On Hearing the Disposition of the Voice: Interactive Voice and Live Electronics in Experimental Sound Theatre

By Caroline Wilkins

Abstract

This paper explores the 'spaces' of sound theatre, taking the voice into different acoustic and electronic realities. It examines aspects such as the dramaturgy of Space Frames (Emmerson 2007: 99) and the relationship between real and virtual voices, as well as the nature of this interactivity with electronics. The theatrical space is deconstructed by means of a dislocation between direct and recorded sound, through the virtual voice that creates a shift in balance between sound and image, through the role of memory, the 'neutral' voice (Blanchot 1969: 564), the a-verbal musical voice, and the 'mechanics' of language. Examples from a performance project for voice and live electronics entitled '*Zaum: Beyond Mind*'[1] are given, citing the creation of a 'third' dramatic space in the mind of the receptor. In particular the process of call and response between the voice-body and the sound is examined within a performance situation.

Introduction

Compared with the term 'music theatre', 'sound theatre' encompasses a much wider genre that goes beyond strictly notated composition, opening up the score to the sonorous qualities of a work. Contemporary practitioners in this area include Heiner Goebbels, Falk Huebner and Craig Vear to name a few. Some of whom have adopted more inclusive terms such as 'theatre-maker' or 'composer-author' to define their role. With the advent of new media technology in the past twenty years this genre has undergone a radical change since the innovative work of composers such as Mauricio Kagel[2]. Linked to this is a fundamental shift towards the concept of performativity in the Live Arts such as theatre and music, where the traditional genre of a fixed written work, such as opera, is replaced by an event emphasizing the moment of performance in its sheer presence and unrepeatability. Departures of this kind were heralded by the experimental sonic and theatrical explorations of John Cage in his *Europeras* 1 & 2 (1987), loosening in turn the aesthetic boundaries of the term 'work' in favour of one that encompassed an aesthetic of the performative (Phelan,1993).

It is within this context that the above-mentioned project *Zaum: Beyond Mind* should be understood, namely as a flexible, living performance of sound theatre emerging from a collaboration between myself and Oded Ben-Tal, an electronics composer based at Kingston University. It comprises two performers, the vocal/instrumentalist and the computer/operator, sharing the performance space together with an audience. All are surrounded by four loudspeakers and variable lighting. Musical instruments such as the bandoneon (similar to the concertina or accordion) and piano are an essential component together with the voice, all of which enter into a dialogue with both live and interactive electronics. The movement of each performer involves choreographic elements, a simple stage set consists of tables and instrumental / technological 'objects' and a silent film, an excerpt from Russian filmmaker Dziga Vertov's *Man with a Movie Camera* (1929), provides an interesting historical link to the theme of the work's title. Coined by Russian poet Khlebnikov, 'zaum' means 'beyond mind' and describes experiments in sound symbolism and linguistic creation stemming from Russian Futurist poets of the 1900's such as Alexei Kruchonyck, whose *Zaum in Tiflis* (1918) provides the basis for much of the vocal material used in the performance. The onomatopoeic nature of the text lends itself to an exploratory treatment in terms of sound rather than meaning. Indeed there is a direct historical link between the trans-rational language or 'words-in-freedom'[3] of Z*aum* and the beginnings of its contemporary equivalent – electronic music – in their insistence on sound and noise as liberating factors that challenged the aesthetic confines of words and music. *Zaum: Beyond Mind* is a work that explores the physical presence and absence of performers on-/ off-stage, the un-desiring sound-bodies of virtual voices, the play between the animate body and the inanimate object, and the multiplicity of roles engendered by a musician and their instrument.

In this paper I shall focus primarily on the phenomenology of the voice in relation to its interaction with live electronics, the haptic experience of listening and responding, and the imaginary drama or course of events taking place on the stage that is engendered by sound theatre. Starting with an exploration of the title's key word, disposition, I discuss the timbre of the voice, its re-embodiment through technology, voice and the phenomenon of memory as developed by Marguerite Duras, the 'neutral' voice according to Maurice Blanchot (1969: 564), and the a-verbal musical voice that, according to

Daniel Charles, has its conceptual origins in Heidegger (1927). I conclude with some reflections on the deconstructed voice and its role in creating a 'theatre' in the mind of the receptor.

'…The Apparatus called the Voice' (Durand 1977: 100)

The word *disposition* has several curious meanings, indicating by turn arrangement, temperament, natural tendency or inclination to. According to Giorgio Agamben (2004) disposition has to do with emotional tonality or *stato d'animo*, which seems to accord with Martin Heidegger's *Stimmung,* meaning mood or attunement, of being in tune with oneself (1927). By all accounts we come closer to a convergence of both voice and disposition in the two German words *Stimme* (voice) and *stimmen* (to tune). 'The voice speaks of the body, […] cuts its groove,' says Régis Durand (1977: 99), strangely reminding us of early recording methods on to wax cylinder or shellac disc. Perhaps our vocal chords could be perceived as strings of the body that resonate imperceptibly with the sound of a particular heard voice, repeating the emotions of the other that reverberate in our whole being. Guy Rosolato (1974) describes this phenomenon as the desire for an imaginary cohesion with the heard voice, a memory of childhood nostalgia for embodied unity with the mother's voice, a voice that was first experienced in the form of a sonorous envelope surrounding the infant.

De-multiplied by modern technologies the voice has certainly lost its historical 'aura' – a term that stems from the Greek word meaning 'air' or 'breath'(Benjamin 2003: 272) – and no longer serves as an oral communicator of tradition and knowledge. Nevertheless, nothing erases its presence or corporeal 'here and now', proceeding from the breath as a *vox pneumatologia* or 'voice of air'. Indeed the *vox humana* or 'human voice' is a term given to a register stop on the organ, sounding something like the trumpet and crumhorn stops in unison, but it is rare for this register to deserve the denomination assigned to it. However both *apparati*, voice and organ, are of air, functioning by means of its intrusion from the outside into the open cavity of the body or instrument.

This leads us, by extension, to the *vox elettronica* or electronic voice that is the subject of *Zaum: Beyond Mind,* a piece of sound theatre involving live and interactive electronic processing of the voice during performance using a Pure Data (PD) programme[4]. It is important here to qualify the terms 'live' and 'interactive' with regard to electronics, as they are often interchanged misleadingly and in fact both processes occur during the work in question. The former term refers to a controlled alteration, by means of processing, of the amplified live sound in real time. The latter also takes place in real time but with the difference that a play of active / re-active response between the programmed intelligence of a computer and a live performer is engendered. According to the complexity of the programmed patch the results are undetermined and demand a degree of spontaneity on the part of the performer. Thus the diameters of performance are extended with regard to our sense of temporality, concentrating on the 'here and now' of the moment.

The PD programme used here analyses timbres produced by a live voice – such as whistling, humming, sibilants and fricatives – and generates responses in the form of virtual sonic equivalents – that is – virtual voices. Most importantly, the sound patch[5] that has been created to provide a palette of sonic parameters is actually based on pre-recorded material taken from both the bandoneon and the voice. Thus the virtual voices take their source from original live recordings and have not been fabricated

artificially by means of pure electronics. Modifications and processing are then introduced into the raw material to alter its timbre and extend its sonic capabilities beyond that of normal human technique.

[AUDIO FILE] Caroline Wilkins; Zaum.

Within the context of sound theatre, as in contemporary opera, the potential for developing a dramaturgy (or series of fictitious events) between imaginary characters personified by singers that are both on- and offstage, live and virtual, each represented by its own amplified or electronically-processed voice, is enormous. Setting up a dialogue between them entails a complex process of call and response between the voices, delimiting the borderline between acoustic and electronic sound production so that the results remain subtle in their modification like a sonic equivalent of multiple mirrors. From a performance angle, there is a sense of play in this dialogue between the live and virtual voices, familiar yet strange when heard in relation to one's own sound. Displaced, altered, their character has changed and taken on a fragmentary, other-dimensional aspect. However, rather than giving them the term 'disembodied' I would plea for the notion of 're-embodied' voices that have taken on a new form through technology. The imaginary persona is in fact a body of sound that has been re-created by electronically removing some aspects of the original vocal timbre and adding others, thus becoming a prosthetic extension of the real. Both performer and audience perceive this new presence as a sonorous body, a virtual double moving through the acoustic space.

Important for the live performer in this process of embodied interaction is a sense of 'local control' (Emmerson 2007: 96), meaning the access of a localised monitoring source in order to hear the balance between their own sound and that of their electronic counterpart. Another factor in determining its quality is gestural nuance (Garnett, 2001), a term that refers to interpretive subtleties integrated into the programming that bring an essentially human aspect to the relationship. These include aspects such as 'give-and-take' in the time allowed to articulate a phrase, or contrasts of volume and dynamic. At times, both physical and virtual voice(s) seem to resemble two 'bodies' breathing in their overlapping of sibilant utterances, the former animated by the latter in a chain of sound stimuli that defy all border definitions and engender a flow of multiple layers. Ultimately what is created in these instances is one complex instrument made up of the body and technological tools.

In *Zaum: Beyond Mind* there are moments of spatial and temporal dislocation of the voice. The main protagonist, who has been interacting with her electronic counterparts, is suddenly interrupted by other virtual voices that appear as sonic 'ghosts', echoing her previous words in a multiplicity of speeds, dynamics and intonations that rebound from all corners of the performance space.

[AUDIO FILE] Caroline Wilkins; Voices.

The performer is rendered speechless, overwhelmed by the presence of a past that seems to draw her backwards in her step as she mouths utterances. The audience's sense of hearing is sharpened by the aural / visual dislocation that happens at that moment, and they imagine the form of these new characters in the theatre of sound. A sonic, spatial dispersal occurs that disorients their visual focus and presents them with simultaneous listening perspectives. This deliberate disruption creates a new space in the mind of the listener / spectator. For a moment they are confronted with the phenomenon

of ventriloquism, as if the protagonist were dubbing one of the 'voices' heard, realising however, that no displacement is taking place. Instead they are presented with something of an internal dialogue between recognisable facets, albeit fragmentary, of the performer's own voice. At this point in the drama the main protagonist is being 'touched' by the sound, 'touching' it in turn, in her efforts to regain control. This haptic experience is extended to the audience, who become aware of the presence and locomotion of sound in and around the performance area and establish their own embodied sense of space accordingly.

Voix-Off

As a precursor of direct or indirect voices we hark back to the terrain of theatre- / film-maker Marguerite Duras and her infinite respect for the bygone days of silent cinema. Her abhorrence of direct sound is clearly manifested in the theatre play that later became a film, *India Song* (1972), where no word is uttered live on the stage or screen. For Duras indirect sound (meaning pre-recorded voices) opened up more echoes, where the characters could be listening and saying something entirely different at the same time. Dramatically it created a multiplicity of meanings, a dual dimension with the character-actor, and a widening of the field of speech. The voice became a fundamental point of departure for much of her work, shifting its relationship with the actor and in turn, with the audience. Actors recorded their lines and heard them played back whilst in the middle of a scene, allowing for another narrative to take place in between those words (Duras, 1975).

Any discussion of voices heard offstage must inevitably invoke the subject of memory. As Rosolato once said 'the voice gives physical manifestation to ancient images reconstituted by an evocation from fantasies' (1974: 83). He links our imagination to a memory of pleasure in the voice, resulting in the creation of a 'sound body' that contains it. Duras' voices have to do with memory and its loss:

They do not address the spectator…they are absolutely autonomous. They speak among themselves. They do not know they are being heard…One never, at any time, knows who those voices are. Yet, by the way they have, each of them, of having forgotten or of remembering, they make themselves known to us more deeply than through their identity (1973: 147).

For the listener these imaginary bodies of voices are transformed into 'multiple vocal personae' (Verstraete 2009: 178) that create their own diegetic space. And yet we are placed in the role of an eavesdropper, 'listening-in' to conversations between these anonymous but strangely familiar voices as an auditory spy. Here Duras is staging the process of remembering, anticipating, in turn, a major concern of much contemporary, intermedial performance. The theme of the past and memory, of retrieving the archive, and of incorporating the past into the present occurs on many levels in the sound theatre work *Zaum: Beyond Mind.* Not only are electronic modifications of the protagonist's voice relayed live during performance, but prior to beginning any stage of interaction between the two, the timbre of the voice has been pre-recorded during the programming process in order to determine a basis for some of the sonic material. Thus the archival source is tapped and altered during the live processing through its interaction with the real voice, creating a virtual counterpart. On a dramaturgical level the co-existence of these different voices – the live processed one and the multiple

virtual ones – suggests a dialogue between past and present, an evocation of memory, and the 'gap' that opens up for the audience in the moment of forgetting *which* voice belongs to the subject.

According to Durand (1977) a parallel can be drawn between Duras' approach to the voice freed of discourse and the 'neutral voice' of Maurice Blanchot. By cancelling the role of the subject as referent she allows her characters' voices to affect us in their pure expression of emotions without addressing us directly (Durand 1977: 108). Blanchot rejects the traditional notion of 'characters' as fictitious roles played by actors that portray certain human traits, referring instead to the phrase 'speech-bearers' who never use the first person singular in their narrative, entering into 'the present without a memory'(Blanchot in Durand 1977: 108). The self is freed from its identification with the past, its consciousness of memory, and becomes a pure narrating voice. *The Madness of the Day* (1949), a short fiction by Blanchot, was adapted recently for the stage by one of his great admirers, Heiner Goebbels in the production entitled *I went to the house but did not enter*, first performed at the Edinburgh Festival in 2008. As in many of his theatre works Goebbels separates the identity of the voice from that of the speaker so that the act of listening can develop autonomously. His four singers – members of the Hilliard Ensemble – turn their backs to the audience to watch a silent film of waves lapping gently on a shore, their voices intoning softly from the depths of the stage. At the same time, perhaps in a similar way to Duras, the actor is thereby freed from the function of doubling their role and becomes another autonomous body on the stage in parallel with the 'text-body'[6](Goebbels 2002: 70). His insistence on the potential for not only theatre but also radio to develop this imaginary 'room' within the listener through non-narrative means, has significant relevance to a re-appraisal of the balance between our visual and aural reception in contemporary culture.

Another approach is offered by the 'voice-body' as described by Steven Connor (2000: 35-42), a body double that reflects vocalisation in gesture so that we hear and see the voice acting upon the body, its resonances, its excesses, its invocations, its possible extensions through sounds made by the hands or the feet. The singer-actor creates this vehicle as a persona or character in response to the effect of the vocal material on the body to a greater or lesser degree depending on the performance context, whether concert or music theatre, and the level of narrativity that is implied by the text. At all events, every singer experiences their own body's particular internal movements that are involved in order to produce a desired sound. In *Zaum: Beyond Mind* the live voice, together with her voice-body, utters fragments of words, syllables, phonemes, that defy any syntactical meaning but play instead with their sheer musicality of sound. Wild curves of declamatory cries – half sung, half spoken – engender an electronic response of virtual sound that resemble bird calls, breathy consonants are echoed by fluctuating pitches mixed with air sound, and a sudden, percussive fricative ending to a word results in a brittle-sounding chord cluster: the embodied voice-body of the performer is interacting with re-embodied electronic voices that have retained an element of the original timbre in their metamorphosis.

[AUDIO FILE] Caroline Wilkins; Zaum 2.

Here the voice takes us into the world of *zaum* language. The original text by Alexei Kruchonyck is carefully considered in its written structure on the page and de-constructed according to the particular sonic characteristics of each word:

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pale are all
            the lands
      and red
            the noses
      i alone am sev-
            ere
            and black
            like
            a plaster



      thing fragment
            mindfragment
                        speech-
            fragment
      Let -
            Terfragmen


                        t



pleasing the plague
                  of her husband    Lazhila
                  lived on the Zhil
                  crops of banter
                              Great
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Figure 1: illustration of text excerpt from Zaum in Tiflis by Kruchonyck as it appears on the page (trans. Gerald Janacek) from *Zaum: the Transrational Poetry of Russian Futurism,* San Diego State University Press, 1996. Reproduced with permission from the publisher.

No attempt was made at syntactical sense in this poetry, reflecting the Russian Futurists' concern with allowing the raw materials of an art form, such as words or music, to 'sound'. Interesting in this historical context is the parallel development of the sonic arts, the one that pre-dated the arrival of the a-verbal musical voice, the other that led to the invention of electronic instruments such as the theremin in 1920. Experimental forms of language such as *zaum* and the rise of machine-inspired sonic compositions by musicians such as Arsenij Awraamov reflected the impact of the Industrial Revolution on Russian society, and were related as radical contemporaries, marking a departure away from music and poetry as vehicles of symbolic meaning towards an emphasis on their innate sonic substance. A new aesthetic was born that laid the groundwork for future experimentation in sound poetry, language invention, electronics and *musique concrète* for the rest of the century.

One development, that of the a-verbal musical voice – sometimes referred to under the term 'silence-voice' – refers to the deconstruction of both silence and speech. Taking its impulse from the Dadaist

movement of the early 1900's, this practice was re-embraced by composers such as Cage, Kagel, Schnebel, Stockhausen and Berio, who allowed us to listen to sound rather than sense by freeing the former from syntax. In his essay on Cage (1966) Daniel Charles indicates a parallel between the composer's vocal works such as *Aria* (1958), and Heidegger's concept of *Ursprache,* as re-embracing the corporeality of language, a return of the voice to its origins. Untamed by words it regresses into a direct expression of the body, tapping emotional resources that have been hitherto locked by conscious memory. Schnebel's *Glossolalie* (1963) springs to mind as a vocal composition that also explores this raw dimension of the voice, deliberately drawing our attention away from the signifier towards the terrain of the senses and passions through the highly stylized application of extended vocal techniques. Disembodied from meaning and syntax the voice became re-embodied in sound.

Turning from composers to writers, there is a different emphasis laid on the 'silence-voice' when we consider Barthes, whose concern is not with expression, drama and emotions, but rather with the sensuous mixture of timbre and language that go to make up a voice. His term 'writing aloud' sums up the importance of the 'grain of the voice' – a term taken from the sound of speech captured close up in cinema – as the substance of an art: namely the art of 'guiding one's body' (1975: 66-67). A parallel can be drawn here with the Futurists' insistence on the materiality or substance of sound in both poetry and music. Barthes however also includes diction as a vital element, alongside that of the 'grain', in constituting this substance. Here the emphasis is on the voice as a phonetic articulation of the body, its materiality in the form of the 'human muzzle […] throwing […] the anonymous body of the actor into my ear' (67). His description of the voice evokes an ear finely attuned to its nuances, the presence of which has been accentuated by means of technology such as the cinema and electronic sound. Its 'carnal stereophony' (67) is made evident in the use of microphones and sound processing, revealing a multiplicity of possible meanings that are opened up for the listener alongside that of the words.

A Third Dramatic Space

No discussion of the voice in relation to electronics and sound theatre would be complete without a consideration of space, that is to say the acoustic space of the performance area, the virtual space created by means of technology and the imaginary space of the receptor in whose mind the theatre unfolds. Electronics composer Simon Emmerson divides acoustic space into two distinct areas, the local and the field, whose 'space frames' contain event / stage in the former and arena / landscape in the latter (Emmerson 2007: 98).
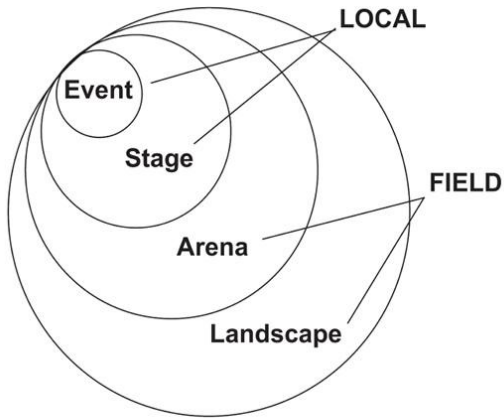
Figure 2: Diagram of Space Frames by Simon Emmerson, *Living Electronic Music*, Ashgate. 2007. Reproduced with permission from the publisher.

Levels of sonic interaction take place within them in a musical discourse that can vary from an accompanying, to an antagonistic, to a responsorial mode. Examples of these abound in *Zaum: Beyond Mind* when, for example the live voice, operating from a local frame of stage / event, is suddenly antagonised by the multiple voices of dis-embodied speech-bearers emanating from each loudspeaker placed in the field of the arena / landscape. These virtual voices do not remain static but circulate their speech in a moving dialogue between the loudspeakers, a device that contributes to their overwhelmingly powerful sonic presence in the space, heightening a sense of dramatic tension between them and the live performer trapped in their midst. Both accompanying and responsorial modes are found in a later scene involving voice and bandoneon interacting with the electronics. Here the localised instrument exudes a high-pitched note that elicits a response in the form of a pure electronic sine-tone from the periphery of the landscape. The voice joins in a role of accompaniment, adding long, sustained middle-range pitches that blend the field with the local by sounding both acoustically and through diffusion over the loudspeakers. Here the possibility of diffusing a sound source to both local and field areas is explored.

What links Emmerson's approach to a possible theatrical interpretation of sound is the transformation of meaning made possible between these space-frames as illustrated above. He refers to 'frame play' as the shift, for example, from a localised stage sound to the peripheral landscape, or the magnification of small sounds through massive amplification, or indeed the opposite, meaning the reduction of large-scale sounds to a minimum, localised level of volume (2007: 99). What are described as purely sonic instances of contradiction, paradox, conflict or juxtaposition, can be applied to a dramaturgical framework. A case in point is provided by the live, embodied voice-body interacting with her virtual counterparts in the piece. The former, beginning from a localised space of the event, hears other voices issuing from the depths of the field that detract from her 'story'. Their relationship of contradiction and conflict, exemplified by the ensuing dialogue as each vie for attention, is played out in the space created between the two frames.

Moreover, a small localised sonic event can be plunged into the arena space of the audience, creating a surreal effect in its sheer sonic amplitude. In this instance the field frame serves to 'exteriorise' or magnify a small, localised acoustic sound source through amplification. Thus the voice's inner articulations, such as tongue-clicking or lip-smacking, become audibly distorted as over-large, sonic 'mechanisms' of the body. *Zaum: Beyond Mind* contains instances of this kind of live electronic processing, a-verbal vocalisations such as sibilants, fricatives, breaths or hums resounding from all corners of the space well away from the small stage space of the performer who is actually uttering them, and setting up a paradox in terms of our acoustic perception. The audience are drawn into a macrocosmic world created by massive amplification of a miniscule source, and enter into an imaginary space that alters their perception of embodied size in comparison. To make an analogy, the same phenomenon occurs with cinema when we are seated in darkness in front of a huge screen and booming surround-sound system. Thus the borderline between local and field remains fluid and allows often for paradoxical occurrences where 'space itself can tell a story' (2007: 102).

Thus both live and interactive electronics enter as other instruments in space, bringing interesting timbral differences to the original sound source and with this, new characters into the theatre of sound, occupying the performance area in an essentially spatial distribution that has no limits. They can operate on the level of a macrocosm to the localised physical presence of the voice, introducing an unpredictable element of play into this dialogue between the real and the virtual. Likewise, any amplification of the live voice magnifies its presence, so that we seem to be inside another dimension, another 'chamber' of sound. The live performer is freed from any obligation to continue a long vocal line as she listens and makes space for her virtual counterparts. She is aware of parallel 'spaces' occupying the theatre of sound, into which she enters or leaves through the vehicle of her voice. It mediates in between the live and the virtual, sound and image, the direct and the indirect.

However, it is vital to maintain an 'observable connection between computer and performer' as Todd Winkler says, otherwise 'the dramatic relationship will be lost to the audience' (1998: 9). In *Zaum: Beyond Mind* this is achieved by key moments of visual contact between the two performers. A comic, dramatic tension is set up with regard to the balance of power over the sonic worlds they are generating, and is clearly read by the audience as moments of intimidation, shock and surprise.

Figure 3: *Zaum: Beyond Mind*. Still Image from Video recording of performance, DRHA Conference, Brunel University, 2010. Reproduced with permission from the author.

As composer Jonathan Harvey once said:

With live electronics […] two worlds are brought together in a theatre of transformations. No-one listening knows exactly what is instrumental (vocal) and what is electronic any more […] When they lack their connection to the familiar instrumental (vocal) world electronics can be inadmissibly alien, other, inhuman, dismissible […] When electronics are seamlessly connected to the physical, solid instrumental (vocal) world an expansion of the admissible takes place and the 'mad' world is made to belong (1999: 80).

Sound theatre is to do with composing the physical space through which sound moves, and employing a dramaturgical strategy that allows for a more active response from the audience by involving their bodily presence in the same space. Developing a spatial sense of sound in the listener helps to stimulate this response in the form of a haptic experience. Sound is perceived as density. The space becomes a large instrumental body that resonates. Thus, this genre can become a doorway to new, emerging structures of listening and meaning.

Conclusion

And so to return to the title of my paper – the act of hearing the voice's disposition, its spatial and affective roles in the contexts I have outlined. The voice is disposed, or arranged, within acoustic space according to the structural properties of that space and the use of audio technology. Given the framework of sound theatre, a placement of voices in different locations, whether heard over loudspeakers or live, offers the possibility of dialogue between them and a resultant generation of dramatic meaning. Thus a theatre of spaces is set up in the mind of the spectator / listener as they internalise events happening both visually and aurally around them. The sense of hearing is sharpened as an audience determines sonic sources issuing from parameters surrounding their own body in space, perceiving factors such as distance, volume and timbre in combination with the mood and verbal signification of a voice. What was essentially an organ of human survival – namely a sense of spatial-acoustic awareness – is re-awakened in a new social context.

Disposition also has to do with emotional tonality and temperament, communicating through a signifier and going beyond the words uttered by a voice in order to reach the listener by means of timbre. This haptic phenomenon is linked to a sense of associative memory, sensibility and embodiment on the part of the audio receptor. Historical experiments in sound poetry and their extension through the development of technology have deliberately re-embraced this latent potentiality by reclaiming the origins of the body within the voice. 'Played' by the body like a musical instrument, it undergoes a metamorphosis through electronic means and assumes new identities. The audience hears its altered timbre, imagines its new 'body in space', linked by the memory's ability to recall the live source and shift between temporalities during a performance. No longer reliant on visual confirmation, the virtual voice traces its path through the various media of audio art, electronic music, radio, theatre and cinema, insisting on the body 'in our mind's ear' (Verstraete 2009: 229).

Perhaps it is the attunement of a voice – of being in tune with itself – that gives it its uniqueness in terms of the body which it inhabits. A natural tendency or inclination towards a certain palette of sounds and timbres reflects the particular physical and emotional disposition of the subject, resulting in characteristics that remain recognisable to the ear and allow us to identify the person. The same could be said in visual terms for the gestural vocabulary that goes to make up a singer's 'voice-body'. However, in the case of unseen sources this perception is reduced to an aural identification of an imaginary person, whether existing in the real world or as a fictitious character in a performance. In terms of the latter this possibility has had infinite dramaturgical implications by allowing for the existence of a voice without its physical representation. Technology has expanded the parameters of dissociation between visual and aural components, between sound and the voice, between the real and the virtual without, however, necessarily resulting in their alienation and thus, their disembodiment. On the contrary, an interactive and embodied discourse between practitioners and new audio media can retain all of the body in its sonic results by expanding and acknowledging those sources stemming from one of the most complicated of instruments: the human voice. Ultimately we are challenged with hearing the voice's disposition in all of its multiplicity. However, this calls for a critical re-appraisal of audio culture in a visuocentric, intermedial world, a re-engagement of the sense of listening with other sensory perceptions, and more inter-disciplinary experimentation on the part of its practitioners.

Footnotes

1. http://ccrma.stanford.edu/~oded/Zaum/zaum.html [↵]
2. Argentinian composer Mauricio Kagel (1931-2008) lived and worked in Germany where his
   works are published by Edition Peters. www.edition-peters.de [↵]
3. A phrase taken from F.T. Marinetti's manifesto of 1912: Technical Manifesto of Futurist
   Literature [↵]
4. Pure Data is an open source programming language invented by Miller Puckette before the
   advent of Max MSP, in the early 1990's. [↵]
5. A computer diagram consisting of small boxes joined together by lines that resemble an
   electronic circuit in appearance and represent the different electronic components of a sound
   [↵]
6. My translation. [↵]

References

Agamben, G. (2004). *The Open: Man and Animal*. Stanford: Stanford University Press.

Barthes, R. (1975). *The Pleasure of theText* (trans. Richard Miller). N.York: Hill and Wang.

Benjamin, W. (2003). *Selected Writings 1938-40* (trans.Michael William Jennings). Harvard University
Press.

Blanchot, M. (1964). *L'entretien infini.* Paris: Gallimard.

Charles, D. (1966). Nature et silence chez J. Cage. *Le Langage: Actes du XIIIme Congrès des Sociétés de
Philosophie de langue française Genève, 2-6 août 1966.* Neuchâtel: A la Bâconnière, vol.1, P172-174.

Connor, S. (2000). *Dumbstruck: A Cultural History of Ventriloquism.* Oxford: Oxford University Press.

Durand, R. (1977). The Disposition of the Voice. *Performance in Postmodern Culture* (eds. M. Benamou,
C. Caramello). Madison W1: Coda Press. P 99 -110.

Duras, M. (1973). *India Song.* Paris: Gallimard.

---. (1975). Marguerite Duras. *Collection Cahiers du Cinéma.* Paris: Éditions Albatros.

Emmerson, S. (2007). *Living Electronic Music.* Kent: Ashgate.

Garnett, G. (2001). The Aesthetics of Interactive Computer Music. *Computer Music Journal* 25:1. P 21-
33.

Goebbels, H. (2002). *Komposition als Inszenierung,* Wolfgang Sandner (ed). Frankfurt: Verlag der
Autoren.

Harvey, J. (1999). The Metaphysics of Live Electronics, *Contemporary Music Review* 18:3. P 79-82.

Heidegger, M. (1927). *Sein und Zeit,* Tübingen: Max Niemeyer Verlag.

Phelan, P. (1993). *Unmarked: The Politics of Performance.* London: Routledge.

Rosolato, G. (1974). La voix entre corps et langage. *Revue française de psychanalyse.* 38:1. (Jan). P 75-94.

Verstraete, P. (2009). *The Frequency of Imagination: Auditory Distress and Aurality in contemporary Music Theatre.* PhD thesis. Amsterdam: Published by the author.

Winkler,T. (1998). *Composing Interactive Music: Techniques and ideas using Max.* London: MIT Press.

Bibliography

Bay-Cheng S. Kattenbelt C. Lavender A. Nelson R. (2010). (eds.) *Mapping Intermediality in Performance.* Amsterdam University Press.

Klein, J. (2008), Voice and Live Electronics: An Historical Perspective. [*eContact!*] 10.4 (October). Available from http://cec.concordia.ca/econtact/10_4/klein_livevoice.html. Accessed: [02.11.2009].

Zielinski, S. (2006). *Deep time of the Media.* Massachusetts: MIT Press.

Works cited

Blanchot,M. (1999). Madness of the Day (trans. Lydia Davies) in *The Station Hill Blanchot Reader*, Station Hill Press, N.York.

Cage, J. *Aria* (1958). Edition Peters, Frankfurt.

Cage. J. *Europeras 1&2* (1987). Edition Peters, Frankfurt.

Duras, M. (1973). *India Song.* Editions Gallimard, Paris.

Goebbels, H. (2008). *I went to the House but did not enter.* Musikverlag G.Ricordi & Co.. Munich.

Kruchnoyck, A. (1996). *Zaum in Tiflis.* (trans. Gerald Janacek) from *Zaum: the Transrational Poetry of Russian Futurism,* San Diego State University Press.

Schnebel, D. (1963). *Glossolalie.* Schott Musikverlag, Frankfurt.

Vertov, D. (1929). *Man with a Movie Camera.* Cinematography: M. Kaufman. USSR.

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Caroline Wilkins is a composer / performer with a background in music theatre and radiophonic composition. In 1987 she was awarded an Australia Council grant for further composition study with Mauricio Kagel. Since then Wilkins' music has received performances and broadcasts worldwide, including the ISCM World Music Days. She was awarded the Karl–Sczuka prize from South West German Radio in 2000 for the radiophonic composition Mecanica Natura. Recent publications include: The embodiment of music/sound within an intermedial performance space – joint paper with Oded Ben-Tal, ARTECH, Portugal, 2010. www.artech-international.com and Zwischen Klang und Geste. Kagel's "Instrumentales Theater", MusikTexte 120, Feb. 2009. www.musiktexte.de