Grasping the Intimate Immensity: Acousmatic compositional techniques in sound art as 'something to hold on to'

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This article explores the accessibility of acousmatic compositional approaches to sound and installation art. Principally of concern is the consideration of *intimacy* to create a means of 'connecting' with an audience. Installations might be said to explore ideas of intimacy in two ways which increase accessibility for the installation visitor: through cultivating installation–visitor relationships, and through encouraging visitor–visitor relationships. A variety of ways in which various acousmatic compositional techniques relating to intimacy might be brought to bear on and operate as a way of drawing a listener into a work are explored, in particular as they relate to the consideration of space and spatial relationships. These include recording techniques, types of sound materials chosen, and the creation of particular spatial environments and listening conditions. Along with a number of instances of sound art provided by way of examples, my ongoing GRIDs series of sound sculptures will provide a case study of works related to an acousmatic aesthetic where these concerns find an outlet.

1. INTRODUCTION

> [P]oets help us discover within ourselves such joy in [perceiving] that sometimes, in the presence of a perfectly familiar object, we experience an extension of our intimate space. (Bachelard 1994: 199)

Much of my research to date has been concerned with the relationship between acousmatic compositional practice and sound art. In Batchelor 2015, I attempted to identify some potential overlaps and synergies between these two apparently incompatible forms which might prove fruitful when applied to broader, sound art-related practice. A not inconsiderable part of my discussion concerned the relevance of acousmatic music to a wider listenership, and how such work might be brought to new audiences. I argued that there is much to be gained from the application of acousmatic compositional techniques and practices to sound art contexts, and that detailed 'musical' as well as referential listening might be encouraged in real-world contexts if appropriate strategies are implemented to accommodate it.

This article goes further in exploring the *accessibility* of acousmatic compositional approaches to sound and installation art. Principally of concern is the consideration of *intimacy* to create a means of 'connecting' with an audience. Installations might be said to explore ideas of intimacy in two ways which increase accessibility for the installation visitor: through cultivating installation–visitor relationships and through encouraging visitor–visitor relationships. In other words, in the way the materials of the installation itself provide points of connection with the visitor (i.e. inviting them in), and encourages a sense of community *between* visitors. In either case the experience of intimacy might be said to help provide 'something to hold on to' (Landy 1994): in the latter case through generating a sense of close communion between visitors through shared experience; in the former through setting up a condition implying close relationship between the visitor and the materials of the installation and, by extension, its creator.

A variety of ways in which intimacy might operate as a way of drawing a listener into a work are explored, in particular as it relates to the consideration of space and spatial relationships. These include recording techniques, types of sound materials chosen, and the creation of particular environments and listening conditions. Acousmatic techniques and the 'presence of a perfectly familiar object' (Bachelard 1994: 199) can be the key to such intimacy. Along with a number of instances of sound art provided by way of examples, my ongoing GRIDs series of sound sculptures will provide a case study of works related to an acousmatic aesthetic where these concerns find an outlet.

2. WORLDS OF INTIMACY

Defined as a 'fuzzy concept' by Prager (1997: 14), intimacy is usually bound up with human interrelationships. In 1963, Edward T. Hall coined the term *proxemics* to describe a system considering the human use of space and social relationships. Within this system, he describes four 'uniform distances which [humans] maintain from each other' (Hall 1990: 113). Intimate distance represents the closest of these possible distances,

ranging from 0 to 45 cm. At intimate distances, 'sound, smell and feel of the breath all combine to signal unmistakable involvement with another body' (116). This is the distance of, at closest, 'love-making and wrestling, comforting and protecting', or at the very least the ability to make tactile contact (117).

Prager defines intimacy in terms of the behaviour usually associated with this sphere – reciprocal expressions of affection, touching and closeness. She suggests that intimate experiences 'can be usefully defined as having affective and cognitive/perceptual components. The affective component consists of positive involvement in, interest in, or feelings about oneself, the interaction, and the partner. The cognitive/perceptual component consists of each partner's perception that there is an understanding between the partners' (1997: 22). As such, while aggression can of course occur at intimate distances, intimacy is considered to include almost universally positive experience 'because conversations[/interactions] that generate negative affect between the partners are not usually experienced as intimate' (22).

The pursuit of a blurring of art and life as introduced by Allan Kaprow during the 1960s was very much about the infiltration of intimate, often domestic circumstances into the stuff of art; indeed the notion of household appears often in his writing and work. Kaprow's 'Women Licking Jam off a Car', as the title suggests, involved a group of women audience members instructed to undertake the action as part of the happening *Household* (1964). Such a condition very much persists into contemporary installation practice. Rosenthal defines four categories of installation, classified according to primarily spatial and contextual considerations. Defining the 'filled space installation', he identifies traits of the intimate closely bound up with installation practice. The 'Enchantment' type, for example, presents a self-contained environment which 'draws heavily on theatrical roots, the suspension of disbelief being chief among these. One witnesses an extreme vision of reality or may have the sense of being inside the artist's mind, indeed, a simulacrum of a consciousness is created'. He goes on to suggest that '[t]hrough … physical convergence [of space, time and the world] and the use of commonplace materials, [the Enchantment] can … potentially comment on the human condition in a way that is profoundly effective because it is replete with the substance of life' (Rosenthal 2003: 27). The embedding of oneself in the imagination of another is to surrender to, and be immersed in another's imagination.

Steve Green's *Back of Beyond* (2016), a multichannel light and acousmatic sound installation, exemplifies the Enchantment. Designed as a 'fabricated sonic ecosystem', it provides, using both natural sounds (crickets, birdsong and dripping water) and pitched droney

material, 'the audible sensation of being in a forest' intended to encourage 'deep listening and reflection' (Green 2016). Meanwhile, Janet Cardiff and George Bures Miller's *Storm Room* (2009), a filled space 'Impersonation' according to Rosenthal's system, is designed to be a facsimile of a type of space. Created in an abandoned dentist's office in a traditional Japanese house, it is a multisensory immersion using ambisonic eight-channel sound track coupled with flashing lighting and controlled water jets to emulate an approaching storm, with rumbling thunder over loudspeakers followed by cascading water and 'lightning'. The immersive character of both of these works offers 'intimate worlds that one observe(s) in a kind of voyeuristic fashion, the viewer having the sense of being on the verge of trespassing on some private place' (Rosenthal 2003: 39).

Various sound installation artists might be argued to have explored interfacing with audiences through intimacy. Max Neuhaus's *Drive-in Music* (1967), a work widely recognised as having been the very first sound installation, did so by inserting itself directly into (or invading) individuals' personal space, its sounds being 'piped' through a series of radio transmitters along the side of a road in Buffalo such that they emerged on drivers' car radios as they travelled past, presumably interrupting existing broadcasts. While these may have successfully 'intersect[ed] seamlessly with audiences' everyday lives' (Ouzounian 2008: 59), such interventions do not obviously imply a getting-on-board of the listener to the experience, more a being-subjected-to.

There are other instances of artworks where the 'balance of power' in a transaction of intimacy is not equal, or at least where reciprocity between participants in an intimate situation is on unequal terms. Indeed, in performance art, the boundaries to propriety in intimate circumstances can actively form the basis of the artwork: Yoko Ono's *Cut Piece* (1964), in which members of the public are invited to cut into Ono's clothing as she sits passively on a stage, is clearly designed to explore the elicited discomfort of such a scenario. A more recent example is Helena Goldwater's *Hot Soak* (2005) in which the artist lies (clothed) in a bath, catching the drops of water from a melting ice cube held by visitors in her open mouth (Goldwater n.d.). So too do some sound installations take advantage of the encroachment of personal space as a means of exploring discomfort. In Marnix de Nijs and Edwin van der Heide's *Spatial Sounds (100dB at 100km/h)* (2000), the experience of invasion of intimate space approaches the (seemingly) dangerous: a large speaker, housing a sensor and rotating on a long arm, tracks visitors as they stand or move around the perimeter of a given installation space, spitting impulses at them. Periodically it accelerates into a

100 kph spin. If the installation space is constrained, both actions convey threat: the first of surveillance, the second of physical impact (van der Heide n.d.).

All the above said, Prager goes on to identify that intimacy does not preclude 'sharing unpleasant emotions with another person; for example, combat veterans talk of intimacy on the battlefield. Here, negative emotion is not directed at the partner or the interaction but to an external target' (Prager 1997: 22). A visceral example in sound art is John Young's *To the Red Sky* (2015), which presents the recorded memories of First World War veterans alongside electroacoustic sound, aiming 'not so much to paint a graphic picture of' the war itself (although it certainly does this), but 'to create an experience bringing us closer to empathy with the sentiments of these [individuals]' (Young 2015). Young seeks to create a 'mosaic of collective memory' through the work. And collective memory is also what provides the sense of 'inner circle' or closeness and shared experience that in turn produces that sense of intimacy.

For the most part in what follows, intimacy will be discussed as having been subscribed to by all involved – that is, a reciprocal agreement between two or more participants; a *sharing* (Prager 1997: 21). Just as in personal interactions where 'sharing is reciprocal, each partner in an interaction shar[ing] something similar with the other, verbally or nonverbally' (21), similarly, we are looking at a reciprocal engagement between agents in the installation experience. This might take two forms. The first is between installation and audience. Here, the installation might carry a sense of warmth, personality and invitation, inviting the audience into the experience. Such an agreement is inherent within the subscription of the audience member to the electroacoustic concert hall experience in traditionally presented acousmatic music. It is less obvious with sound presented in the public domain. The second circumstance of intimacy is that occurring between audience member and audience member. Prager identifies that intimacy can occur through 'experiences of cohesiveness': '[t]wo people can enjoy completing a task together (agentive cohesiveness) or watching a ball game together (communal cohesiveness) without also engaging in intimate interaction. However, cohesive activity, such as sharing a meal, may often serve as a backdrop for intimate interaction' (Prager 1997: 25). As can the sharing of a common experience: audience members may become part of a temporary community within a given scenario.

3. MICROPHONE SPACE AND THE ACOUSMATIC SOUND

Berenek describes acoustic intimacy simply as being 'the aural sense of being in proximity to [a performer], as if the space were small' (Blesser and Salter 2009: 218). Close microphone techniques allow the capture

of acoustic cues associated with such conditions – an absence of reflections ('delay between the direct sound and the onset of the first sonic reflections: small delays produce aural intimacy' (218)), and high-frequency bias (or low frequency bias where dynamic mics are involved). The microphone thus affords us access to this intimate space, whose nature can be deduced from the spectromorphology of the recorded sound, and which is preserved irrespective of how it is later played back:

> Performed gestural space does not require a 'natural' or feasible performance acoustic in order to convey its indigenous intimate or personal space. I can decode gestural space regardless of whether I hear an acoustic around the sound, regardless of whether the image is mono or stereo, whether it is distal or proximate, or whether it is with me in the same arena or in another 'room' altogether. (Smalley 2007: 44)

Such techniques by extension permit 'the expansion of musical space into the listener's psychological private sphere [which] can be a powerful means in musical expression and communication, particularly in connection with referential sound material' (Henriksen 2002: 60). Close microphone techniques are commonly applied in source recording for acousmatic music. Stavropoulos discusses specific acousmatic works concerned with intimacy and proximity, identifying Pete Stollery's *Shortstuff* (1993) and Manuella Blackburn's *Switched On* (2011) as examples, in which sounds are designed to be '"up front" with little middle or background' or inhabit 'microscopic sound spaces picked up by close-miking' (Stollery and Blackburn in Stavropoulos 2018: 114). This he does in the process of presenting his own microphone array design in order to capture complex spatial behaviour using a multi-microphone setup. His approach increases what he describes as a 'strong spatiality and a perceived increased materiality/tangibility' of the sound. All of which contributes to the invitation to *listen in* to the sound materials. So acousmatic music, in its very presentation of recognisable sounds in close proximity, could be approachable for this reason, as discussed below in relation to my own work *Studies on Canvas* (2004).

4. SWEET NOTHINGS: THE VOICE

Nowhere is intimacy through close miking more effective than when recording the voice, which 'offer[s] the listener the most familiar and most versatile instrument there is' as something to hold on to (Landy 1994: 54). It is, after all, 'the most direct embodiment of human presence, and offers us the most intimate of sounds, when captured close up' (Smalley in Kim 2011: 9). Suk-Jun Kim's *In Tune, Out of Tune* (2009) is an eight-channel installation for which

participants were asked to hum a memorable song from childhood. This would contribute to a pool of hummed fragments presented as collective memory. Humming represents community and connectedness, through which we 'find ourselves in an inexplicable world of intimacy' inviting us to 'perhaps hum along now and then, and keep on humming!' (Hein in Kim 2011: 19). Equally, there is 'something mysterious about acoustic intimacy, the murmuring of low voices together … where not only words play a role but also the interpersonal relationship, the close communication of direct whisper-contact' (18). It represents unaffected delivery and the non-commercial; '[i]t is, as it were, the opposite of our music industry, the opposite of Muzak and all its derivatives, including the constant streams coming through millions of headphones' (18).

The act of asking people to hum something so deeply personal is 'seeking the person's permission to be invited into his or her intimate, personal space … If they agree to hum, you are in a contract with them bound by a certain trust, one that usually would take longer and require considerably more effort to build' (Kim 2018: 2). This reveals another aspect of the intimacy of relationships: '[s]ince intimacy involves revealing the vulnerable parts of the self, partners must trust one another to continue to interact intimately, almost by definition'; thus '[i]ntimate interactions provide partners with the opportunity to demonstrate their trustworthiness' (Prager 1997: 25). To be presented with Kim's work is to be invited into the realm of such a trusting, intimate relationship.

'[H]ums can lead to a study of the intimate spaces, such as the bedroom, the bathroom, the study, even phenomenologically re-constituted spaces in public space' (Kim 2018: 27). Playback of such things in any context represents an invitation into the private, intimate space of the individual. Playback in the real world represents another form of vulnerability to scrutiny.

'When offered to others as an invitation – usually to those who are close to themselves, and in rare occasions, to strangers – the emotive and intimate attributes of humming do not lose their power but in fact expand and are empowered by sharing' (Kim 2018: 5).

Intimacy extends to the presentation of traditional musics, whose performance would commonly be in the intimate circumstances of small community spaces (e.g. the pub) and/or the domestic, 'parlour' space. While Ouzounian expresses reservations about 'cultural transgressions' committed through artists who extend the language of traditional music into the realm of contemporary sound art (Ouzounian 2013: 53), such appropriation nevertheless permits an insight into the intimate circumstances – small community

gatherings – in which such music is traditionally presented.

Similarly, Susan Philipsz's *Lowlands* (2010) is made the more approachable by the intimate nature of both its subject matter and its delivery. Philipsz presents a sixteenth-century folk song in her own wavering, untrained voice over speakers under three bridges spanning the River Clyde in Glasgow. The vulnerability and the non-professional nature of her delivery enhance the domesticity, and therefore intimacy, of the result: 'Everyone can identify with a human voice. I think hearing an unaccompanied voice, especially an untrained one, even if it's singing a song you don't know, can trigger some really powerful memories and associations' (Philipsz in Corner 2010). By these means, intimacy, in this context, was achieved in spite of the very public nature and urban–industrial circumstances of the setting.

But it is not just the voice in delivery that can convey intimacy. In Janet Cardiff's *Forty Part Motet* (2001), a performance of Thomas Tallis's *Spem in alium* (*c*.1570) in which each of the 40 voices is recorded independently and played back over 40 loudspeakers, the compelling nature of the work lies in its intimacy and connectedness to the performers of the work: the entire performance is captured, including the 'whispered comments, coughs and shuffles of each singer' preceding and following the actual performance. As such the listener is granted access to the community of singers at a specific moment in time: 'it made the people into real people', including through the 'breath, collectively, of these 40 different singers' (KQED Arts 2015).

5. FOR YOUR EARS ONLY: HEADPHONE LISTENING

Many installations invite audiences to experience the sound materials of a work using headphones. Quite often this is a practical strategy, allowing for isolated listening in busy spaces to ensure audibility of the installation (or to avoid 'bleed' of sound materials from the installation into public spaces where it might not be welcome). However, it can inevitably accommodate further opportunities for close and careful listening: '[t]oday, if you put on binaural headphones by using spatial synthesisers, an audio engineer can place a virtual musician two inches from your left or right ear, well within your intimacy sphere' (Blesser and Salter 2009: 35). Or indeed well within your own head: Bernhard Leitner's *Kopfräume–Headscapes* series (2003) 'are works specifically created for the interior of the head', which is 'conceived as hollow volume, as a globe-like receptacle for time-based acoustic-geometric spaces' with a view to 'contemplating the interior, the inside – however unfathomable it may be' (Stankievech 2009).

Figure 1. BEAST *Viewpoint* (2001), Aldeburgh Beach
(photograph: David Berezan).

The promise of a bespoke and personal experience can also be an incentive to engage with a work, particularly when carrying implications of being party to secrets, the invisible, the behind-closed-doors. Headphones inherently carry a suggestion of *listening in* in this way. Such is the case with Christina Kubisch's *Electrical Walks*, which use the system of electrical induction within headphones to amplify the electromagnetic fields of real-world urban landscapes (Kubisch n.d.). And while not explicitly for headphone listening, Janek Schafer's *Recorded Delivery* (1995) involves recordings made by a voice-activated dictaphone as it travelled through the postal service in a parcel, intermittently capturing the private discussions of Royal Mail workers *en route*. Listeners were provided with a listening station for one, in which speakers positioned in close proximity to the head played back these sounds. In these works both the sound material under scrutiny and the manner of its discovery involve intimacy, which in turn provides an incentive to listen.

The effectiveness of in-ear delivery is especially evident in several of Janet Cardiff's soundwalk works. In her soundwalks *Villa Medici Walk* (1998) and *The Missing Voice (Case Study B)* (1999), participants, wearing headphones, are guided around cities (Rome and London (Whitechapel) respectively) by Cardiff's disembodied voice, recorded binaurally and emerging from *within* the head, yielding an intimacy emerging from 'placing the auditor directly in the position of the artist as she made the recordings. We walk in her footsteps, we hear her breath in our ears … our experience of the actual surroundings through which we walk is heightened in a surreal and unsettling way' (Tubridy 2007: 7). The narrator's voice effectively becomes the participant's own: 'It's as if I am part of their body' (Cardiff in Walsh and Enright 2001).

In 2001, several members of the Birmingham ElectroAcoustic Sound Theatre presented a work entitled *Viewpoint*, a project which involved the assembly of eight windbreaks on Aldeburgh beach, each forming a small compartment containing a single deckchair and headphones. Seven of these compartments opened to the sea, each facing one of the countries directly across the North Sea from Aldeburgh; the eighth compartment faced Aldeburgh itself (see Figure 1). The eight composers involved were each invited to choose one of these countries and produce a piece inspired by a section of its coastline. Along with extracts from tourist brochure texts describing the portrayed coastline, my own contribution involved sounds referring as much to the beach on which the installation took place (a steep pebble beach with choppy waves) as to that to which the text refers (the bay of Wissant, France, with its long sandy beaches and rocky headlands). The use of binaural recordings and headphone presentation of the piece was important when played in context since, for example, the fabricated footsteps on pebbles were often indistinguishable from those made in reality by walkers on Aldeburgh beach; the resultant sense of spatial and contextual displacement was not only effective but also quite unsettling. Overall the installation cemented a groundedness in present and individual experience (aided by the complementary olfactory and tactile experiences of seasalt and breeze) even while depicting a remote place, the windbreaks and single deckchair serving to enhance the sense of the personalised experience.

6. PERSONALISED TIME/SPACE EXPERIENCE

Acousmatic music is typically presented in a concert setting to (predominantly) a practised community of listeners who subscribe to an established tradition of fixed seating for an extended duration, circumscribed listening conditions (darkened environment; no visual stimulus) and (often) an entry fee. Sound and installation art, by contrast, can be presented in arenas more agreeable to 'casual' public interest – a gallery (accommodating walk-in/walk-out engagement) or public space. This makes it accessible to the uninitiated who will likely not have developed listening skills pertinent to, or any predisposition towards, the appreciation of intricate compositional subtleties engineered into a work.

Equally, it cannot be assumed that listeners will be conscious of, or even around an installation for sufficiently long to '[trace] connections between the poetic construction of formal-structural possibilities and the aesthetic perception of formal structures' as in acousmatic music (Basanta 2015: 172). Nevertheless, this

does not preclude appreciation of shorter-term gestural or phrasic constructions that 'make sense', either within themselves or within the context of the installation site (i.e. where it is experienced). The composer might adopt certain strategies that make a work work within the context of an installation and for the less experienced listener.

Basanta proposes two principal time structuring strategies common to sound/installation art. The first he describes as a fixed order of 'states' that repeats indefinitely (i.e. a loop) (2015: 178). The musical narrative within such a strategy might be linear and developmental in the way of an acousmatic work; however, since the full loop may run for longer than the visiting time of an individual listener, a composer might wish to contrive an arch structure or some other means by which the work may effect a logical return to an opening state (logical meaning 'making sense' within the spectromorphological or referential logic established throughout the rest of the sonic framework). Basanta compares his second proposed structuring strategy to Stockhausen's notion of 'moment form', whereby musical 'scenes' or states are presented in indeterminate order while nevertheless belonging within a notional whole. These moments should be self-contained, since none can explicitly follow from another. Within these moments there may be musical development, but on a scale that can be experienced within the short term. Basanta suggests that nested compositional arcs may exist simultaneously in multiple formal levels. This makes visitors more likely to experience 'some sense of movement or development towards an as-of-yet unattained "goal" or manifestation, regardless of the time period in which they explore the installation' (2015: 179). I have taken this strategy myself in my *Studies on Canvas* work, discussed below, whereby each study can be taken as an independent coherent musical moment which could be presented in any order.

As has been comfortably established by Robin Minard (1996), among others, the sound installation moves the emphasis on time in a sonic work to one on space. Meanwhile, one of the aspects of acousmatic music most immediately compelling to the uninitiated listener is similarly the deployment of sound in space. However, the rigid spatialisation strategies imposed by the composer when composing for the concert hall may be less relevant or appropriate to installation spaces. As Basanta points out, the energetic perspective as conceived by the composer, while having an impact on the common experience of individual visitors, actually 'bears little resemblance to the experience of installation works where "space [becomes] a pulsating encounter, created through movement of sounds, modified by movement of the person experiencing the space – movement …

as space-shaping temporal process; space as time-space"" (Kern in Basanta 2015). In other words, a visitor's migration around the installation space can inform the *experienced* structure of a work as much as that imposed by the composer.

An alternative, more flexible approach to space which 'address[es] the ways in which a visitor reconfigures their experience to sonic media through movement' (Basanta 2015: 173) is therefore warranted for the acousmatic installation. Sabine Schafer and Joachim Krebs's typology of installation spatialisation categories provides alternative means of experiencing spatialisation using loudspeakers to that of the concert hall, accommodating and celebrating the individual experience of the individual listener. These include projecting in a single direction (allowing standing 'in front of' the sound object), projecting outwards from a fixed centre (allowing circumnavigation of the sound-making object), projecting inwards towards a centre (experiencing from *within* the sound object), and multiple layers of projecting inwards (an elaboration of the last, experiencing from within *several layers* of speakers) (Schafer and Krebs 2003). All these accommodate the mobile listener.

Tristan Perich's *Microtonal Wall* (2011), which consists of '1,500 speakers, each playing a single microtonal frequency, collectively spanning 4 octaves across 25-feet', positively insists on the exploration of different positions of audition. Standing at a distance provides the experience of a panel of 'noise' from the entire speaker wall, while at close range individual sine waves can be heard from each speaker at different frequencies along the length of the wall. The listener's choice of listening position is undoubtedly empowering and a way into the work. An equivalent for the acousmatic work might be the pursuit of fluid soundfields that remain coherent irrespective of the position/orientation of any audience member, such that listeners at any point within a given space receive a unique subjective experience of front, sides and rear, proximity and distance. But this can require a large number of loudspeakers. The large-scale coordinated multichannel speaker arrays required for the high-quality presentation of acousmatic works are usually seen as the preserve of institutions who can provide the resource required for reliable, high-quality signal processing and sample-accurate digital audio conversion. Recent developments in low-cost computing, however, allow affordable distributed networks which, while requiring certain compromises and modifications to workflow, can nevertheless accommodate rich acousmatic soundscape generation over multiple channels at a relatively low cost.[1] This in turn

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[1]There are of course implications of low equipment costs in terms of audio fidelity, which is normally considered to be critical in the presentation of acousmatic music. However, Robin Minard points to the remit of the sound installation being less towards high fidelity than towards 'real spatial experience': '[i]n the case of sound

permits the development of particularly extravagant multichannel arrays which invite the generation of extremely intricate and immersive spatial sound environments, in turn encouraging ambulatory investigation and scrutiny.

7. INTIMATE IMMENSITY: BACHELARD

A consideration of intimacy informs many of my own sound art works, manifested in a variety of different ways. All my recent works are part of a series of installations entitled GRIDs, the title encapsulating the tight geometric arrangement of speakers which affords the close spatial detail intended in each work.

I have described my *Studies on Canvas* (2004) installation elsewhere (Batchelor 2015); the work 'presents a flat panel array of 30 loudspeakers in a 6×5 arrangement behind a blank canvas (c.1.8× 1.5 m)'. In this work, from the outset I was interested in the notion of the still life, a painting which both depicts and is presented primarily in an intimate domestic setting. In the still life, items at meso-scale (e.g. an apple and wine bottle, a vase of flowers) are presented in isolation as studies for close scrutiny. In the case of the canvas, these

> still life's amounted to focused exploration of object behaviours across the canvas, for example marbles rolling down a table-top, a pool of bubbles, clattering wood, and ice gestures. All of these make use of the close miking of individual events – e.g. multiple recorded instances of dropping a dry branch into a pile of driftwood at close proximity in order to produce impact gestures; these instances are then layered using software to produce clattering textures of 'dry woodness'. Such a strategy was designed to encourage close attention to the intimate phenomenology of aggregated micro events that constitute the majority of environmental sounds in the real world. (Batchelor 2015: 155)

Coupled with this strategy was multichannel spatialisation over the surface of the canvas, affording a viewer/listener opportunities for intimate engagement with the canvas at close range in order to experience spatial detail, much as one might explore the dots in a pointillist painting before standing back to experience the emerging whole image as it resolves with greater distance.

Similar compositional and spatialisation strategies were applied to later multichannel installation works, but with different results. Behavioural emulation of natural phenomena, through clouds of activity yielded by the triggering of similar-sounding micro events in quick succession, has been equally important in both *Beyond*

(2015+) and *Cascade* (2018).[2] In the latter case, the flat panel arrangement of speakers is presented above the listener, and over a wider area, encompassing 256 loudspeakers in a 16×16 grid (see Figure 2).[3] The volume of speakers is accommodated by the use of affordable technologies as described above – in this case, networked Raspberry Pi computers and cheap multichannel gaming interfaces. Aside from exploring the technical and aesthetic challenges inherent in managing such volumes of loudspeakers with a view to creating a coherent spatial sound environment, the installation seeks, through a series of short compositions, to consider the deployment of acousmatic compositional materials and strategies across the 'flat panel' speaker space. Unlike with *Studies on Canvas*, where listeners can stand at distance from the work, proximity/distance of the listener to the speakers in *Cascade* is limited by the height of the setup; nevertheless, listeners may stand, sit or lie under the speakers, which affords some variety of listening position. Most choose to sit or lie. Such a position, in conjunction with the rich spatialisation, low audio levels of the installation and the nature of the presented sounds (birdsong, quiet drones and textures), is designed to accommodate and invite an attitude of contemplation and relaxation. This in turn increases its accessibility, encouraging extended dwell times and, when others are present, a sense of shared reflective/meditative experience.

In *Beyond*, the user sits within a spherical geodesic structure, surrounded by 40 loudspeakers which are distributed evenly around the inside surfaces of the sphere (see Figure 3).[4] Similar to *Canvas* and *Cascade*, the speakers were conceived collectively as a single sound-producing unit, accommodating the detailed spatial construction of sonic images over the surfaces of the structure. Equally, some of the strategies used were similar to these related works, involving aggregated micro-events to produce natural textures.

The sphere accommodates only one person at a time within what is essentially a sensory *enhancement* chamber – this time offering intimacy through individualised experience. Such a space inevitably caters for an instinctive human partiality for small hideaways, and has proved when presented to be particularly appealing to children – akin to the Wendy House, fort or den which 'become[s] the new safe place, a small world that [children] create from the raw materials of the natural world and their flexible imaginations' (Sobel 2002: 160). The sense of shelter and ensconcement is designed

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installation such concepts of "fidelity" and "reproduction" do not exist'; instead, it 'deals with building new realities and not with reconstituting or simulating them. It is exactly for this reason that one frequently finds the use of low-fidelity loudspeakers in sound installation projects' (Minard 1996: 74).

[2]Both installations were produced in collaboration with visual artist and sculptor Ian Bilson.

[3]Further photos of this installation can be found at www.peterbatchelor.com/cascadedoc.html.

[4]Further photos of this installation can be found at www.peterbatchelor.com/beyond_willow.html.

Figure 2. Peter Batchelor and Ian Bilson, *Cascade* (2018) (photograph: James Andean).

Figure 3. Peter Batchelor and Ian Bilson, *Beyond: Willow* (2015) (photograph: Steve Benner).

to be enhanced by the sounds playing over the speakers, such that 'listeners, shutting their eyes, may feel themselves to be contained within an enclosed structure, with rain pounding on the surface of what seems to be a corrugated iron "roof"' (Batchelor 2012). Other sound materials present a sense of engulfment – for example, granulated textures that cover the entire surface of the sphere – or give a sense that the 'roof' becomes 'amorphous – composed of liquid that bubbles, trickles or gushes across the speaker-space before re-solidifying, receding, fragmenting and swirling around the listener' (ibid.). In all these instances, the

amplitude and proximate spatial presence of the sounds suggest that the surfaces of the spheres are, if not solid, acoustically isolated from the outside world.

Importantly, however, the spheres for *Beyond* are *un*enclosed, and therefore acoustically transparent, enabling a listener inside to experience the soundscape beyond the playing loudspeakers – ideally a park, or another outdoor space – as an extension of that presented by each sphere itself. This is important, because while the proximity of the loudspeakers, and the tendency of the sound materials to rise in intensity to obscure everything beyond the enclosure

itself, maintain the acoustic illusion of enclosure, at times the acoustic 'walls' 'may ultimately vanish altogether, presenting real-world sonic environments that are indistinguishable from the reality that exists beyond the sphere' (Batchelor 2012). In fact, the sound material may be derived from that reality (making use of surrounding keynote sounds and sound signals/soundmarks, for example).

This was all done in an attempt to connect the installation with the surrounding environment, an aim enhanced for *Beyond: Willow* – an instance of the Beyond series for which willow sticks were used to construct the sphere itself, with willow rods woven between these and moss used to cover the speakers – by the construction materials themselves. Natural environmental sounds (rain and birdsong) played over the surface so that the source of the sounds – whether they came from the sphere itself or beyond – became ambiguous to the point of prompting somatosensory illusion. On the cold, grey and humid April days on which the sphere was in situ, 'the convincingness of the multichannel acoustic illusion was nothing short of astonishing: sat in the outdoor sphere, listening to the sound of heavy rainfall, I felt surprised not to sense the splatter of raindrops on my head' (Thomas 2015).

As such, the installation 'afford[s] the listener an experience akin to Mallarmé's notion of "transparent prolongation": a listening-through of the constructed land(sound)scape into the already-there' (Batchelor 2015: 157). *Beyond* might also be said to embody Bachelard's notion of 'intimate immensity'. Bachelard speaks, in the *Poetics of Space*, of a 'grandeur [that] does not come from the spectacle witnessed, but from the unfathomable depths of vast thoughts' (Bachelard 1994: 192). He uses the analogy of a forest, in which 'the mystery of space [is] prolonged indefinitely beyond the veil of tree trunks and leaves, space that is veiled for our eyes, but transparent to action' (Brosse in Bachelard 1994: 185). Bachelard is referring to a sense of immensity achieved through inference, through reference to a 'beyond' experienced paradoxically through intimacy. Through focus on what is real and what is not, the sphere prompts a concentration on the present – what is happening *now* in the *here* (or hereabouts); and through the experiential interplay between perception of interior and exterior, it therefore seeks to expand intimate space to meet an outer immensity, while equally the 'exterior spectacle helps intimate grandeur unfold' (Bachelard 1994: 192). With the ambiguity between inside and outside comes a paradoxical sense of enclosure, safety and, above all, intimacy, in spite of the openness to the outside world.[5] It is this twofold concern with intimacy – the invitation to linger in an intimate, isolated 'safe' space and the simultaneously intimate connectedness of the installation with its acoustic locale – which is designed to afford the 'something to hold on to' factor in this work.

8. INTIMATE CONNECTIONS: INTERACTIVITY

While interactivity is commonly experienced in installations, rarely if ever is it encountered in acousmatic music. Indeed, the very idea of interactivity for an acousmatic composer may be anathema to the way in which an acousmatic composition is conceived and constructed. For Andrew Lewis, for example, it is the fixity of acousmatic music which, by virtue of affording the opportunity to listen repeatedly, with the experience each time remaining 'the same in every detail', allows the listener to 'become intimately acquainted not just with the musical idea, but with the sound itself, and this in turn means that the sound is no longer some sort of carrier of the musical idea: the sound is the musical idea' (Lewis 2014).

However, there is no denying that the capacity for interaction in an installation encourages a deeper engagement with its materials, if only because any observer/listener must somehow activate the installation in order to experience it and will therefore feel some level of creative satisfaction upon hearing the result. At its most responsive, an installation might achieve the condition of the instrument, 'preserv[ing] and even extend[ing] what F. Richard Moore has described as "control intimacy" – a useful notion which combines consistency of behaviour with sensitivity', enabling the nuance that 'minute differences in breath pressure, embouchure, finger position etc., bring about as I painstakingly practice an instrument' (Moore 1988 in Emmerson 2000: 199–200). A number of sound artists produce works which hybridise instrument and installation (e.g. Godfried Willem-Raes's *Pneumaphone* (1983) and Hans van Koolwijk's *Bambuso Sonoro* (2005)), bringing this level of 'control intimacy' to the installation visitor. Of course in many installations the relationship between user input and installation response is contrived to be more complex than simply 'I hit harder to produce a louder sound' (Emmerson 2000: 199); moreover, the composition of acousmatic music involves 'an organic process of growth in which both composer and material participate' (Harrison 2000) – that is, the composer has limited 'control' over the material, which has its own 'life'; the relationship must be collaborative. So achieving 'control intimacy' through interaction is not necessarily trivial when working acousmatically.

Providing the user with sufficient control to yield an effective interaction is not beyond the realms of possibility, however. Several of Ricardo Climent's works enable an audience member to take control of the musical

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[5] For this reason I have speculated whether it is possible that the sense of enclosure and intimacy afforded by spheres, in spite of their openness, may have some outlets in music therapy contexts.

Figure 4. Peter Batchelor and Ian Bilson, *Contraption* (2019).

narrative by presenting a work through custom-made systems modelled on the video game. While many are vehicles for performance by the composer himself, *Hõ* (2009) is conceived as an installation. Users are provided with a 'sound-wheel interface' and invited to navigate through a series of 3D sonic environments (Climent 2009). Collisions with objects within these environments trigger sound events grouped according to complementary spectromorphological characteristics such that they produce compositionally coherent sound structures when activated collectively. While game-like, the user's interaction here is *paidic* (child-like free play) rather than *ludic* (rule-bound, complex play) (d'Escrivan 2014: 257); as such the audience enjoys exploration for its own sake rather than according to any teleological incentive. This ability to meander in turn accommodates a close relationship with or immersion in the materials as experienced *now* – appreciating and exploring the sounding materials (and by extension the relationships between these) as they happen. This process of paidic sound exploration seems closely analogous to that engaged in at early stages of the compositional process by the acousmatic composer, which provides another 'way in' to the acousmatic compositional experience.

I have sought a similar strategy of immersivity in *Contraption* (or *Acousmatic Contraption*) (2019), a sound sculpture comprising a number of multichannel towers, each containing several rings of eight speakers (see Figure 4). While the installation is designed to be visually intriguing, an acousmatic veil is nevertheless rendered through utilitarian featurelessness: the audience is confronted with industrial-looking pillars, the installation designed to suggest a series of imaginary

machines whose mechanics are *hidden* and whose energy (industry) is apparent only audibly – nothing moves. Each ring of speakers acts as a 'cog' in the machine, playing looped materials in rotational trajectories. Visitors to the installation are empowered to interact with the installation by choosing 'cog' types (i.e. sound materials), triggering events and gestures, 'starting' and 'stopping' machines, changing the speed of the 'motors' along with their synchronicity (both between motors on the same column and motors between columns) and enacting a variety of other interventions. This in turn is designed to allow individuals to engage in impromptu, 'on the fly' acousmatic composition, encouraging close listening to and exploration of the sound materials.

Several of the sounds for *Contraption* are derived from my acousmatic concert work *Pulse* (2013). This work similarly plays with real-world sounds that exhibit rhythm and periodicity – both mechanical (engines and machinery, bicycle chains, a record player, thudding helicopter blades) and natural (crickets) – allying these with looped sound fragments and repeated rhythmic patterns. In this work too, musical relationships are sought between these various materials, and the polyrhythmic complexities that result from their combination. Critically, in order to maintain the illusion of a machine, while the sounds may be quite un-machine-like at times, the *behaviour* must remain convincing: transitions between machine 'components' must always be logical (accompanied by a 'gear change' or other catalyst) and stoppages/restarts must consider physical reality – that is, inertia and momentum. In addition, actions and transitions are

catalysed by human agents (using buttons to trigger certain events); and multiple actions in quick succession can yield dynamic gestural activity. Thus *Contraption* remains 'gesture-based', a major characteristic that defines the acousmatic approach to composition – implied energetic causation through (human?) physical agency (Lewis 2014). Equally, there is sufficient in the way of fixed medium micro-compositional detail within each of the loops and gestural catalysts to ensure 'engage[ment] with sound in a … detailed way' (ibid.) by both the composer and listeners/interactors. In this instance, it is not only the ability of the audience to engage directly with the loudspeakers through close listening that provides the intimacy, but also the ability it affords to engage closely with the materials themselves through interactivity. All this, in turn, accommodates accessibility through agency.

9. CONCLUSION

Lewis declares himself 'dogmatic' in his position that '[r]eaching out across interdisciplinary boundaries requires us to be clear about where we are reaching from, and where we stand as we do so' in order 'to avoid creating a bland and generalised mixed-media concoction which attempts many things but excels at none' (Lewis 2014). Bringing the compositional techniques and sensibilities of acousmatic music into the territory of sound and installation art within a more 'public' domain does not require the dilution or compromise of its core characteristics. It is not *in spite of* such characteristics as the use of recognisable sound material, detailed microphone capture or complex spatialisation that a work might be more accessible, but *because of* them. Working within the realm of sound and installation art for me simply provides access to a rich set of conditions – new territory and tools – in and with which to develop my existing acousmatic compositional interests. And any characteristics that *do* change do so by virtue of the nature of the presentation conditions (e.g. alternative time structuring to accommodate walk-in-walk-out engagement) rather than any desire to appease an anticipated unwilling audience; the acousmatic 'message' remains the same.

That said, increasing audiences for their work is of course a desirable outcome for most artists. Many of the terms Landy uses in describing the 'something to hold on to factor' – 'helping hand' and 'user-friendliness', for example (Landy 1994: 50) – allude to gentle, even tactile guidance through the process of listening, and above all communication. Meaningful communication is most effectively achieved within the domain of intimacy; and it is intimacy, achieved in a variety of different ways, which provides a possible 'way in' to the works discussed throughout this article. Intimacy always figures in the working process of the acousmatic composer: an intimate relationship with the sound materials through, for example, close-miked recording as discussed above, but also through the concrete manner of constructing a work – multiple repeated listening to reveal and explore the intimate nuance of every sound – all within the intimate setting of the (usually small) studio in which composition takes place. The character and conditions of the composition environment and working method inevitably translate to those of the compositional outcome. So while the creative pursuit may not explicitly be driven by a desire for accessibility or for audience development, if a way in is provided by such a condition of intimacy, this is a happy outcome indeed.

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