion**

Sound Proof developed a comprehensive catalogue of works during the period 2008 to 2012 preserving sonic memory traces of London 2012 as it evolved over time. Whether as soundscape, experience, active memory or memory track, the seventeen sound works commissioned expressed the sense of liminality palpable at the Olympics site during the time of construction. The ephemeral and delicate vulnerability of that time and that place is in this way now part of the legacy of London 2012.

**References**