

**Composing affect: Reflecting on configurations of
body, sound and technology
in contemporary South African performance**

A half-thesis submitted in partial fulfilment
of the requirements for the degree of

MASTER OF ARTS
of
RHODES UNIVERSITY

by

Ilana Cilliers

February 2016

The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

Abstract

This thesis engages with experiential performance modes through the lenses of phenomenology and affect theory. Because experiential performance relies per definition on personal, subjective 'experience', specific responses cannot be anticipated. However, by attempting to compose 'affect', a performance has the potential to 'move' an attendant towards response. Deleuze and Guattari define 'affect' as "an ability to affect and be affected....a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body's capacity to act" (1987: xvi).

One current strategy for manifesting affect in performance seems to be the ways in which different configurations of body, sound and technology are employed. The body is the means through which sound is received or 'experienced' in the phenomenological sense, but it can also act as a source for sonic material. The body is furthermore the means by which sonic technology is manipulated. It is the complex, reverberating relationships between body, sound and technology, and their potential for eliciting affective transformation, which is the focus of my enquiry.

In the first chapter I unpack the roles of the natural phenomena, body and sound, and their complex relationships to affect. The chapter serves as philosophical basis for the rest of the investigation, and draws largely on works by philosophers Susan Kozel, Maurice Merleau-Ponty, Brian Massumi, Gille Deleuze and Félix Guatarri and sound theorists Don Ihde, Marshall McLuhan, Brandon LaBelle and Frances Dyson.

In the remaining three chapters I discuss current South African theatre works that employ the strategy of placing emphasis on sound, sonic technology, and its relationship to the human body. These works are my own piece *herTz* (2014), Jaco Boucher's pieces *Samsa-masjien* (2014) and *Na-aap* (2013), and First Physical Theatre Company's *Everyday Falling* (2010). While they range from being plays to physical theatre performances to performative experiments, they all place specific emphasis on sonic devices, drawing attention to sound by revealing microphones, speakers, midi boards, etc. to the attendants, and including the generation and manipulation of sound in the action of the performance.

Table of contents

Introduction: Meaningful experience	1
Chapter 1: Affect, body and sound	7
1.1 Affect and the body: Virtual 'muddy' autonomy	7
1.2 Sound: Manifesting affect	12
Chapter 2: <i>herTz</i> – A heartfelt experiential experiment	20
2.1 Body, sound, technology configurations	22
2.2. Context	22
2.2.1 Subject matter and text	22
2.2.2 Technical setup	27
2.3 Descriptions and reflections	28
2.3.1 Sourcing sound from the space	28
2.3.1.1 Material and positional sources	31
2.3.1.2 Manipulating technology	35
2.3.2 Heart sounds	39
2.3.2.1 Heart voice	42
2.3.2.2 Heart squash	43
2.3.2.3 Heart song	47
Chapter 3: <i>Samsa-masjien</i> – A Sensory onslaught	51
3.1 Body, sound, technology configurations	51
3.2 Context	52
3.2.1 Subject matter and script	52
3.2.2 Technical setup	53
3.3 Descriptions and reflections	55
3.3.1 Synaesthetic immersion: Insect music	59
3.3.1.1 Abstraction of material sources	61
3.3.1.2 Spatialisation	63

List of figures

herTz

Figure 1.	The right-side court: The attendants' perspective	20
Figure 2.	Live feed projection of face superimposed on pre-edited echocardiogram projected on back wall of left-side court	23
Figure 3.1.	Moving the microphone across my body	30
Figure 3.2.	Recording Katleho Ramafalo's running footsteps	30
Figure 4.1.	Attaching the steth-mic with elastic plaster	41
Figure 4.2.	Securing the steth-mic with duct tape	41
Figure 5.1.	Dylan Myburgh playing squash: The cable from steth-mic to transmitter visibly hanging from under his t-shirt	44
Figure 5.2.	Counting Myburgh's heartbeats over 30 seconds	44
Figure 6.	“Vedrai, Carino”, as I am pushed across the court by Gerhard de Lange	48

Samsa-masjien

Figure 7.	Gregor and Josephine build the noise-machine, Grethe and Tjaart entertain	58
Figure 8.	Kamper and Kellermann moving the horn speakers	64

Acknowledgements

I wish to thank the Rhodes University Drama Department for encouraging original thought and work, and for providing both an inspirational and supportive environment for experimentation and learning. In particular, I would like to thank my supervisor, Ms. Heike Gehring, for her consistent enthusiasm and encouragement, for her patience and her invaluable guidance with regards to both my practical and academic work. I am also greatly indebted to Ms. Jeannette Ginslov for her contributions to my practical work, for supervising the original paper which has developed into this thesis and for introducing me to inspirational artists, theorists and the extraordinary relationships between bodies and technology. This thesis would also not be possible without the inputs of the cast/crew during the creation of my practical piece *herTz*.

I wish to thank Jaco Boucher and Pierre-Henri Wicomb for their provocative work and for providing me with the information regarding the sounds and processes used in the creation of the soundtrack for *Samsa-masjien*. Furthermore I wish to thank Jaco Boucher for allowing me to attend rehearsals for *Na-aap*, for allowing me to make recordings, and for the video footage of the performance. I also wish to thank De Klerk Oelofse and Ina Wichterich for allowing an outsider into their rehearsals and Rocco Pool and Wolf Britz for taking the time to explain the intricacies of the technical setups for *Na-aap* and *Samsa-masjien*.

I wish to thank First Physical Theatre Company for the permission to use their recording of *Everyday Falling* as reference material and the photographers Megan Grace Wright, Eva Du Preez and Hans van der Veen for allowing me to include their photographs in my thesis.

Lastly I would like to thank my family and friends for their support and patience during this sometimes strenuous process.

Introduction: Meaningful experience

The word 'meaning' is usually associated with some cognitive action of making sense of the relationship between some sign, in the form of a word or other symbol, and what it signifies or refers to. More specifically, 'meaning' is associated with language and the composition of sentences in linguistic semantics. It is seen as a product of cognition, a product of our logical minds. Phenomenology takes a different approach. French phenomenologist, Maurice Merleau-Ponty, is of the opinion that that which defines us is synonymous with our bodies, and through our bodies and our senses, we 'open up' to the world in order to engage in meaningful experiences (Diprose and Reynolds, 2008: 111). According to Merleau-Ponty "(m)eaning does not arise at a psychological level; it is born at an organic level that is pre-personal, which is thence modulated through one's bodily engagement with the intersubjective world, engendering a complex personal relation to the world" (Diprose and Reynolds, 2008: 114). The meanings we experience through our senses are transformed by our personal physical, emotional and mental histories to form new meanings or perspectives. In theorising contemporary performance works (or aspects of these works) which are experiential in nature, it seems necessary that we take into account these other meanings, experienced through the senses, which don't lend themselves as freely to cognitive analysis.

A valuable starting point for interpreting the experiential may be to question what is meant by the word 'experience'. 20th Century German philosopher, Walter Benjamin, distinguishes between the German terms "*Erlebnis*" and "*Erfahrung*". *Erlebnis*, having as its root the word *leben* [life/live], denotes a 'moment of sensation', an immediate occurrence with a definitive beginning and end. *Erfahrung*, on the other hand, has the root verb *fahren* [to travel], and refers to "retrospectively constructed, temporally mediated self-possession and self-appropriation" (Elsaesser, 2009: 293-294), knowledge, wisdom and understanding of the world, accumulated over time, through the various *Erlebnissen*, the moment to moment experiences, that occur in our lives.

In his *Phenomenology of Perception* (1962) Merleau-Ponty echoes these sentiments, but with specific reference to the human body. According to Merleau-Ponty "[o]ur body comprises...two distinct layers, that of the habit-body and that of

the body at this moment” (1962: 82). He posits the body as the ground of ‘experience’ and our opening to the world around us. It is the seat of our senses, through which we encounter the world, as well the place where these encounters become established and remain ‘sedimented’ (Merleau-Ponty, 1962: 130), effecting new experience, which cannot be extricated from that which has gone before. One might say that the body is where *Erfahrung* accumulates and *Erlebnis* occurs. It is through experience of the body that he establishes that the body is the primary means of existing in the world, allowing for ‘psycho-physiological’ human existence, incorporating both body and mind, simultaneously as an object in the world and as a consciousness. “I am my body, at least wholly to the extent that I possess experience” (Merleau-Ponty, 1962, 198).

Writing about experience poses certain difficulties in the sense that experience is not linear, but multi-layered. It may occur on emotional, psychological, mental, spiritual or physical (multi-sensory) levels. Several performance theorists have drawn on Merleau-Ponty’s rejection of the Cartesian body/mind dichotomy, in favour of a psycho-physiological existence through the body, when engaging with experiential performance modes.¹ One such theorist is performance practitioner and philosopher, Susan Kozel. Kozel uses the lens of phenomenology, traditionally the “science of experience” (Ihde, 1986: 21), which views human experience, via its perceptions of and interactions with the world and the objects there-in, as inherently important and meaningful. Phenomenology refutes scientific explanation, in favour of descriptive interpretation (Ihde, 1986: 34). However, while the transcendental phenomenology of earlier phenomenologists, like Edmund Husserl, sought to identify universal essences with regard to experience, Kozel is influenced by the existential philosophy of Merleau-Ponty (Kozel, 2007: 13). As a phenomenologist, Merleau-Ponty views all experience as inherently meaningful. He ascribes particular significance to ‘affective’ experience, and views our affective life as that which defines us as human (Diprose and Reynolds, 2008: 169).

But what is meant by ‘affective experience’? Merleau-Ponty refers to all emotion-related phenomena. In the wake of Dutch enlightenment philosopher,

¹ Erika Fischer-Lichte, in *The transformative power of performance*, for example, says that “[t]hrough the performer’s presence, the spectator experiences the performer and himself as embodied mind in a constant process of becoming “ (2008: 99). This co-presence of the ‘embodied minds’ of performer and spectator is what she calls ‘radical presence’, and is what she asserts is responsible for the transformative power of performance (2008: 99).

Baruch Spinoza, and social philosophers, Gilles Deleuze and Felix Guatarri, the concept of 'affect' is constantly being reinterpreted within affect theory. While affect eludes concrete definition, Melissa Gregg and Gregory J. Seigworth describe it, amongst other things, as a vibrational intensity, a 'shimmering' potential with the capacity to "move" us, either abruptly or incrementally (2010: 1).² It is an almost magical quality, perhaps an X factor, experienced through the psycho-physiological body, moving through space, moving through bodies, moving us, transforming us, prior to cognitive computation and evaluation, carrying meaning without having to 'make sense'.

Because experiential performance relies per definition on personal, subjective 'experience', specific responses cannot be anticipated. However, by attempting to compose affect, to manifest this shimmering potential, a performance has the potential to "move" an attendant towards response, whatever that response may be. A way of theorising experiential performance modes may thus be a phenomenological approach to the strategies employed to manifest affect through sensory experience.³

One current strategy for manifesting affect in performance seems to be the ways in which sound and sonic technologies are employed in relation to the human body. Different configurations of body, sound and technology are employed towards the manifestation of affect and the emergence of affective response. While the body is the means through which sound is received or 'experienced' in the phenomenological sense, it can also act as a source for sonic material. The body is furthermore the means by which technology is manipulated. It is the complex, reverberating relationships between body, sound and technology, and their potential for eliciting affective transformation, which are the focus of my enquiry.

² The notion of 'shimmer' in relation to affect, was first used by Roland Barthes in his collected published lectures *The Neutral* (2005), where he refers to the "microscopic fragment of emotion...which implies an extreme changeability of affective moments, a rapid modification, into shimmer" (cited in Gregg, M. & Seigworth, G.J., 2010: 10) and has subsequently been used by Gregg & Seigworth and Kozel who relates it to "the fleeting, never fully defined" and describes it as "distinct from a judder, a shiver or even a ripple. It is not just a kinetic oscillating pattern, but a particular combination of kinaesthetic, perceptual, imaginative and affective that has a quality of unpredictability or magic" (2012).

³ I use the term 'attendant' the way it is used by Stephen di Benedetto (2010), instead of the more traditional 'audience member', as the role of the so-called audience member in experiential performance has changed from being a passive onlooker, bystander or 'viewer' to one which may include active participation in the performance, and indeed the term 'participant' is often used. I find 'attendant' preferable as it is inclusive of both passive and active roles, of 'audience members', as well as 'participants'.

Before attempting to examine the affective transformation, which may potentially emerge or become manifested through different practical configurations or compositions of body, sound and technology, it is necessary to gain understanding, on a theoretical level, of the role of the individual components in manifesting this transformation. In the first chapter I unpack the roles of the natural phenomena, body and sound, and their complex relations to affect. This also serves to explicate (or complicate) what is meant by this elusive term in the context of this enquiry. The chapter serves as philosophical basis for the rest of the investigation, and draws largely on works by philosophers Susan Kozel, Maurice Merleau-ponty, Brian Massumi, Gille Deleuze and Félix Guatarri and sound theorists Don Ihde, Marshall McLuhan, Brandon LaBelle and Frances Dyson.

In the remaining three chapters I discuss current South African works that employ the strategy of placing emphasis on sound, sonic technology, and its relationship to the human body. While they range from being plays to physical theatre performances to performative experiments, they all place specific emphasis on sonic devices, drawing attention to sound by revealing microphones, speakers, midi boards, etc. to the attendants, and including the generation and manipulation of sound in the action of the performance.

Chapter 2 is dedicated to my own Masters production, *herTz* (2014). In *herTz* I used microphones and digital technology to explore a space and its capacity to generate sound, to source sound from the space, to amplify performers' heartbeats and to manipulate the human voice. In this chapter I introduce the three main configurations of body, sound and technology in relation to two extracts from the work.

In Chapter 3 I discuss the play *Samsa-masjien* (2014), which I performed in as actress. The play was written by Willem Anker and directed by Jaco Bower, with soundtrack by avant-garde composer, Pierre-Henri Wicomb. Bower and Wicomb made use of multi-channel sound, contact microphones which amplified the sound of physical action on stage, manipulation of recorded sounds and the human voice as well as the deterioration of language into sonic experience. My discussion incorporates all the configurations of body, sound and technology, but focuses on the experience of the attendant at the climax of the piece.

In the final chapter I compare extracts from two physical theatre productions, namely First Physical Theatre Company's *Everyday Falling* (2010) and Jaco

Bouwer's *Na-aap* (2013), *Everyday Falling* was choreographed by Athena Mazarakis and performed by two company members and used live and pre-recorded sound, music and a microphone which amplified the physical action and the body's painful interaction with the stage. *Na-aap* made use of pre-recorded sound, microphones, and interactive software, allowing for live sourcing and manipulation of sonic material, as well as the interaction between sound and image from a single source. In this chapter the emphasis is on the attendant's sympathetic responses to the performer's experience.

I begin each chapter by introducing the work and the configurations of body, sound and technology. While the focus of the explorations are on the various configurations of body, sound and technology and their potential for manifesting affective transformation, it is important to keep in mind the multi-layered nature of human experience. The experience of sound is not necessarily divorced from the other senses. The immediate affective transformation is not necessarily independent of psychological associations with, the subject matter of a work. As such, I introduce the subject matter of each work as well as the technology used in the work, including sound, lighting and other technologies. This is an attempt to contextualise the successive descriptions and reflections.

My explorations of the works take the form of phenomenological descriptions and interpretations from my own experiences. This is done in the vein of Kozel, who writes specifically about "the transformative potential of the extraordinary alchemy between bodies and technologies" (2007: xvii). She adheres to what she calls a "modified, 'relevant' phenomenology" (2007: 15), one that "does not attempt to posit truths, but instead acts as a chiasmic, embodied, first-person methodology with the objectives of understanding, expressing, and extending lived experience" (2007: 16). Her phenomenology is an inclusive one, which gives expression to all modes of experience: "[b]odies, thought, imagination, memories, material conditions of life, and affect find a voice through phenomenology" (Kozel, 2007: 5).

According to Kozel

The extension of lived experience happens not only by extending our human senses but also by exploring the depths of our relationships with others. This reflects the belief that the imperative behind phenomenology is not only to understand ourselves, but also to share this knowledge with others. (2007:16)

In this spirit, while dotted with new theoretical information and the opinions of others, much of the enquiry in the final three chapters is dedicated to my own processes of creating work and my experiences of works, feeding into the wider web of theatre-making. Descriptions of all the works also serve to record and capture aspects of the ethereal existence of a theatrical work, sharing experience, in the hope of extending our understanding of human existence.

Chapter 1 – Affect, body and sound

1.1 Affect and the body: Virtual ‘muddy’ autonomy

In her paper “Affectivity: Performing Affect with Augmented Reality” (2012) Kozel briefly introduces the debate surrounding the so-called ‘autonomy of affect’.⁴ This debate centres on questions of whether affect is something corporeal, situated within the human body, or independent of it; whether the body is an integral ingredient in the emergence of affect, or simply a receptacle for affect or means by which it may be experienced (Kozel, 2012: 77). Affect’s proximity or relationship to the body, is intimately connected to the definition of affect that one adheres to, as well as one’s understanding of ‘body’. In this subchapter I briefly introduce some philosophical ideas on affect’s relationship to the body, ranging from the complete dependence granted by psychology and Merleau-Ponty, through the total autonomy described by Gilles Deleuze and Felix Guattari, to the ambiguous, ‘muddy’ autonomy of Brian Massumi and Suzan Kozel.

Merleau-Ponty describes one common definition of affectivity as “a mosaic of emotional states, of pleasures and pains each sealed within itself, mutually incomprehensible, and explicable only in terms of the bodily system” (1962; 154). This is a stream within affect theory which is often practised in psychology and psychoanalysis (Gregg & Seigworth, 2010: 7), whereby these “emotional states” are categorised into a set of ‘affects’: for example, shame, interest, surprise, joy, anger, fear, distress, disgust, and contempt (Sedgwick & Frank, 2003: 5). These ‘affects’ are emotions and feelings, and are closely linked to biology, and, more specifically, to human biology. By this definition affect is completely and utterly situated in human physiology, albeit influenced by the intellectual faculties and psychological life of the individual.

Merleau-Ponty’s own notion of ‘affectivity’ is complex. It is tied inextricably to the body, but for Merleau-Ponty the human body is far more than its physiological processes. His notion of affect includes all emotion-related phenomena, but edges

⁴ “The Autonomy of Affect” is also the title of a pivotal essay by Canadian philosopher, Brian Massumi, largely responsible for the recent renewed interest in affect theory (Gregg & Seigworth, 2010: 5).

towards contemporary definitions, all drawing on the writings of Dutch enlightenment philosopher Baruch Spinoza.⁵

In Spinoza's *Ethics* (1677) drives, motivations, emotions and feelings are all 'affects', and they are viewed as central to what defines us as being human (Damasio, 2003: 8). Similarly, Merleau-Ponty is of the opinion that in order to "bring to light the birth of the being of us" (1962: 154), to understand and fully embrace our own humanity, it is important to pay particular attention to our affective life, our 'inner phenomena' which "the body brings into being and actualizes" (1962: 164). For Merleau-Ponty the body is the place where affectivity not only comes about, but is also felt or 'experienced'. While the body may at times act as a shell into which one may withdraw, shutting out what is outside of oneself, the body is also "what opens [one] out upon the world and places [one] in a situation there. The momentum of existence towards others, towards the future, towards the world can be restored as a river unfreezes" (2002: 165), in this way establishing personal, 'embodied relations' with our world (Cataldi, 2008: 169), as our inner phenomena interact with our environment.

This 'momentum of existence towards others, towards the future, towards the world' is reminiscent of Gregg and Seigworth's description of affect on the very first page of the *Affect Theory Reader* (2010), which poses affect as "those forces...that can serve to drive us toward movement, toward thought and extension..."(2010: 1). Gregg and Seigworth qualify these forces further as being "visceral forces beneath, alongside, or generally *other than*⁶ conscious knowing" (2010: 1). This can perhaps be likened to Merleau-Ponty's position that affectivity must be recognised as "a distinctive form of consciousness" (1962: 155), which entails "a mode of perception distinct from objective perception, a kind of significance distinct from intellectual significance" (1962: 156). In other words affectivity might be described as a paradoxical pre-conscious 'consciousness', which one has an awareness of, but which occurs without rational impulse or clarification (Cataldi, 2008: 171). He refers as example to sexuality and desire, which skips the intellectual step, and "comprehends blindly by linking body to body" (1962: 157). For Merleau-Ponty affectivity thus entails a complex web of drives, desires, and emotions, which

⁵ While the term 'affect' is often used interchangeably with emotion or feeling, or employed as umbrella term denoting all emotion-related phenomena, several theorists distinguish very specifically between affect, emotion and feeling

⁶ Original emphasis.

precede conscious, intellectual 'sense-making', which arises within, and of which one is conscious in and through, the living, human body.

Another interpretation of Spinoza exists in the form of Gilles Deleuze and Felix Guattari's notion of affect. Deleuze and Guattari distinguish between 'affect' and 'affectation', the former being described as "an ability to affect and be affected....a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body's capacity to act" (1987: xvi), and the latter as "each such state considered as an encounter between the affected body and a second, affecting, body. The term 'body' is understood in its broadest possible sense to include "mental or ideal bodies" (1987: xvi). What is particularly important for an understanding of Deleuze and Guattari's definitions is the Spinozist interpretation of 'bodies', which are defined in terms of their 'relations of movements and rest'. This does not necessarily refer to literal movement in physical space between points of stasis, but includes the body's transitions between internal states (Massumi, 2002: 15). A body is therefore something with the capacity to change state or position, regardless of whether it belongs to a fleshy organism. Affect, for Deleuze and Guattari is this capacity or potential for change or transition within one such body, and affectation this process of transition as effected by another body. It is not an emotion, action or movement itself, but the potential for the existence of such an emotion, action or movement. Because bodies are not necessarily human bodies, affect is granted total autonomy from humanity. It may exist in something as abstract as an idea. It may exist in a work of art, while existing as something in its own right. Deleuze and Guattari explain:

Affects are no longer feelings or affectations; they go beyond the strength of those who undergo them...affects are *beings*⁷ whose validity lies in themselves and exceeds any lived. They could be said to exist in absence of man because man, as he is caught in stone, on the canvas, or by words, is himself a compound of percepts and affects. (1994: 164)

A compound of percepts and affects is what Deleuze and Guattari call a "bloc [sic] of sensation" (1994: 164). Blocs of sensations, the things we experience and undergo when, for example, we encounter a work of art, are preserved in that work

⁷ Original emphasis.

of art, and do not rely on the person experiencing and undergoing them for their existence (1994: 164).

While sensation is autonomous in its existence, it may be revealed through the body wherein it resides and its encounters with other bodies. This revelation may occur in the flesh, and as such the human body can become a “thermometer of a becoming” (1994: 179), that which exposes the transition from one state to the next, or, perhaps, the place where affect may be ‘experienced’. For Deleuze and Guattari affect does not necessarily come about in the human body. As ‘potential’, it could be argued that it does not come about at all, but is always present in some way. In the same way as energy is never created or destroyed, affect merely manifests itself in different ways, giving rise to new potential through its various transformations. It may manifest within the human body as an emotion, feeling, thought or action, but exists as something independent.

Canadian cultural philosopher, Brian Massumi, writes in the same philosophical vein as Spinoza, Deleuze and Guattari. He distinguishes specifically between affect and emotion. For Massumi affect is a preconscious potential, a vibrational intensity. Emotion is the qualification or ‘capture’ of affect (2002: 35), at “the point of insertion...into semantically and semiotically formed progressions” (2002: 28). Emotions are the habitual manifestations of affect in the individual. Emotions are personal and affects, pre-personal.⁸

He offers a slightly more ambiguous view on affect’s habitation of, or proximity to, the human body, by placing affect in the realm of the ‘virtual’. The concept of ‘virtuality’, in contemporary culture, is most directly related to computer games and other digital explorations through the notion of ‘virtual reality’. The word ‘virtual’, in this case, acts as synonym for the word ‘almost’. In this ‘almost reality’, or paradoxical ‘simulated reality’, one is simultaneously absent and present in two different worlds. Physically, one can be present in the concrete ‘real’ world, connected to a machine, wearing virtual reality goggles, for example, while one’s

⁸ Neuroscientist Antonio Damasio, further distinguishes emotions from feelings, stating that “Emotions play out in the theatre of the body. Feelings play out in the theatre of the mind” (2003: 28). Emotions take hold of the body through various physiological means, affecting our heartbeats, muscular tensions, facial expressions and vocal qualities amongst other things. (Damasio, 2003: 28). They are publicly displayed and form part of our evolutionary survival mechanisms, while feelings are our private, conscious interpretations of these emotions (Damasio 2003: 30). While these distinctions are important, and the three terms certainly cannot be used interchangeably, they do remain connected, with affect having the furthest reach. Emotion and feeling have at their root and may be encompassed within notions of affect. In other words, you can have affect without emotion, but no emotion without affect.

concentration may be so distracted that one becomes oblivious to one's physical surroundings in such a way that one no longer responds to stimuli from this world, as one no longer feels the goggles on one's face or hears the sound of someone entering the room. Consciously, one is present in an illusory world, created digitally by a machine, perhaps even being stimulated in such a way as to experience the illusion of physical presence, which is absent. One is paradoxically present and absent in both. This paradoxical state of presence/absence is what Massumi might describe as a 'virtual' state, "a lived paradox where what are normally opposites coexist, coalesce, and connect" (2002: 30).

For Massumi affect is a virtual "superlinear abstraction" (2002: 31), an intensity which doubles the body, and exists alongside it. It belongs to a paradoxical "incorporeal dimension *of the body*⁹. Of it, but not it" (2002: 5). Massumi explains this 'incorporeal' dimension with reference to a body in movement. By passing through positions, instead of occupying them, the body expresses its own difference from itself, its own changeability, its transition or 'becoming', it stands in "immediate, unfolding relation to its own nonpresent potential to vary" (2002: 5). It is virtual, at once "real, but abstract" (2002: 5), a formulation which Massumi borrows from Deleuze and Guattari. It is abstract, because 'potential' can never be perceived in one particular moment. It transcends the present, connecting past and future, relying on an accumulation of traces of past experience and glimpses of future possibilities (Massumi 2002: 30). It is real, because it cannot be separated "from the concrete activity and expressivity of the body" (2002: 31) to which the potential belongs. "*Its autonomy is its openness*.¹⁰ Affect is autonomous to the degree to which it escapes confinement in the particular body whose vitality, or potential for interaction, it is" (Massumi, 2002: 35). Affect is thus not contained within the body. It occupies the virtual realm of potential, much bigger than the world of actual occurrences, much bigger than the body it belongs to, but always remaining connected to or anchored in it.

This ambiguous notion of affect's independence is what Kozel calls "muddy autonomy" (2012: 77). In her capacity as performance theorist and dancer, disciplines which one may argue rely on the human body before anything else for their existence, she warns against an overemphasis on affective autonomy as it

⁹ Original emphasis.

¹⁰ Original emphasis

“falsely lulls us away from the awareness that we are corporeally impacted by affective practices” (2012: 77). Indeed, regardless of the degree of autonomy granted to affect by the abovementioned theorists, there seems to be an overall agreement that the body is the place where affect can be ‘measured’, ‘felt’ or ‘experienced’. As Kozel says, “I absolutely cannot access affect without my body but it does not reside or originate or remain in me” (2012: 78). For her affect exists outside, within and through the human body.

It is this paradoxical capacity of affect to be at once within a body as well as beside it, which allows it to manifest within and between several bodies simultaneously, granting it the potential to weave an affective web within a space, connecting bodies and allowing a current of intensity to course through an entire group. This is one of the major qualities that affect shares with sound.

1.2 Sound: Manifesting affect

In the introduction to their book *Sound, Music, Affect: Theorizing Sonic Experience* (2013) Marie Thomson and Ian Biddle affirm Massumi’s notion of affects as extending beyond a body, “towards the bodies of others, while also folding back in on themselves” (8). This layer of reflexive ‘folding’ creates feedback loops as the affective relation between bodies impinge on one another via the self and the other, effecting a continuous series of transformations, ranging in scale from virtual, incremental shifts to monumental explosions. Affect reverberates. Indeed, Deleuze and Guattari, as well as Massumi, describe affect in terms of vibration. These words: feedback, resonance, vibration; are all usually associated with what can arguably be described as the ultimate affective phenomenon, namely sound.

Sound too, connects us to each other and our surroundings, resonating, weaving an invisible thread between bodies in space. “From one body to the other, a thread is made that stitches the two together in a temporal instant, while remaining loose, slack, to unfurl back into the general humdrum of place” (LaBelle, 2010: xvii) For Brandon LaBelle sound is ‘promiscuous’, never belonging to one person, but simultaneously belonging to everyone who encounters it (LaBelle, 2010: xvii). It sits comfortably next to affect in a non-dualistic, connective flow, not having to choose where it settles, manifesting transformation as it travels.

If one accepts a Deleuzian, or even Merleau-Pontian, interpretation of affect as something which occurs pre-intellectually, one may arrive at the conclusion that affect belongs to the order of experience, the sense or meaning of which can not necessarily be calculated or explained. As such, a direct connection can be drawn to sound and the sonic, described by Thomson and Biddle as “that which is frequently resistant to semantic or semiotic interpretation” (2013: 10). We are moved by music, by compositions of sounds. We experience a variety of intensities, emotions, feelings within our bodies, or even radical physiological effects¹¹ as vibrations bypassing the auditory system move into and through our bodies, before being interpreted by our sense of hearing (Di Benedetto, 2010: 133). This capacity of music to affect has been known for centuries and Plato even condemned certain kinds of music “derived from complex rhythms and inappropriate modes” as exercising a corrupting force, leading to all kinds of unacceptable behaviours, including sexual promiscuity (Thomson & Biddle, 2013: 12).

For media theorists Edmund Carpenter and Marshall McLuhan this capacity of sound to affect stretches beyond music, including other sounds and noises as well. They assert that the ear, more so than the eye, speaks “directly to emotion” (1960: 69). Sounds act as warnings or appeals for attention that cannot be denied as we are instinctively programmed to respond (1960: 69). Certain sounds, like the ocean or the wind blowing through the leaves, may calm and soothe us, while others, like the sound of traffic or nails on a blackboard, make the hair at the back of our necks stand on end or send shivers down our spines.

The fact that we are impacted affectively by sound is self-evident and as such it does not seem surprising that, by some definitions, sound and affect share several physical and phenomenal qualities. One definition that Massumi offers for affects is that they are “*virtual synaesthetic perspectives*¹² anchored in the actually existing, particular things that embody them” (2002: 35). While affect itself eludes a fixed definition or containment, sound, at once material and immaterial, experienced through an intermingling of senses, vibrating through and within the body of the listener, can perhaps ‘manifest’ affect (Thomson & Biddle, 2013: 16), as sound too can be described as being both virtual and synaesthetic. The way in which a sound

¹¹ The beat of techno music, for example, can recalibrate our heartbeats (Di Benedetto, 2010: 133).

¹² Original emphasis.

manifests affect, however, depends on the individual's experiential patterns and subjective consciousness.

In Subchapter 1.1 "Affect and the Body: Virtual 'Muddy' Autonomy" (pp.10-11) I touched on Massumi's explanation of affect's virtuality as that which belongs to a body's paradoxically 'real, but abstract' potential to vary. Another way that Massumi describes affect as being virtual, is through its treatment of time. Affect suspends reaction in the moment before an emotion or thought is formed. It is the moment in which change takes place before having manifested, the moment of transformation. In this suspended moment a selection between possible reactions occurs too quickly to be truly experienced (Massumi 2002: 30). It occurs pre-consciously and the paradox lies in this moment which is "unliveable even as it happens" (Massumi, 2002: 31). Affect is virtual and incorporeal in the sense that it is not ownable or recognisable (Massumi, 2002: 28). At the same time its effects and manifestations are felt. It is material in the sense that it can be "embodied in purely autonomic reactions most directly manifested in the skin – at the surface of the body, at its interface with things" (2002: 25). This manifested intensity in the skin is "static, but not passive" as it is filled with vibratory motion (Massumi, 2002: 26). A sound wave may affect the skin in precisely this way.

Sound too inhabits the paradoxical realm of the virtual. What our ears and bodies encounter when encountering sound, is not an 'object' in the traditional sense, but pure movement. Sound waves propagate through the air and set our tympanic membranes (Yost, 1994: 22) and skins into motion.

It escapes language. We struggle to describe sounds. We often revert to onomatopoeic *thuds* and *cracks*.¹³ Yet how do we fully capture the difference between the *crack* of the wrist and the *crack* of the whip through descriptive language? And yet sound is always there. Perceivable through hearing as well as through touch, it affects and transforms us through its murmurs and melodies. Just like affect it is simultaneously material and immaterial (Dyson, 2009: 1). It is both ephemeral and invisible and can therefore not be pinned down and contained. Once experienced, it cannot quite be recovered. The same note sung twice is never identical and a recording can never contain the original experience. Even on repeat, the second and third experiences occur elsewhere in time and are thus never true

¹³ Italics will be used throughout the thesis to emphasise onomatopoeic sounds.

repetitions of the original experience (Lehmann: 1999: 157). Sound's invisibility makes it even more slippery. Because sound is invisible, it does not 'exist' in as concrete or 'real' a form as an object which can be seen in space and is therefore 'not to be trusted'. Our bias for the visual has been ingrained since the ancient times of Aristotle, who named sight our primary sense, as is demonstrated in expressions such as "seeing is believing" (Carpenter & McLuhan, 1960: 65). According to this expression, if something is invisible, it cannot be proven to exist, and, indeed, a space which contains no visible objects is said to be empty (Carpenter & McLuhan, 1960: 65).

Carpenter and McLuhan's concept of 'acoustic space' illustrates the way in which sound makes its own rules, running counter to our ingrained understanding of space as something which is contained within a boundary. They describe auditory space as "a sphere without fixed boundaries, space made by the thing itself, not space containing the thing. It is not pictorial space, boxed in, but dynamic, always in flux, creating its own dimensions moment by moment" (1960: 65). It is this virtual, acoustic space without boundaries which grants sound its unmatched power as 'immersive' phenomenon. Digital media analyst, Frances Dyson, defines immersion as "a process or condition whereby the viewer becomes totally enveloped and transformed by the virtual environment" (2009: 1). In combination with immersion, Dyson poses that sound and its accompanying technologies' extraordinary capacity for embodiment has made it the model for all new media's excursions into virtuality (2009: 5). This synaesthetic embodiment is also crucial to its existence as affective force. Sound's immersive quality makes it a powerful affective tool in performance, by placing attendants within the performance, instead of treating them as mere onlookers. We cannot shut sound out, as our ears do not have lids (Dyson, 2009: 4), and so we become transformed or affected whether or not we choose to.¹⁴

Sound immerses through its phenomenal shape, the sphere. "Sounds begin their lives as inflating spheres of acoustic energy and then spread out and resonate as part of the spherical sonic environment" (Brown, 2010: 138). Sound begins at one source, where an object is set into vibration, and radiates outward in all directions, rendering each individual sound 'round' (Brown, 2010: 138). These individual, round sounds together form a sonic environment around the listener. Carpenter and

¹⁴ It is this insidious behavior of sound which also makes it a powerful weapon, as is analysed in Steve Goodman's *Sonic warfare: Sound, affect and the ecology of fear* (2010).

McLuhan in the quotation above, as well as phenomenologist Don Ihde, in his in-depth phenomenology of sound, describe the acoustic space or, in phenomenological terms, the 'field shape' of sound, as spherical (Ihde, 2007: 75). This is because from the perspective of the listening person, sounds occur from all angles. According to Ihde this 'omnidirectionality' of experience is far more apparent when listening than when seeing, as sight is fixed in a singular, forward directionality (2007: 65).

What can further contribute to the sensation of being immersed or 'lost in acoustic space', is the fact that sound bounces. When encountering objects, portions of the sound waves are reflected back towards the source (Yost, 1994: 28-29). This is called reverberation.¹⁵ To the listener the sound becomes a blurred repetition, diminishing in energy and volume until it can no longer be heard (Brown, 2010: 145). The source of the sound can become completely confused as the sound waves ricochet off different surfaces, surrounding and immersing a listener, affecting the listener's body, from all angles. This brings me to sound's synaesthetic embodiment.

Don Ihde's statement "I hear with my body from bones to ears" (Ihde, 2007: 81), seems a poignant establishment of sound's unique mode of embodiment; a sentiment echoed by LaBelle, who states that "[s]ound and auditory experience forms a primary sensory matter in continual contact with the body" (LaBelle, 2010: 133). The ear is not the only part of our bodies through which sound is capable of affecting us, and not the only sense active in the experience of sound. One need only stand in front of the speaker at a rock concert with a hand on one's chest, to feel the pounding vibration of the bass.¹⁶ Sound is embodied in more ways than one, as it can be heard as well as felt.

An intermingling of the senses or simultaneous encounter of overlapping sensations is known as synaesthesia. Based on definitions by ethnomusicologist, A.P. Merriman, 'true synaesthesia' is a psychological phenomenon which involves the association of one sense with another (cited in Donnell & Duignan, 1977: 70). In "coloured hearing", for example, a synaesthete may perceive auditory stimulus in involuntary conjunction with vivid images of colours (Vernon in Donnell & Duignan, 1977: 69). For Massumi synaesthesia is integral to affectivity as "the measure of a

¹⁵ This effect is often simulated by technology to create the illusion of immersive space.

¹⁶ LaBelle uses the example of a baby, encountering the vibrations of its mother's voice in the womb (2010: 134).

living thing's potential interactions is its ability to transform the effects of one sensory mode into another" (2002: 35). In associated forms of synaesthesia, sensory transfers can be made artificially by, for example, 'intersense stimulation', which involves the addition of one sensory stimulus to another in order to intensify the perception of either or both (Donnell & Duignan, 1977: 70).

Sound may be used in combination with other sensory experiences to engender intersense stimulation. However, its own synaesthetic effect does not quite seem to fall into either of these categories. The synaesthesia of sound has no psychological or neurological cause, but it is also not artificially induced. It seems to be a unique form of natural intersense stimulation, interacting simultaneously with our sense of hearing as well as our sense of touch. Due to its physical qualities, sound can be both heard and felt. It is embodied in more ways than one, through the ears and the skin.

Sound's synaesthetic abilities rely on its physical manifestation as vibratory wave as, according to LaBelle, the vibratory may act as 'conductive matter' between 'oscillating bodies' (2010: 137). Vibration causes sound causes vibration and so on (2010: 134). A vibrating guitar string, for example, may be heard as a sound, but as the vibration travels through the air, it may cause the tin of paper clips on my desk to accompany it with its own sonorous vibration. My arm on the desk may in turn feel the vibration of the tin through the wood it rests on. Merleau-Ponty describes this phenomenon occurring when listening to a musical performance.

[T]here is an objective sound which reverberates outside me in the instrument, an atmospheric sound which is *between* the object and my body, a sound which vibrates in me 'as if I had become the flute or the clock'; and finally a last stage in which the acoustic element disappears and becomes the highly precise experience of a change permeating my whole body. (1962: 227)

The final stage in Merleau-Ponty's description above is the stage of affective manifestation. The sound has not only become tactile, but has literally transformed into an experience which includes the entire body. As sound waves penetrate our skin, reverberate with our already vibrating molecular structure, and resonate within the cavities of bodies, causing further vibration, hearing becomes feeling (Dyson, 2009: 4), not only in the tactile sense, but to the extent that a felt transformation may

occur. Vibrational, virtual, synaesthetic affect manifests through vibrational, virtual and synaesthetic sound.

One last similarity between affect and sound is the question of autonomy. Pierre Schaeffer's concept of the 'sound object' meant that sound existed as something entirely independent, not only of the ear, but even of its own source, although his practise was still very much focused on listening (Kim-Cohen, 2009: xvi). Christoph Cox, calls for what he terms 'sonic materialism', where sound is viewed as 'sound-itself', removed from its purely cochlear interpretation (Schrimshaw, 2013: 29).

On the other side of the debate, communication studies theorist, Jonathan Sterne, poses that "you can take sound out of the human, but you can take the human out of sound only through an exercise in imagination" (cited in Di Benedetto, 2010; 134). By his definition of sound, the relationship between sound and the body is that sound is dependent on the body for existence. In other words, while vibrations may exist in the world and may cause sound waves that we can imagine traveling through the air, they do not become sounds as such until they have been interpreted by the human ear and brain. This may be said to be true of any of the human senses. Whilst miniscule grass particles may be floating through the air, the smell of freshly cut grass can only come about in the nose and through its neural connections to the brain. Philosophical questions of whether something exists when not being interpreted directly by human beings, is as old as philosophy itself. However, one could argue, as Merleau-Ponty and phenomenology does, that while certain phenomena exist in the world prior to human interaction, they only take on 'meaning' when encountered by a human, and specifically a human body.

For the purposes of this enquiry it is important to understand both sound and affect's 'muddy autonomy', as they both transcend their manifestations within individuals, while engendering unique, subjective experiences when coming into direct contact with a human body. This is what grants them the connective, transformational power, so crucial to experiential performance.

Experience folds back in on itself in the same way that affect or a reverberating sound wave does, engendering a feedback loop that does not only impact on the individual, but may weave its web through an entire group. In the following three chapters I will attempt to extricate a thread one may follow, or isolate a wave one may ride, keeping in mind that they all affect and are affected by one

another, contributing to the ebb and flow of the experiential ocean.¹⁷ While it is important to remember that affect remains in the realm of potential, and no finite claims can be made about every attendant's personal experience, I will attempt to describe the potential affective transformation that can be engendered through various configurations of body, sound and technology with reference to the connective, the vibratory, the virtual, the synaesthetic and the immersive qualities of these configurations in various local performance works.

¹⁷ According to Ross Brown, sonic experience in particular is often described in "aquatic tropes of oceans, bathing, drowning, swimming, floating and so on" (2010: 1).

Chapter 2: *herTz* - A heartfelt experiential experiment

In this chapter I will discuss my own work *herTz*, the culmination of the practical component of my degree, which took place in the St. Andrew's College squash courts in Grahamstown in March, 2014. Performed by myself, seven other students from the Rhodes Drama Department and two high school squash players from St. Andrews College, the piece took the form of a technological, vocal and physical experience. The piece had no explicit characters or narrative structure and included text, movement, and several pre-structured technological experiments. For the greatest part of the performance, the attendants had a view from above (Figure 1) onto two adjacent squash courts, where most of the action unfolded.



Figure 1. The right-side court: The attendants' perspective (Copyright 2014 by Megan Grace Wright)

One of the main premises for the work was the exploration of a space in terms of its sonic potential. I had been playing squash socially and had been struck not only by the specific sounds created in a squash court, but also by the resonance created by the shell of brick, concrete and corrugated iron. "The squash court echoes rubber balls on racquets and brick walls, squeaky shoes on wooden floors and grunts of exertion, determination and despair" (Appendix A: Cilliers, 2014: *herTz* programme, front, "Notes").

A previous shorter practical exercise had entailed the recording and manipulation of sounds created with everyday objects. Using a tape recorder, I recorded the sound of blowing on a bottle. I then filled the bottle with water to create a different note. With a second tape recorder I then recorded the playback from the first tape recorder, along with the live sound of the new bottle note. Repeating this process, in the manner of a low-tech loop track artist, I was able to layer various “tracks” (e.g. playing a beat on a coffee tin with a chopstick, rhythmically switching a blender on and off) over one another, composing a backtrack, which was eventually used as accompaniment for a song.¹⁸

What excited me about the exercise was how the process of generating and capturing sonic material can be done with very simple objects, and can also comprise the action of the performance. The sonic material can then be arranged or composed in such a way that it can be used as a score. The final score relies utterly on the live moment of performance for its existence and its quality. Any mistakes or chance occurrences would be included in the final score and, as such, no two end products would be the same.

It occurred to me that all the sounds of the squash court could be used as material for composition as well and that here too the composing process could make out part of the action of a dynamic performance, as a squash court affords many possibilities for action. Through the use of more sophisticated technology, I would be able to manipulate the compositional process in far more detail in order to create what I hoped to be an intense sonic experience.

2.1 Body, sound, technology configurations

In the piece, the body, sound and technology appeared in several configurations. Firstly, the body acted as that which received sound via technological devices, whereby both Merleau-ponty’s layers of the body presented in the introduction (pp.1-2), the ‘habit-body’ and the ‘body at this moment’, were at play. In Benjamin’s terms, the attendant’s body was affected through its *Erfahrung*, through the sedimented connotations of the habit-body to the types of sounds it was exposed to, or its

¹⁸ Loops are sections of tracks that are repeated (Duffell, 2005: 14). Loop artists layer several loops over one another to compose a track, mostly through the use of a loop machine.

connotations to the objects responsible for the sounds. It could also be affected by its *Erlebnis* of the spatial proximity to the sources of sounds, the way in which these sources may have been obscured by the space or through technological means, and the directions from which sonic vibrations may have interacted with the ears and skin.

Secondly, the body was that which manipulated technological devices, by absorbing them into itself, relying on the 'virtual', pre-cognitive knowledge of the habit-body, allowing it to engage in mediated ways with its environment in order to both generate and capture the sounds which contributed to the sonic experience. The ongoing sonic experience which, in turn, affected the ways in which the technology was manipulated, became a feedback loop of information, encompassing performer and attendant in the 'acoustic space'.

Thirdly the body acted as generator for sonic material, when one of its autonomic functions, the beating of the heart, was amplified through technological means, establishing direct communication between performer and attendant through pure sound.

2.2 Context

2.2.1 Subject matter and text

The subject matter of the work was the scientific structure and more poetic associations of both sound and the human heart. The title, *herTz*, was intended to be a play on the German word *Herz*, meaning heart; and Hertz (Hz), the measuring unit of frequency, the aspect of a sound wave determining its pitch. The capitalised 'T' was meant to be an indication of the insertion of this letter into an existing word, forming a new one, thereby referencing both words. The shape of the capital 'T' resonated visually with the image of the two squash courts, a single, extended back wall divided by a shared wall. This also resonated for me with the image of the septa, the walls of tissue dividing the left and right sides of the heart.

The text included several literary and musical references. The first was Berthold Brecht's poem *Das Lied von der Wolke der Nacht* [The song of the cloud of the night], which formed a part of Brecht's very first play, *Baal*, which Brecht kept staging, rewriting and restaging between 1917 and 1926 (Thomson & Sacks, 2006: 68-69). I chose the poem for several reasons, one of them being Brecht's

association with cabaret and his practice of incorporating music, a sonic device other than pure language, into his work. As an episodic pastiche of text, movement and music, *herTz* resonated for me with cabaret as a theatrical form.

Being unfamiliar with *Baal*, I chose the poem out of its original context, for both its immediate semantic meaning, the use of the German language, and in particular the word *Herz*, one of the sources for my title. I included the poem in the programme with a translation by myself.

Das Lied von der Wolke der Nacht

*Mein Herz ist trüb wie die Wolke der
Nacht
Und heimatlos. Oh Du!
Die Wolken des Himmels über Feld und
Baum
Sie wissen nicht wozu
Sie haben einen weiten Raum
Mein Herz ist wild wie die Wolke der
Nacht
Und sehnsuchtsvoll. Oh Du!
Die will der ganze weite Himmel sein
Und sie weiss nicht wozu?
Die Wolke der Nacht ist mit dem Wind
allein.*

The song of the cloud of the night

My **heart** is murky as a cloud of the night

And without home. Oh you!
The clouds in the sky above field and tree

They do not know what for
Their room to roam is far and free
My **heart** is wild as a cloud of the night
And longs for home. Oh you!
It wants to be the whole wide sky
And does not know what for?
A cloud of the night is alone with the
wind.]

(Appendix A: Cilliers, 2014: *herTz* programme, back)

The poem encapsulated for me much of the poetic (as opposed to medical or scientific) associations with the heart, and several of the things that the heart has in common with sound. The speaker in the poem describes the heart as ‘murky’, or unclear, something of which the inside cannot clearly be seen or understood, even by itself. It is ‘wild’, untamed and uncontainable, wanting to be everything at once, but simultaneously longing for a home or a place to settle, something or someone to love. Brecht likens the heart to the wind, something invisible and ephemeral. Similarly, sound, as described in Subchapter 1.2 (pp.14-15), has this intangible

quality. It spreads throughout a space, whilst remaining anchored in the thing making the sound. It cannot be fully captured and can be several seemingly opposing things at once. In this way the heart, along with sound, enters the world of the virtual and the affective.

While the semantic meaning of the poem was available to the attendants, it is unlikely that it would have been read by all and even more unlikely that it would have been read at the moment of the poem's performance. While I felt it necessary to include the poem for those who might be interested, it was unimportant to me whether or not everyone would understand the poem. The use of the German meant that an attendant who had not read the translation and who was unfamiliar with the language would have been able to experience the text on an immediate, purely sonic level, unencumbered by its semantic meaning.

Other text included a sung extract from Swedish pop music group, Roxette's *Listen to Your Heart* (1988), which is meant metaphorically in the original song, but had a double meaning in the performance, as one of the sonic devices used was the live amplification of two of the performers' heartbeats.

On the more medical/scientific side, the text included a description of the excision of an atrial myxoma, simple scientific explanations of the biological functioning of the human heart and the propagation of sound waves and definitions of the terms 'Hertz' and 'frequency'.¹⁹ There was also improvised commentary to a live squash match; practical instructions guiding the movement of the attendants; and functional dialogue between the performers when performing tests or manipulating technology.

A final musical reference was in the form of an extract from Zerlina's aria *Vedrai, Carino* [You will see, my dear] from W.A. Mozart's opera *Don Giovanni* (1787), which I sang right at the end of the performance, and which will be expounded upon in the reflection to follow.

2.2.2 Technical setup

The technical setup for the performance was quite complicated and consisted of the following. Two handheld and two modified radio microphones, used to amplify the

¹⁹ An atrial myxoma is a non-cancerous growth in either of the top two chambers of the heart

performers' heartbeats, were connected via an external sound card²⁰ into a computer running Sonar x1 LE.²¹ The software allowed for live recording, manipulation and playback of the sound captured by the microphones. The sound was further manipulated by a sound desk and amplifier, which was connected to four speakers placed in the middle and at the outside edges of the upper level of the court space.

Two video projectors were focused onto the back wall of one of the squash courts, allowing for two layers of image to be projected simultaneously, superimposed on to one another (Figure 2). Both projectors were connected to live feed video cameras, which moved through the space, and one was further connected to a computer from which pre-edited video images could be played. Apart from the light from the projectors, the only other light used was the fluorescent lighting of the courts and a few small flashlights.

The computer and sound equipment and their operators were placed above the squash courts, among the attendants, along with a tripod for one of the cameras (Figure 1). All connection cables and extension cords were purposefully left exposed. The movement of cameras, microphones, cables and the manipulation and amplification of sound and image was intended as an integral part of the action of the piece.

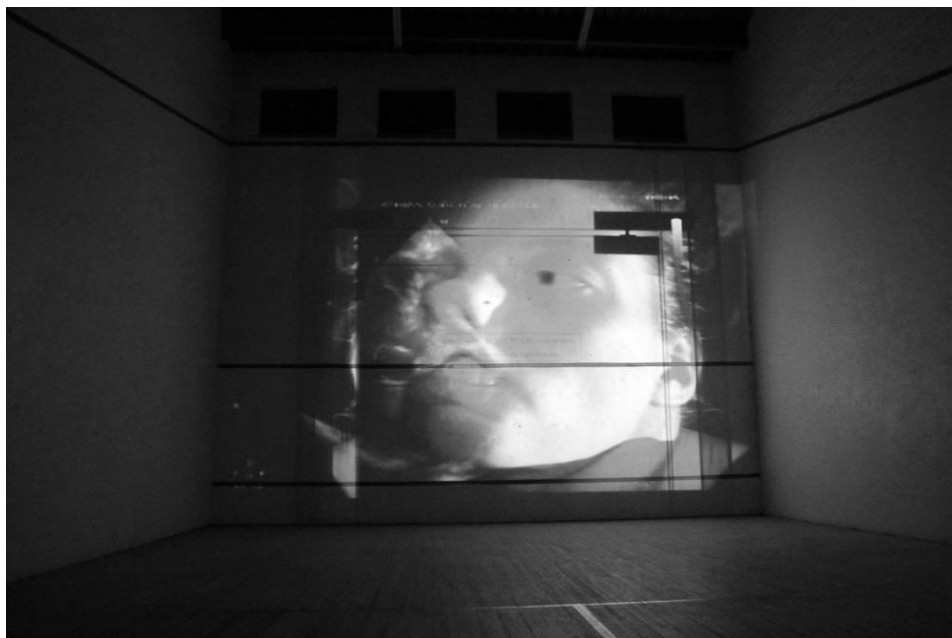


Figure 2. Live feed projection of face superimposed on pre-edited echocardiogram projected on back wall of left-side court (Copyright 2014 by Megan Grace Wright)

²⁰ An external sound card digital device with several connection ports, allowing for musical instruments and microphones to be plugged directly into a computer.

²¹ Sonar LE is entry-level recording software from the company Cakewalk.

2.3 Descriptions and reflections

2.3.1 Sourcing sound from the space

The first two configurations of body, sound and technology are illustrated clearly in what I call the ‘sourcing sequence’, which will be described below. This sequence had its origins in my original notion of exploring a space with regards to its potential sonic material and the use of this material for composition. As a site-specific, non-representational performance piece, it was important that the sonic material for the piece be sourced from within the space itself. Thus one of the first exercises my cast/crew and I undertook was a simple exercise involving a Shure SM58, dynamic microphone,²² connected to a simple PA system²³.

Each cast member had a turn to take the microphone on a journey through the squash courts, and by moving the top of the microphone across various objects and surfaces a whole range of sounds were discovered. As the exercise was performed, I made a shorthand list of the sounds we liked.²⁴ We then added a microphone so that we were able to amplify two sounds simultaneously. We added other, unamplified sounds created in the space, until we had several combinations of sounds that complemented or departed from one another in pitch, rhythm and quality. Through the rest of the process we would eliminate most of these sounds and combinations, distilling our material sources to the following sequence.

The sourcing sequence

(See Appendix C for link to audio clips)

I am standing in the middle of the squash court. My heart is pumping from running between the walls of the court, my breath *rasps* in my throat. Palesa brings a microphone to my lips and the sound of my *pant* erupts from the speakers in front and above me, facing the bodies watching the performance

²² A dynamic microphone is a general-purpose, robust vocal microphone, using a wire coil and magnet to generate the audio signal (Mediacollege.com, *Dynamic Microphones*)

²³ A ‘public address’ system can refer to anything which amplifies sound in order to be heard by a group. In our case, a small sound mixer with a built-in amplifier, connected to two speakers, was used.

²⁴ Some entries describe the sounds. “Wrought iron gate. Metallic clang”. “Bin - hollow grate”. “Door squeak”. Some entries describe the actions performed to create the sounds; “Scratching on squash courts”, “Beating railing”, “Scrape and hit corrugated iron”, “Blowing into vac, cleaner pipe”, “Finger tapping in door hole”. Some simply named the objects. “Door handle”, “Glass”, “Bricks in change room”, “Paper in dustbin” (Appendix B: Cilliers, 2013: *herTz* selected process notes, October 10, 2013).

from upstairs. I look up at Jes, the sound operator, standing among them. “Are you recording this?” I ask with a strained laugh. Jes nods and plays the question I just asked back to me. A chuckle from the attendants. From this point onward every new sound in the sequence is recorded right in front of the attendants.

I take the microphone from Palesa and put it to my chest, just to the left of my sternum, and start moving the microphone across my body (Figure 3.1). Behind me Dylan stretches, before starting to hit a squash ball against the wall with a squash racquet. To the right of me Katleho stretches, before doing various aerobics exercises; star jumps, lunges, and jogging on the spot. Several sounds fill the space, but the attendants are guided by the microphone. I vary the surfaces, the pace and pressure that I move the microphone across my body with. My hair, my cotton t-shirt, its pleather sleeves, my skin, my nylon tights each *shhhhh*, *zhhhh*, and *ffffff* at a slightly different tone, with a *dzh*, *ksh* or *bff* every time the microphone moves across a seam or bone or a *zhikizhikizhiki* when I scratch like a disk jockey, my microphone the needle, my body the record. There is a *grrrtz krrrtz* as I move the microphone across the Velcro holding the mic-pack around my waist. I become light-headed as I move quickly up and down my left leg to make long *swishes*. My only focus is to find as great as possible a variety of interesting sounds by running the microphone across the surface of my body. The shapes my body makes, the way it moves, is unplanned and follow simply from the quest for sound. I end on my textured running shoes, which *drrr* and *krrr* as I sit down to scratch the soles of my feet.

Pushing it across the floor with a low *rumble*, I move the microphone towards Katleho, whose jogging now becomes amplified. I urge her to pick up speed as the *ghaghaghagha* of her shoes on the squash court become increasingly frenzied (Figure 3.2). As Dylan hits the ball quite close to us, we become aware of his presence. Following him around the court, I try to capture the *thwack* of the rubber ball on the plastic strings of the racquet, before moving to the wall he is hitting at to capture the *dsh* of the ball against the wall, placing myself in harm’s way, in order to capture the sound. The *thwack* and *dsh* are followed by the *bf* of the ball on the floor, *thwack*, *dsh*, *bf*, *thwack*, *dsh*, *bf*, a waltz increasing in tempo as I urge Dylan to hit the ball

harder, trying to get the microphone as close to the point of contact between ball and wall as is possible, whilst ducking and diving to avoid becoming the point of contact myself. Katleho follows me with a handheld camera. Dylan's task becomes increasingly difficult as people, equipment and cables obscure his movement, and his frustration boils to the point where he throws the racquet down with a *crash* and leaves the court.

Two other sounds, namely myself reciting the poem *Das Lied von der Wolke der Nacht*, and the squeaking sound of a permanent marker drawing a heart on the glass of the squash court facing the attendants, were recorded during the performance. The recorded sounds, in combination with live sound, both amplified and not, were used to make up the sonic landscape of the entire performance. The only sound not sourced from the space was a regular heartbeat downloaded from the internet, which I looped, adding reverb and boosting the bass frequencies.



*Figure 3.1. Moving the microphone across my body
(Copyright 2014 by Megan Grace Wright)*



*Figure 3.2. Recording Katleho Ramafalo's running footsteps
(Copyright 2014 by Megan Grace Wright)*

2.3.1.1 Material and positional sources

The first configuration of body, sound and technology to be reflected on, is the body as receptacle for sonic material, experiencing sound, enhanced and manipulated through the use of technology. For a clearer understanding of our phenomenological experience of sound (what we hear from where), it may be valuable to observe its sources.

According to Don Ihde the sources of sounds may be described in two different ways. The first is 'to what' we listen. Ihde states that all sounds are "sounds of things" and sound is used for identification in our everyday lives. (2007: 60). I

recognise that paced ticking as my wall clock. Without having to look outside, I can tell whether it is the Labrador or the Jack Russell Terrier barking in the backyard. The sucking noise followed by a low hum coming from the kitchen is the sound of the fridge door opening, and I know that repetitive ting and scrape as the sound of someone stirring a cup of coffee.

What I realise from these identifications are two interconnected things. The first is that in order to identify something, it is necessary in the first place to recognise it or to have some previous 'experience', some prior knowledge of the sound. I need to have heard it, or something similar to it, before. If, for example, a stray dog were to get into my backyard, I would still be able to identify it as a dog, but I wouldn't know what breed it is, unless I were familiar with that specific breed's bark.

The second is that the 'context' within which one hears a sound, affects one's identification. I can identify the sound of stirring a cup, but without context, I would have no idea what is inside the cup. I can assume that because it is morning and I had recently heard my housemate's room door open, I know that he is primarily a coffee drinker, and that I have left a pot of coffee on the stove, that he is stirring a cup of coffee, but I would not know for sure unless I walked to the kitchen to check. Thus in order to identify the 'thing' making the sound, both previous experience and current context have an effect. I will refer to the 'thing' or the 'to what' we hear as sound's 'material' source.

In *herTz* the sequence above provided the attendant with the tools for identification of sounds' material sources. When hearing such sounds played on an electronic sound system, a person familiar with a squash court would have previous experience, or *Erfahrung*, and a certain amount of context for the sounds of shoes and a ball hitting a racquet, wall and floor. Such a person may be able to recognise these sounds without seeing them being generated. While *thwack's*, *dsh'es* and *bf's*, on their own could possibly be mistaken for other sounds, like similar sounds being generated on a tennis court, the specific quality of the resonance inside a squash court provides context, allowing for more accurate identification. However, through the use of sound technology, the quality of resonance can be artificially manipulated and thus an entirely accurate identification of these sounds becomes impossible when they are electronically mediated. In the case of less easily identifiable sounds, like those generated by a microphone rubbing on a body, it becomes even more important to provide a listener with experience and context.

The sequence above performed a double function. The intersense stimulation between sight and sound, discussed in Subchapter 1.2 as a related form of synaesthetic experience (pp.16-17), acted as a teaching mechanism, providing the attendant with the context required for later identification, when the *Erlebnis* of hearing the sounds while seeing them being generated would transform into *Erfahrung*. The immediate experience, or *Erlebnis*, of the material being sourced, the sounds being made and captured live, in real time, in front of the attendant, also brought the attendant firmly into the present and into the physical space. Thus, throughout the piece, the sounds captured here could continuously bring the attendant back to the world of the squash court, the human body and the actions that may be performed there.

As such the sequence functioned as a basis for the rest of the work and also took on a quality reminiscent of Massumi's 'almost' or paradoxical 'virtual', which I explained in Subchapter 1.1 (pg.10-11, 14). The attendant could remain paradoxically anchored in the immediacy of their physical surroundings, while retaining the capacity to be transported affectively through new movements and images, and even by the quality of the sounds themselves when they became abstracted from their material sources. As such the sequence formed a virtual layer, both there and not there, superimposed onto new experiences every time the sounds were heard in a new context.

In this sequence, in order for the identification to take place, the body of the attendant was positioned in a relationship to the action, whereby the generation of sounds could be seen and the resulting sounds, heard. Sounds were heard, identified and experienced as the sounds of things, and, more specifically, the things of the squash court. But what of the body of the attendant's relationship to the technological devices?

This brings me to Ihde's second source for sound, 'to where' we listen (2007: 60). 'To where' we listen, refers to the position in space that a sound emanates from. I will call this sound's 'positional' source. Ihde speaks of the spatial qualities of sound in terms of 'directionality' and 'surroundability' (2007: 77). The curtain blowing against the pencil tin on my desk reminds me that it is to my left and I could probably reach out and take a pen without looking. When someone calls my name, I can turn to face them with relative accuracy. What enables me to pinpoint a sound's positional source is the 'directional' quality of sound. This directionality, however, is

prone to distortion through various means. The wind may affect the birdsong outside my window to the extent that I think the birds are roughly to the front and left of me, but I would not be able to pinpoint their exact location without further investigation. If I am in a concert hall listening to a symphony, I become “*immersed* in sound that *surrounds*²⁵ me” (Ihde, 2007: 60) as the reverberation of the sound waves may cause positional sources of sounds to be utterly confused. In the case of the concert hall, the directional quality of sounds retreat, and the surroundability of sound through reverberation becomes more prominent. Ihde refers to this “copresence of surroundability and directionality” as the “bidimensionality of the auditory field-shape” (2007: 77).

My initial reason for placing the attendants at a distance from the action in *herTz* was simply a functional one, specifically with regards to the visual experience. From the balcony it is easy to see both of the squash courts, where most of the action occurred. The speakers were placed on the balcony, in close proximity to the attendants, simply to enhance the intensity of the sonic experience in terms of volume.

During the rehearsal process, I would often step outside of the performance, into the position of the attendant, in order to gauge what an attendant may potentially experience. My own experience of standing upstairs between the speakers, seeing sounds being created in the squash court down below filled me simultaneously with excitement and eerie uneasiness. These sensations were not rooted in any emotional reaction based on semiotic association or narrative context or even on the quality of the sounds, and were not brought about by sheer vibrational volume, but were elicited entirely by my physical orientation in relation to what I was seeing in front of me and what I was hearing from the speakers, causing a disruption in what I had learned to expect from everyday experience.

In our everyday experience there is an expectation that a sound will be heard from roughly the same direction as the position in space that it emanates from. In a squash court, the resonance of the space already serves to diminish some directionality, and indeed, even without technological aid, the positional sources of the sounds in the space are somewhat obscured.

²⁵ Original emphasis.

My experience of the squash court led me to believe that the closer I am physically to a sound's positional source, the more accurately it can be identified. The further away I moved, the more directionality made way for surroundability and the less easy it was to identify a sound's positional source. This was caused by reverberation, described in Subchapter 1.2 (p.16). Through the addition of the sound system the bidimensional field-shape morphed, a new directionality interacted with an enhanced surroundability. Depending on my distance from the original positional source, it sometimes became entirely obscured and the speakers acted as the new positional sources for the sounds.

Depending on the proximity of my body to the speaker, this new positional source was more or less apparent. If I was close to a speaker, I identified the sound as coming from the speaker. Because of the amplification, I could even feel the physical vibrations of the sound waves in the cavities of my body. The amplified vibration had even more potency as conductive matter, described in Subchapter 1.2 (p.17), physically connecting me to the sounds emanating from the speaker. At the same time the amplified sound waves reverberated to such an extent that they surrounded me from every angle, immersing me in the sonic field. If I stood more or less between the speakers, I could scarcely identify the positional sources of the sounds, as they seemed to be coming from everywhere at once. Thus depending on an attendant's proximity to the speakers, they would have had varying experiences in terms of directionality and surroundability, but in all cases the original positional source became obscured.

In the sequence from *herTz* described above, the immediate space was presented visually and sonically to the body of the attendant. This synaesthetic intersense stimulation provided her/him with the necessary experience and context to identify the sounds used throughout the piece, potentially anchoring her/him virtually in the physical space, the squash court, as it fluctuated between the literal and the metaphoric. Technology functioned to abstract sound from its original positional source as well as to enhance its surroundability through amplification of the vibration, contributing to a virtual, paradoxically disjunctive and immersive experience, which varied according to a body's position in the space.

2.3.1.2 Manipulating technology

The role of the human body in the sourcing sequence above, exceeded that of the body as a receptacle for sound. In order to engender the virtual, immersive experience of the attendant, the performer's body stood in another relation to technology. The body functioned as that which manipulated technological instruments by embodying them. In the sequence above I was manipulating the microphone, while Ester von Waltsleben and Jes Killian were operating the sound desk and recording software.

Let us first turn our attention to the microphone. Philosopher of technology, Philip Brey, draws on both the theories of Merleau-Ponty and Ihde, when writing about the 'embodiment relations' between humans and what he calls "technological artifacts [sic]" (2000: 1). They function as extensions of the body and as such enlarge our sense of embodiment (Ihde, 2011: 111). They are incorporated into what Merleau-Ponty terms our "body schema" (1962: 98).²⁶

According to Merleau-Ponty the body should be understood as a unified entity, whereby all the parts are interrelated or "enveloped in each other" (1962: 96), guided by the specific task we wish to perform (1962: 106), or, in phenomenological terms, an "intentional arc" which unifies the senses, intelligence, sensibility and motility (1962: 136). While I understand that my head is situated above my feet and my arms beside one another, I am not necessarily aware of this spatial orientation when performing an action like walking or scratching my ear. In the same way I do not consciously calculate distance when sitting on a chair or grasping my coffee mug. This is not the case from the day I am born, but is learnt through the cultivation of habits, built up by *Erfahrung*. Merleau-ponty says that "the body has understood and habit has been cultivated when it has absorbed a new meaning, and assimilated a fresh core of significance." (1962: 146). Thus my body schema is constantly being extended by incorporating new tasks and encounters with new objects and instruments, which become part of the virtual, sedimented layer of my habit-body (Brey, 2000: 8), allowing for my body in the moment to engage in *Erlebnis*.

When I was manipulating the microphone in the sourcing sequence described above, my immediate intention was to find interesting sounds. Because I had held a

²⁶ Smith's translation uses the term 'body image', but, like Brey, I prefer the term 'body schema' from the original French, *schéma corporel* because of contemporary associations with the term 'body image', referring to one's psychological attitude towards one's physical shape.

microphone before several times, I did not need to concentrate on the position of my fingers when moving the microphone across my body and through the squash court. The knowledge of the microphone as embodied artefact seemed to “resemble [my] knowledge of body parts” (Brey, 2000: 1), as the microphone had been incorporated into my body schema, as an extension of my arm. The microphone itself was not the object of my perception, but ‘withdrew’, becoming a (partially) transparent means through which I perceived my environment (Brey, 2000: 3) and acted upon it (Brey, 2000: 1). Thus technological artefacts can act as “a means through which motor skills are expressed or a means through which perception takes place” or both (Brey, 2000: 9).

In the sourcing sequence, the microphone fulfilled several functions. The first was to generate sound through interaction with various surfaces. The microphone entered into duets with all the surfaces it knocked, rubbed, or scraped across. In this way rubber, wood, plastic, bones and fabric, which would usually be silent, were made to sound, or were “given voice” (Ihde, 2007: 67). This is an example of how hand-held and manually operated technological artefacts, may enhance one’s motor ‘interactive skills’. (Brey, 2000: 10). Brey cites Merleau-Ponty’s example of a skilled typist that “incorporates the key-bank space into his bodily space” (1962: 145), interacting with the page through the typewriter, allowing for words and sentences to appear in ink, without having to focus on the keys themselves. Other examples are “a pen, a paintbrush, a vacuum cleaner, a razor, a hammer, a trumpet, a remote control, a knife, or a gun” (Brey 2000: 10). The microphone was used exactly like a pen or a paintbrush, but instead of creating visual patterns, I interacted with the various surfaces within the space through the microphone, in order to create sonic shapes (Figure 3.1).

It is important to note that “the embodiment relation is *inter-relational*²⁷” (Ihde, 2011: 111), which means that as I affect my environment through the technological artefact, my own experience is affected. While I was using the microphone to exercise movement and pressure onto various surfaces in order to create sounds, the surfaces reflexively made their textures and shapes known to me. In this way, the microphone was “mediating” (Ihde, 2011, 110) my perception of my environment, enhancing my perceptive skills. While I could have used any other object or even my

²⁷ Original emphasis.

hand to discover these characteristics, the microphone, performed another mediational function. It not only translated textures into sounds, but allowed for them to be captured, along with the other sounds in the space, the duets of racquet and ball, ball and wall, ball or foot on floor, in order for them to be further manipulated.

The microphone did not fulfil this function alone. The next mediational steps were the sound desk, computer and recording software.²⁸ Von Waltsleben and Killian had incorporated the sound desk and mouse-operated interface of the recording software on the computer into their respective body schemas, in the same way as Merleau-Ponty's typist. Here the various functions of the microphone and speakers, and qualities and characteristics of sound, have been translated into physical and visual interfaces, which allow for interaction by the operators. The "original sensory information has been pre-processed (e.g. augmented or distorted)" (Brey, 2000: 1). On the sound desk, different aspects of a sound signal are represented through dials and sliders, and on the computer screen, a sound wave itself is represented visually along with a host of effects and other options for manipulation. By moving a slider or knob, or clicking on a button on the screen, the operators were able to interact, through their embodied technological artefacts, with what they received visually and aurally from the performance space, and what they received aurally and physically from the vibration of the speakers.

Through the vibration emitted by the speakers, the attendants and performers all embodied the sounds, textures and shapes in the space at an amplified level. For the performers this created affective feedback loops of information. For me it affected the amount of pressure to apply with the microphone, how quickly to move it on a surface, or how far to hold it from an object, creating new sounds with new feedback from the speakers and so on. Similarly for Katleho Ramafalo it continuously affected with what velocity and speed her feet needed to hit the floor and for Dylan Brokensha, how hard and fast he hit the ball. For the operators it affected which frequencies they boosted, how much signal they allowed through, how much reverberation they added. The attendants in the midst of this affective web of feedback, embodied the continuous culminating of a series of embodied technologies, allowing them to hear and feel the shapes and movements they saw in front of them.

²⁸ For clarity's sake and because of their limited measure of embodiment, I will leave the cables conducting the signal between the instruments out of the argument.

2.3.2 Heart sounds

The final configuration of sound, body and technology I would like to discuss with regards to *herTz* is of the body itself as an instrument for sound generation, amplified through the use of technological devices.

Italian biophysical musician, Marco Donnarumma, describes the body as a “relentless sound technology” (2012a), acting as an instrument, perpetually generating sound. This includes audible sound, the most obvious being the voice, and inaudible sound, like the heartbeat, muscle vibrations and other autonomic functions, which can be made audible through amplification. External technology in the form of microphones, recording devices, computers and amplification systems can thus become the means by which the ‘technology’ of the body may be heard, engendering another kind of resonating feedback loop in which sound and body may affect and be affected by one another.

Donnarumma’s own ‘biophysical music’, is composed and performed with an instrument of his own invention called the Xth sense. He describes biophysical music as “the design of live sound performances that use a performer’s muscle sounds to substantiate an authentic sonic vocabulary and uncharted sound forms” (2012c). Donnarumma discovered that an acoustic vibration, a low frequency sound wave, is produced by excited muscle tissue. The Xth sense is worn on the body and picks up these bio-acoustic signals in order for them to be amplified, manipulated and played through loudspeakers (Donnarumma, 2011a). Through a chosen collection of rules and algorithms²⁹ the interactive software affords a computer the ability to “learn” human kinetic behaviour through capture and analysis of a bio-acoustic signal, as well as process and play back the results of its processing in real time. As such Donnarumma’s muscle sounds act as the “raw sonic material” as well as the “control data” for his work (Donnarumma, 2011a). The Xth sense and its accompanying software turns the body itself into a musical instrument which can produce and manipulate a sonic score, instead of just controlling the sound-generating instrument, as one would a violin or a flute (Donnarumma, 2012a).

Having been exposed to Donnarumma’s work by one of my practical supervisors, media artist and screendance filmmaker, Jeannette Ginslov, I was inspired to make audible the live sound of the human heart in my practical work

²⁹ An algorithm is the set of instructions for a computational process.

about the heart. The idea of externalising the sounds of the body's autonomic functions, which are normally inaudible, fascinated me as it has the potential to facilitate direct communication between performer and attendant. Before any words are spoken or any movement enacted, information about a performer's true state can be revealed through sound. The performer's heart rate can indicate fitness, nervousness or excitement, and is affected by all the physical and emotional action the body performs, leaving the performer truly vulnerable, unable to mask her/himself through acting. Through the use of sonic technology, which enables the attendant to experience that which is usually hidden, the attendant is thus enabled to tap directly into how the performer may be feeling.

Making the steth-mic

I did not have the technological savvy or the resources to make use of technology as sophisticated as Donnarumma's. While the ability to both generate and manipulate sound from a single source, as is the case with Donnarumma's Xth sense, adds a conceptual layer to the externalisation, I was satisfied that simply amplifying the heart would be e/affective enough in itself. The difference between the sounds of our heartbeat and our muscles is that even though it is not something that is always audible, we are familiar with the sound of the heart, while muscle sounds are completely unknown to most of us. The sound of a heart is almost iconic and too much manipulation of the original sound had the potential to obscure its simple, honest meaning. Thus I set out to find a simple method to amplify my heartbeat.

As part of my research I came across a sound art performance by musician and sound artist, Andre Borges. The performance formed part of the University of Brighton's Degree Show in 2011 and was entitled *INSIDE-OUT: A Sound Art Performance*. Borges used breath to manipulate his heart-rate, which was amplified along with the sound of his gut. Through the use of interactive media, the sounds of his heart and gut would trigger various lights and motors connected to fans, gongs and other percussive instruments, creating a larger soundscape (Borges, 2011).

On his website he describes his own process, including the assemblage of the 'stethoscopic microphones' used to pick up the internal

sounds of his body through his skin and subcutaneous tissue. This is done by attaching the part of the stethoscope containing the diaphragm,³⁰ to the diaphragm of a condenser microphone (Borges, Inside-Out Project).³¹

With no condenser microphone at my disposal, I continued on my search for a method to amplify a heart. I came across a YouTube video, showing exactly how a user named VisibleHB had assembled a stethoscope microphone for a science project using a similar method, but with a much less sensitive microphone, normally used with a personal computer (Visible HB, 2009). With the knowledge that the heart could be amplified with a simpler microphone, I set about experimenting with the equipment at my disposal.

Ideally I wanted the heart to be amplified wirelessly, affording the performer the capacity to move through the space, unencumbered by a cable. I ordered a stethoscope from a local pharmacy and attached the 'head' or part containing the diaphragm, as per Borges and VisibleHB's instruction, to a wireless Sennheiser lapel microphone from the Rhodes Drama Department, using insulation tape, and connected it to a sound system. Through experimentation I discovered that the seal between the microphone and the stethoscope had to be as airtight as possible, and the tube of the stethoscope head had to be perpendicular to the diaphragm of the microphone for the best results. I found the position on my chest where my heartbeat was loudest and discovered that by applying some pressure to the steth-mic,³² I was able to get much more volume from the microphone. If the steth-mic moved, the sound was muddled by the interaction with skin and clothes. After trying various methods, the simplest and most effective way to keep the steth-mic in place, whilst adding pressure, was to stick it directly to the skin with elastic plaster tape (Figure 4.1) and to strap it tightly to the rest of the body using duct tape (Figure 4.2). With the transmitter attached to the body with an elastic cloth strap (or mic pack), the performer would now be completely free

³⁰ A diaphragm is a thin piece of material inside a device which vibrates when encountering sound waves (Mediacollege.com, *How do Microphones Work?*).

³¹ Far more sensitive than a dynamic microphone, the condenser requires an external power source or battery, as it uses two plates with a voltage between them to create the acoustic signal (Mediacollege.com, *Condenser Microphones*).

³² 'Steth-mic' is a short term for 'stethoscope microphone', borrowed from VisibleHB.

to move unencumbered through the space, while her/his heartbeat could be heard clearly over the speakers.

The process of building the steth-mic with my own hands and experimenting with its position and the pressure required to fulfil my wish of amplifying the heart, was in all aspects one that made me aware of Merleau-Ponty's psycho-physiological body, at once mind and physical object, described in the introduction (p.2). I became distinctly aware of the knowledge embedded in my hands. Simultaneously managing a stethoscope, a microphone, tape and tissue which I used to protect the microphone, while closing the seal as tightly as possible, was something that I understood intellectually, but would be unable to achieve had I not incorporated the necessary skills into my body schema. Through a simultaneous thinking, hearing and feeling, the final product was created and met with a great sense of achievement and satisfaction; an immediate, inexplicable emotional response to hearing my inside amplified so loudly and clearly.



*Figure 4.1. Attaching the steth-mic with elastic plaster
(Copyright 2014 by Megan Grace Wright)*



*Figure 4.2. Securing the steth-mic with duct tape
(Copyright 2014 by Megan Grace Wright)*

2.3.2.1 Heart voice

As I wanted the attendants to be made constantly aware of my technological devices, I included the attachment of the steth-mic to my body and the testing of its sound in the action of the performance (Figures 4.1 & 4.2). After the mic was attached, I would ask Von Waltleben to adjust the levels of various frequencies. This showed the attendants that the sound was genuinely coming directly from my body and was not added through the use of soundtrack. It also introduced them to the way in which my voice was altered through amplification from the chest and the reverberation that was added electronically to give the heartbeat a fuller sound.

By amplifying the voice from the chest resonator as opposed to the mouth and adding reverberation, the voice took on a surreal, almost distant quality. When the lower frequencies were somewhat lifted, the resonance from my chest was enhanced and the heartbeat became clearer, but the clarity of my vowels and consonants were obscured to the extent that speech became almost unintelligible. Because I was using the steth-mic to amplify both heartbeat and voice, the testing served to find the best equalisation for talking, for singing and for pure heartbeat, while exposing to the attendants some of the ways in which we were experimenting with sound technology.³³

2.3.2.2 Heart squash

The heartbeat was used in various places throughout the piece, mostly to betray the impact of physical strain on the body. The piece opened with two high school squash players from St. Andrew's College, Dylan Myburgh and Otto Fietze, engaged in a shortened squash match. The match was there to introduce the space and its sounds to the attendant in the way that it would normally be used, before transforming it into a more metaphorical, theatrical space. It also introduced the device of the amplified heartbeat to the attendants. Myburgh had a steth-mic attached to his chest, enabling the attendants to hear his heart beating (Figure 5.1). This was explained to the attendants before the match commenced. As the two players shook hands at the beginning of the match, they remained frozen for thirty seconds. By counting the number of heartbeats that occurred in this time and doubling the number, an approximate heart rate could be calculated in beats per

³³ Equalisation refers to the enhancing or lowering of respective frequencies of an audio signal (Mediacollege.com, *Audio Equalisation*)

minute (BPM) (Figure 5.2). The match was accompanied by simple commentary from myself and cheers from the other performers, which quickly infected several of the attendants to participate in clapping and cries of support and disappointment. All the while, the match was underscored by the sound of Myburgh's heartbeat, steadily increasing in speed. In rehearsal we discovered that measuring Myburgh's heart rate at the end of the match, disturbed the natural excitement that occurred once the match had been won. Thus the measurement of his heart rate was repeated just before match point, when the players froze again for thirty seconds. Arguably the tensest moment in any match, this moment would not only externalise physical exhaustion, but also had the capacity to reveal emotional tension. Every night the increase in heart rate by match point was significant; almost double what it had been at the beginning of the match.

A sports match carries its own affective potential, which can be enhanced by many factors. One's interest in and knowledge of a sport, or one's investment in a specific team or player, adds layers of meaning onto one's direct experience of a match. The excitement and relief or dissatisfaction, tension and release of tension, as one's chosen team or player fails or succeeds becomes the affective wave that one rides through the match, continuously shifting as cross-currents of statistics or moments of virtuosity or disappointment flow through and into one's multi-layered experience.

In *herTz* I used unknown school learners from St. Andrew's College and a sport which would not be identified as one of South Africa's most popular sports in comparison to soccer or rugby, because, just like the sounds from the sourcing sequence, they belonged to the specific space. The experience was rooted in the everyday and in many ways similar to an experience that one could have, entering the St. Andrew's Squash Courts on any night of the week. This did mean, however, that many attendants would have had very little frame of reference for the match. As with the poem by Brecht, this was unimportant to me, as this allowed many attendants to engage in a direct *Erlebnis*. However, it did mean that they may not necessarily have been as invested in the players and the match, which could have detracted from the opening segment of the work.

In one of our earliest rehearsals, we as the performers tried our hand at playing squash against a wall. We experimented with adding calls from the onlookers and everyone reported that comments from the others fuelled their commitment to

the exercise, even if these comments were added somewhat artificially (Appendix B: Cilliers, 2014: *herTz* selected process notes October 11, 2013). In working with Fietze and Myburgh on framing the match for the piece, we decided to try vocalising our feelings towards their performances. We had been building relationships with them as players and people, and each of the onlooking performers rooted for their favourite. We included these calls of encouragement and disappointment in the final performance, in the hope of building investment from the attendants, to support the players, and to fill out what I feared could potentially be an unexciting beginning for the work.

I could not anticipate to what degree the attendants would be invested and was astounded by the responses to the segment. To varying degrees on different nights, the attendants started joining the performers in their claps, cheers and calls, and several attendants reported the segment as being one of their favourites. One of the main contributing factors seemed to be the audible heartbeat. An attendant reported that hearing the heartbeat was fascinating and that they could not believe how much it had increased in speed. An examiner remarked that amplifying one of the players' heartbeats gave the attendants a 'hero', something I had not anticipated. For her, simply hearing Myburgh's increasing heartbeat had fast-forwarded the process of building investment in him as a player. This is an example of affect's 'muddy autonomy', discussed in Subchapter 1.1 (pp.11-12), weaving its influence through a group of people.

The sonic result of the match was an intermingling of the everyday sounds of squash in a resonant court, calls and jeers from performers and attendants, my own commentary guiding the attendants' understanding of the match, and a steadily increasing live heartbeat. The synergistic effect of these sonic experiences, paired with the visual information conveyed by the match, seemed to become a driving 'force', a promiscuous affective bond, muddy in its autonomy, eliciting engagement in the immediate moment to the extent that, in many cases, attendant became participant.



Figure 5.1. Dylan Myburgh playing squash: The cable from steth-mic to transmitter visibly hanging from under his t-shirt (Copyright 2014 by Megan Grace Wright)



Figure 5.2. Counting Myburgh's heartbeats over 30 seconds (Copyright 2014 by Megan Grace Wright)

2.3.2.3 Heart song

Vedrai, Carino, the aria from Mozart's *Don Giovanni*, was chosen, like the poem by Brecht, for its immediate semantic meaning, out of the context of the original opera. In the opera Zerlina sings the aria to her fiancé, Masetto, after he has been wounded in a sword fight against Don Giovanni. Although the word heart is never mentioned, it is alluded to in the lines "Then feel it beating. Put your hand here". One can infer that Zerlina might put Masetto's hand on her chest over her heart. Offering the heart and, by association, love as a magical remedy for a physical wound, was a notion which I personally found very moving. The mystery of the crossover between something physical and metaphysical, which is encompassed in both sound and the image of the heart, was what drew me to these themes in the first place.

As with the poem by Brecht, however, it is very possible that several attendants had no idea as to the meaning of the text, as it was sung in Italian, and the squash courts were decidedly dark at this point in the performance, so they would have been unable to follow the translation. Once again the word had the ability to be experienced as pure sound. This time the words were sung and not spoken.

Vedrai, carino

(See Appendix C for link to video and audio clips)

I am standing on a metal trolley, wrapped in LED lighting strips, holding a red heart-shaped light. The squash court is dark. The LED's and heart-light are off. My heart is beating. Audibly. I inhale. The lower frequencies of the sound of my intake of breath, is amplified through the steth-mic. The labour of breathing in *rumbles* in my chest and ears. I begin to sing in a fairly high major key in my semi-trained soprano. My voice, amplified from my chest with plenty of reverb has an otherworldly, haunting quality; simultaneously present and distant; recognisable, but altered.

“*Vedrai, carino*” [You will see, my dear].³⁴

I pause. The heart in my hands lights up. After the deep in-breath my heart slows down for a moment, before returning to its regular rhythm.

“*Se sei buonino*” [If you'll be good].

Another in-breath.

“*Che bel rimedio*” [The cure].

I pause again. The LED's light up.

“*Ti voglio dar!*” [I have for you!].

Another deep inhalation slows down my heart which gradually returns to its normal pace during the following four lines which flow from one another.

“ <i>È naturale</i>	[It's natural]
<i>Non dà disgusto,</i>	[It won't give you disgust]
<i>E lo speciale</i>	[Though no apothecary]
<i>Non lo so far.”</i>	[Can prescribe it]

Another deep inhalation. As I begin to sing again, the trolley I am standing on is pushed from behind and starts moving slowly forward, at an angle, across the squash court. A video of an open-heart operation, the removal of an atrial

³⁴ The English translation is by Camila Argolo Freitas Batista and was included in the programme. It is not a line for line direct translation from the Italian, but strikes a balance between faithfully and poetically conveying the meaning of the aria (Appendix A: Cilliers, 2014: *herTz* programme, back).

myxoma, is projected onto the back wall of the squash court. My shadow moves slowly across the image as I am pushed forward.

<i>“È un certo balsamo</i>	[It's a certain balm]
<i>Ch'io porto addosso</i>	[I carry within me]
<i>Dare tel posso</i>	[Which I can give you]
<i>Se il vuoi provar.</i>	[If you'll try it.]
<i>Saper vorresti</i>	[You want to know]
<i>Dove mi sta?</i>	[Where I keep it?]
<i>Sentilo battere</i>	[Then feel it beating]
<i>Toccamì qua!</i>	[Put your hand here!]

The excerpt from the aria is underscored from beginning to end by the ever-changing rhythm of my heartbeat and breath. During the second half of the excerpt, the sounds sourced throughout the rest of the performance start filtering in. The waltz of ball on racquet, wall and floor; the *shwish* and then *shikishiki* of the handheld mic on my clothes; the *thump* of the mic on my hipbone; a distorted *crack*; splashes of my voice reciting the poem by Brecht, manipulated beyond recognition; the *squeak* of the marker on the glass wall of the squash court; all build with the aria in intensity and volume. As the final note of the aria is sung, the projection, LED's and sourced sounds are simultaneously switched off, leaving only the heart light, the sound of my breath, my heart beating and the lingering, resonant ring of all the sounds of the space. After a few more heartbeats, the sound from the steth-mic fades.

While the aria was sung in a sweet, lyrical style, and the image of the lights on their own could have pleasant associations (reminiscent of fairy lights or a Christmas tree), the explicit projected imagery, alienating quality of the voice, and the accompaniment stood in stark juxtaposition. While the heart is being offered as a remedy, its weakness is presented by the operation projected on the back wall. Once again there is the potential for a virtual, paradoxically disjunctive alienation and simultaneous empathetic inclusion in the sensory and affective world that binds performer and attendant through image and sonic vibration.

As in my first, short practical exercise, everything that was introduced and sourced throughout the duration of the piece culminated in a final segment. The result encompassed the body as receptacle of, as manipulator and as generator for sound in a synaesthetic *erlabnis* which carried with it all the virtual layers of the

Erfahrung of the rest of the work. Whether conscious or not of these layers of experience, the attendants seemed to be most affected by this segment and the finale was the part of the work that most attendants commented on as being the most “powerful”, most “beautiful”, most “moving” moment in the piece.



*Figure 6. “Vedrai, carino”, as I am pushed across the court by Gerhard de Lange
(Copyright 2014 by Megan Grace Wright)*

Chapter 3: *Samsa-masjien* - A sensory onslaught

Samsa-masjien is a scripted play by acclaimed Afrikaans playwright and novelist Willem Anker, centring on an aging man's ambiguous suffering from/ liberation by dementia, and the effect of his deteriorating mental state on his family. The piece was originally conceived by Anker, in collaboration with Jaco Boucher, who undertook the direction and design of the work. *Samsa-masjien* starred Gerben Kamper as the aging Gregor Samsa, Antoinette Kellermann as his wife, Josephine, myself as their daughter, Grete, and Ludwig Binge as Grete's husband, Tjaart. The piece debuted at the Absa KKNK in Oudtshoorn in April 2014 and was restaged at the Baxter's Flipside Theatre in Cape Town in January 2015. Although Anker's text certainly lends itself to literary analysis, with much of its emotional value being conveyed via narrative and character development, the sensory experience of the work seems to have made an incredible impact.

In an open letter in the Cape Times, author, academic and former Vice-Chancellor of the University of Cape Town, Professor Njabula Ndebele, describes his experience of the piece as follows: "*Samsa-masjien* was 40 percent linguistic and 60 percent visual and auditory...metaphoric figures to help me convey a theatrical experience in which speech complemented the drama of movement, sight and sound" (Ndebele, 2015).

3.1 Body, sound, technology configurations

In *Samsa-masjien*, the same three configurations of body, sound and technology which were discussed with regards to *herTz* (p.21), were present. The body acted as receptacle, manipulator and generator of sonic material, enhanced through the use of various technological means. All these configurations were illustrated in the climactic third act. While they will all be mentioned briefly, I will focus mostly on the body as the receptacle for a synaesthetically immersive experience, as this seems to be what stood out in reports by attendants and reviewers.

Samsa-masjien in its entirety is described in several reviews as a physical experience, a sensory onslaught. Wicomb's soundtrack is mentioned in all the reviews and Barbara Loots of *Cape Town Theatre Scene* makes specific mention of sound as the main contributor to this onslaught.

The “Samsa-masjien” becomes the “geraas masjien” (noise maker) and so brings a delightfully surprising additional layer through sound. It elevates the play to both a mental and a physical experience through an assault on the senses. It makes you the recipient of a theatrical out of body experience. (2015)

Tracy Saunders of the Cape Times writes that “(t)here are theatre productions that you watch and hear and then there are those that you inhabit with all your senses. ‘Samsa–masjien’ is an experience of the latter. More than a visual and aural experience it resonates on a sensory level” (2015).

As the climax of the piece, the third act is where the multi-sensorial experience is at its most obvious. Of this act, Saunders writes that “[t]he intensity crawls in to your brain so vividly that the involuntary scratching it elicits to rid yourself of the onslaught is not surprising” (2015).

3.2 Context

3.2.1 Subject matter and script

Anker used as source material Czech-born, German-language writer, Franz Kafka’s short story *The Metamorphosis* [Die Umwandlung] (1912), German playwright Heiner Müller’s *Hamletmachine* [Die Hamletmaschine] (1977), Austrian writer, Peter Handke’s novella about his mother, *A Sorrow Beyond Dreams* [Wunschloses Unglück] (1972), as well as quotations from Handke’s play *Kaspar* (1967), amongst several others. The most overt of these references is *The Metamorphosis*, which introduces the reader to the adolescent Gregor Samsa, who wakes up one morning to find that during the night he has transformed into a human-sized, cockroach-like insect. When he is discovered by his family, his own astonishment and their disgusted shock fuel a fast-paced, chaotic story ending in Gregor’s death.

In Anker’s play Gregor, a retired headmaster and freelance piano tuner, and his wife, Josephine, who spent her life as a housewife, are forced by Gregor’s intensifying mental instability, to move in with their ambitious daughter Grete, a copywriter at an advertising agency, and her husband Tjaart, a psychiatrist. Josephine, Gregor’s main caregiver, remains sympathetic to his condition to the extent that it seems that she herself may be losing her grip on reality. While there are glimpses of sympathy and humanity from the children, they are caught up in the

corporate world of status and financial success, and view Gregor and Josephine largely as an inconvenience, disrupting their clinically ordered lifestyle.

Gregor's re/progression manifests first in hallucinations of insects, and later in his behaving increasingly like an insect himself, scurrying on the floor and eating rotten food. His physical deterioration/development is paralleled by his use of language, which re/progresses into a poetic non-sense, and finally into pure croaks and hisses. Along with his increasing denial of that which 'makes sense' in a logical world in terms of behaviour and language, he develops an abhorrence for musical structure, and becomes infatuated with noise, making recordings of cicadas, and household appliances, for the 'noise-machine' [*geraasmasjien*], that he is building in the basement.

The climax of the work occurs in the third act, when the conflict between the two couples has reached breaking point. The young couple are entertaining important guests and doing their best to maintain the facade of normalcy, while, downstairs, Gregor's madness reaches its pinnacle. Pushing his noise-machine to its limits, like a maniacal mad scientist, he is transported in ecstasy to another dimension. This emotional and sonic climax is the last time Gregor appears in the piece. While no explanation is given as to the exact circumstances, the suggestion is that Gregor has finally died.

The epilogue shows the grief-stricken Josephine washing herself, an ambiguous attempt at reconciliation between her and her daughter and ends with the suggestion that Josephine too passes on.

3.2.2 Technical setup

A microphone on a stand, an old reel-to-reel tape recorder, a power-amplifier, several grey horn-shaped speakers and several connection cables were visible to the attendants on the lower level of the double storey set (Figure 7), while big speakers on stands faced them from either side. The soundtrack, (de)composed³⁵ by Pierre-Henri Wicomb, incorporated excerpts from the second movement of W.A. Mozart's *Piano Concerto in C Major, K. 467* (1785) and pre-recorded everyday

³⁵ According to Wicomb 'decomposition' was the main theme for the soundtrack. He refers particularly to the ways in which the Mozart Piano Concerto was deconstructed. He explains that this relates to the metamorphosis or transformation of the main character as he edges closer to death (personal communication, July 1, 2015).

sounds, and was developed further in the sound design through the use of live directional and contact microphones, and multi-channel audio.

The chain of command for the sound system in *Samsa-masjien* was as follows: the microphone on the lower level connected to the PA system on stage, which connected in turn to the multi-channel sound desk at the control station. The contact microphones on the upper level were also lined into the sound desk. The sound desk lined into the laptop running Ableton Live, where all the pre-recorded sounds and live sounds were mixed during performance.³⁶ The signal travelled back from the laptop, through the multi-channel sound desk, which diverged some sound to the overhead speakers and some back to the PA on stage. Connected to the PA were the horn speakers. Each of the microphones and speakers, as well as independent pre-recorded sound clips played from the laptop could be controlled individually, allowing for complexity of material and spatial composition.

The striking lighting, which contributed enormously to the sensory experience of the piece, was designed by Wolf Britz. The lighting on the upper level of the set was stark, with one light isolating the table on the top floor. An unseen light lit up the doorways to the two top floor rooms. The stark lighting in Grete and Tjaart's living space, reflected their clinical, success-driven lifestyle. A single, naked lightbulb hung from the centre of the roof of the basement. On the floor behind the set, more lights were arranged, four of them facing the attendants directly. These lights were used to great effect, especially in conjunction with the sound of the noise-machine in the third act, where the lightbulb would pulsate with the *buzzes* from the speakers and the lights facing the attendants would flash blindingly, in time with the sonic onslaught.

3.3 Descriptions and reflections

I will use a description of my own experience of a technical rehearsal on April 1, 2014, the day before opening at the ABSA KKNK, as springboard for the discussion to follow. The description of the soundscape has been supplemented with my memories of performing the scene and a re-listening of the main track composed for the scene.

³⁶ Ableton Live is a user-friendly digital audio workstation (DAW), which allows for easy manipulation and arrangement of live and pre-recorded sound.

Die geraasmasjien

(See Appendix C for link to audio clip)

I am in the airplane hangar of the South African National Army in Oudtshoorn. An enormous black curtain cuts the space in half. The small windows, high in the walls have been covered with black plastic to keep out the daylight. I am sitting on one end of the hangar, facing the black curtain, in a blue plastic chair which is connected to rows of others stretched out beside me, below and to the front of me, and above and to the back. The raked seating of the 'auditorium' is connected by steel scaffolding.

The scaffolding I am seated on mirrors the double-story set in front of the curtain. There is the immaculate white wooden shell of what I know to be Grete's house, with two rooms visible. One contains a table and four chairs and the other a bed. The two rooms are connected by an invisible passage. The pristine shell is held aloft by another scaffold construction. Wires hang from the roof of what I know to be the cellar. The cellar space is cluttered. Through the scaffolding's rows of spiny steel legs I can see black plastic on the floor, mounds of soil, more wires, a chair, and several pieces of sound equipment. To the right and slightly in front of me lighting designer, Wolf Britz, is seated in front of a lighting desk, resolving the lighting for the third act of the piece, trying to match the lighting as closely as possible in mood and intensity, to the complex soundtrack.³⁷ Behind me Rocco Pool, stage manager and sound operator, sits in front of the laptop, building the soundtrack from a combination of pre-recorded tracks and sound clips.

The second movement of W.A. Mozart's *Piano Concerto in C Major, K. 467* begins to play. An excessive amount of reverb gives the orchestra a hollow distant feeling. The ends of notes are extended and blend into one another. On the first accent a metallic *tapping* noise, not part of the original piece, increasing in volume, enters and continues for a couple of seconds as the final note of the musical phrase distorts. The tapping noise repeats, louder this time, ending in a dissonant *clang* which I identify as a muted *pluck* or *bang* on the strings of some musical instrument. More *thuds*, *ticks*, *clicks* and

³⁷ The lighting desk was not programable, which means that timing or brightness of cues could not be set in advance. Lights could be grouped together and assigned to certain channels. These lights could then be flashed manually by pushing a button, or faded in and out with sliders.

string noises, completely out of time with the Mozart, start to filter in as feedback, sliding downward in pitch, clashes with the key the piece is composed in. The sounds are coming from different places, some from the left and some from the right. As the *slides*, *cracks* and *taps* increase, the Mozart begins fading into the background, even cutting out completely for moments. There is a sound like shuffling footsteps. The piano of the Mozart is barely audible. An otherworldly *rumble* and a door-like *creak* start to increase in volume. There is a hard sound, almost like boiling water, but much more artificial, as if the lower frequencies have been removed. All the sounds are becoming more electronically manipulated, distorted, strident, with hard edges, becoming less and less recognisable. The Mozart has disappeared completely. An ambient wind-like, suction sound is ever-present in the background now, except when the sound cuts out completely for moments. There is an oscillating *buzz*, reminiscent of an electronic device, working at full capacity to perform its function. It is coming from one of the horn-shaped speakers on the stage floor. Another *drone* now comes from two of the other speakers on the floor. A *gargling* fades in. All the shorter, staccato sounds make way for the extended *buzz*, *gargle*, and a hollow, electronic *whine*, consecutively descending and ascending in pitch. A *buzz*, and Gerben Kamper's voice enters, delivering some of the text from the piece. His voice has a metallic, tinny quality, and is further distorted, duplicated and transposed, sometimes completely muted, sometimes incredibly loud, sped up and slowed down, becoming almost unrecognisable by the end of the text. Sounds like magnetic tape stretching enter at the climax of the text. There is a *hum* like that of bees buzzing. We return to an oscillating electronic *buzz* and the *gargle*. A throbbing, deeper *buzz* repeats several times. The oscillations start increasing in speed as the volume rises. More *screeching* sounds, distortion, feedback, *buzzes* and *whines*, slicing from different directions, build to frenzy, until, without warning, all sound cuts.

Britz listens to the track several times, matching groups of lights to specific sounds, flashing on staccato sounds, fading in and out on longer ones, using more light when the sound is at its most intense, and less when the sound is more muted. He plays the desk like a concert pianist, his fingers

dancing rapidly across the instrument. I cannot see Pool, but I can hear that he is just as busy.

With every repetition, Britz and Pool become more in sync, and the changes in lights begin to coincide increasingly with the beginnings of sounds, almost as if the lighting is being generated through the use of sound-reactive technology.³⁸ By the sixth or seventh time, the timing is close to perfect. A feeling of satisfaction every time a light coincides with a sound or a repetitive, sequential flashing enhances a *rumble*, accompanies the unsettled *buzz* in my stomach and chest, engendered by the harsh, alien noises coming from the speakers at an extreme volume. I become aware of another sound, a *hum* coming from the scaffolding I am seated on, and I can feel the plastic chair vibrating underneath me. I put my hand on my chest to feel the bass *rumbling* there.

By the end of the track my chest is tight with tension, my eyes squinting from the lights flashing directly at me, but the sensation is somehow not only unpleasant. I am no longer aware of where which sounds are coming from or really able to distinguish between them, as sound and light washes over me in ever-increasing intensity.

The track ends, leaving me in silence and darkness, in a state of exalted relief, my ears ringing and my skin tingling with the remnants of the experience. I can only imagine what an attendant must experience when sound and light is accompanied by the physical action on stage, within the emotional context of the play, surrounded by others undergoing the same visceral experience.

In performance this act, consisting of one intense scene, had even more sonic layers. Binge and myself, on the upper level, were engaged in a stylised dinner party, where we played our own characters as well as those of our guests, spewing reams of superficial, disconnected lines of text (Anker, 2015: 73-87), while manipulating cutlery and crockery on a glass table. A contact microphone, attached beneath the table, allowed for amplification and manipulation of the clanging and scraping of the utensils on the table. In the basement, Kamper and Kellermann were

³⁸ Sound-reactive technology is a form of interactive media allowing for other technological processes to be triggered by sound.

engaged in the final assemblage of the noise-machine, which included the manipulation of the horn speakers as different sounds would blast from them. At one point, Kellermann also delivers a speech on a microphone (Anker, 2015: 80).

My experience of the technical rehearsal gives me a glimpse into what an attendant may potentially have experienced when encountering this scene, which was described as “one of the most hypnotising and powerful scenes in the production” and “a spectacular visual and aural assault that leaves the viewer exalted and numb at the same time” by Marilu Snyders in her review for *What’s on in Cape Town* (2015). Her sentiments are echoed in several reviews. Marina Griebenow of *Die Burger*, for example, writes that the scene is “an absolute triumph, a cacophony of sound and light of apocalyptic scale. The silence that ensues, illustrates the feelings of the audience at the end of this tour de force – cleansed and stripped” (2015).³⁹



Figure 7. Gregor and Josephine build the noise-machine, Grethe and Tjaart entertain (Copyright2014 by Eva Du Preez)

3.3.1 Synaesthetic immersion: Insect music

From my own description above and from the words of the reviewers, one can see the synaesthetic, immersive power of the work, and the third act in particular. The intersense stimulation was engendered through a marriage between hearing and seeing, which transformed into feeling, as the attendant was enveloped by the virtual, acoustic space. In Subchapter 1.2 I introduced Carpenter and McLuhan’s

³⁹ Griebenow’s comments are translated from Afrikaans.

notion of ‘acoustic space’, as something which is fluid, omnidirectional and immersive, and closely connected to the affective (p.15). The attendant is surrounded by the acoustic space which “emanates spherically from the listener at its centre” (Brown, 2010: 138), also explained in Subchapter 1.2 (pp.15-16), as was the case in *Samsa-masjien*. While the contribution of light and action to the synaesthetic experience will not be explored in depth, it is important to remember that it cannot be divorced from the sound in the construction of the virtual environment. It is the virtual environment as a whole that effects the potential affective transformation that constitutes Dyson’s immersion, referred to in Subchapter 1.2 (p.15).

With regards to the intersense stimulation effected through sound and light, it is perhaps important to mention the role of the operators. They both stood in ‘embodiment relations’ to the technological artefacts they have incorporated into their body schemas, as is discussed with reference to Brey and Merleau-Ponty in Subchapter 2.3.1.2 (pp.35-36). As such their manipulation of the sound desk and software via the laptop is an example of bodies manipulating technology. Apart from their relation to their respective technological artefacts, however, they also stood in relation to one another. Their communication occurred completely without words. Through the repetition described above, a connection was created between Britz and Pool. With every repetition their actions were slightly altered as they started to anticipate one another’s timing. One can almost say that, to a certain degree, they both became responsible for both sound and light and its synergistic effect. The plane on which their mediums met transcended their individual actions, binding them with an affective thread, which spilled over into the experience of the attendant.

The next level of intersense stimulation, sound’s natural intersense stimulation described in Subchapter 1.2 (p.17), was effected through the immersive, reverberating sonic field. Through amplification the sound system augmented the aural and tactile vibrational experience. As described above, I could physically feel my chest vibrating from the sound waves I was immersed in. The conductive action of the vibration was intensified, as was the case in *herTz* (p.34), and bound everything in the space, the scaffolding and seat underneath me joining in the chorus of sensory experiences. The intersensory marriage of sound, light and action heightened the experience, as “the senses do not merely converge somewhere; they also influence each other...visual inputs can influence auditory perception and vice

versa” (Savig, Dean & Bailes, 2011: 294). This resulted in a synergistic embodiment, a synaesthetically immersive experience with the ability to affect and transform the person being subjected to it.

Both Snyders and Loots describe the scene as hypnotic. Loots goes to the extent of calling it a “theatrical outer body experience” (2015). While they both mention physical phenomena in the form of sensory experience, there seems to be a paradoxical disconnect from the physical space. Transportation to a virtual realm, simultaneously physical, but not of the body, occurs. The impact of the transformation is so great that it leaves the attendant “exalted and numb” (Snyders 2015), “cleansed and stripped” (Griebenow 2015). My own ‘exalted relief’ by the end of the scene echoes these transformations in physical and metaphysical state.

Another transformation reported by Loots, occurred in the form of a hallucinatory, physical sensation. “As you sit hypnotised by the noises and suggestions that Pierre-Henri Wicomb weaved into insect ‘music’, you can almost swear you too felt the crawling of insects on your skin along with Gregor Samsa” (Loots, 2015). This is echoed by the ‘involuntary scratching’ that Saunders mentions. Through the technologically mediated, vibrationally conducted, synaesthetically immersive experience, of sound, light and action, a new, sensation was created. This hallucinatory effect, virtual in the sense that it was not really there, but ‘almost’ felt, is an example of a potential affective transformation, “manifested in the skin” (Massumi, 2002: 25).

The ‘insect music’ ‘crawling...on [the] skin’ was engendered, to a great extent, through the manipulation of the material and positional sources of the sounds, defined in Subchapter 3.2.1.1 (pp.30-34).

3.3.1.1 Abstraction of material sources

Wicomb used recordings of insects, particularly crickets and cicadas, in his soundtrack. Apart from the sounds made by cicadas and crickets, generated by insect bodies, Wicomb drew from several material sources for the composition of the soundtrack for *Samsa-masjien*.

In terms of sounds of the human body, Wicomb used licking sounds, the grinding of teeth, a crowd in a sports stadium, groans and moans and Gregor’s speech from the script. (Wicomb, P., personal communication, July 1, 2015). Like the voice and heartbeat used in *herTz*, these sounds have the capacity for

communication with an attendant's own psycho-physiology and its sedimented experiences and associations.

Wicomb also used the sounds of inanimate objects. This includes the *creak* of a door, a microwave, *plucking* and bowing on a violin and *plucking* and *hitting* the strings of a piano with plastic and wooden objects (Wicomb, P., personal communication, July 1, 2015). This set of sounds is engendered through the body's interaction with objects. The body entered into duets with these objects in a similar way that the microphone in *herTz* did, in order to 'give them voice', as mentioned with reference to Ihde in Subchapter 2.3.1.2 (p.36).

The sound of a creaking door or a microwave, are sounds that would be have been familiar to most attendants. Indeed Bouwer and Wicomb relied on the familiarity of these sounds to represent these objects on stage. Doors were not represented physically, but through a *creak* and a *slam* from the overhead speakers and a mimed action by the performers. Initially the microwave was also not present physically in the piece, but was suggested through the use of an electronic *buzz*, followed by the *ping* of the bell, indicating that the microwave has completed its set heating period. As part of the narrative, a microwave is used to warm up food (Anker, 2015: 14), but Bouwer also used the sound of the microwave as a transitional device in the first act. It was a sound associated with Grete's modern kitchen and became a symbol for the mundane and the automated style of her corporate existence. In the second act, when the older couple were in the basement, Josephine brought the microwave, now represented physically, downstairs to be used in Gregor's noise-machine.

The piano and violin also fulfil narrative functions in the piece. We learn that Gregor used to be a piano tuner (Anker, 2015: 40) and is tinkering with a piano in the basement (Anker 2015: 22). Once again, the piano was not shown on stage. In the second act, Josephine discovers a violin (Anker, 2015: 38), which she carries with her for the rest of the act. Grete informs us that learning to play the violin is one of Josephine's unfulfilled dreams (Anker, 2015: 39), and with encouragement from Gregor, she keeps plucking and sawing, driving Grete to exasperation (Anker, 2015: 61).

The door, microwave, violin and piano are thus all objects that form part of the narrative of the piece and were present, whether seen or unseen, in the represented

environment of Grete's house. Like the sounds of the squash court used in *herTz*, the sounds were sourced from the world of the piece.

Throughout the piece, as part of Gregor's process of building the noise machine, he collects the sounds of his environment, including the cicadas outside. The recording process was represented through Gregor's movement through the space with a microphone on a stand. In the basement, the attendants were also shown at various points how Gregor manipulates sounds, playing them on the old reel-to-reel tape recorder and pulling and scraping reams of magnetic tape. Dyson remarks how the invention of the microphone and magnetic tape allowed for the existence of Schaeffer's 'sound object' (2009: 54), allowing for reproduction and distortion of the original sound, abstracted from its material source. While the sounds in *Samsa-masjien* were abstracted, they were not completely divorced from their material sources. They retained their connection to their material sources, as the attendant was guided by 'experience' and 'context', as discovered in Subchapter 3.2.1.1 (p.31). Through Gregor's manipulation process, the attendant was shown and made to hear how the familiar everyday sounds of Gregor's environment pro/regressed into the *buzzes* and *rumbles* that were heard and felt in the third act. By the time the *Erlebnis* of the third act occurs, the original sources of the sounds had become sedimented in *Erfahrung*. In this way, similar to the immediacy of place established through the sourcing sequence in *herTz*, the world of *Samsa-masjien* remained, as a virtual layer, superimposed onto the sonic onslaught experienced at the climax of the work.

The main difference between the sourcing processes in *herTz* and *Samsa-masjien*, is that the sounds in *herTz* were sourced in the presence of the attendant. The attendant was privy to the interaction between body and technology, whereas in *Samsa-masjien*, Gregor's sourcing was merely represented. Much of the body/technology interaction of sourcing the sonic material occurred in the process leading up to performance. However, not all of the body/technology interaction happened outside of the performance. The use of the live microphones, contributed to the sense of immediacy in *Samsa-masjien*. Another great contributor was the complexity of the spatialisation in the sound design.

3.3.1.2 Spatialisation

In *Samsa-masjien*, and especially in the third act, Wicomb and Bouwer experimented with the bidimensionality of the auditory field, introduced in Subchapter 3.2.1.1 (pp.32-33) through the use of spatialisation.⁴⁰ This was made possible by the digital multi-channel sound system, the various speakers and through the physical interaction of the performers and operators with the technological artefacts.

Wicomb experimented with spatialisation by having certain sounds played in mono⁴¹ and some in stereo⁴², sometimes only using one of the two overhead speakers, sometimes using both, sometimes moving sounds from one to the other, and sometimes moving sounds to the horn speakers in the basement. The horn speakers are directional, focusing sound in a beam (Wicomb, P., personal communication, July 1, 2015). When the horn speakers were moved, as was done by Kamper and Kellermann in the third act (Figure 8), one was distinctly aware of these beams of sound, slicing through the space. This is another example of the manipulation of an embodied technological artefact in the piece, similar to the manipulation of the microphone in *herTz*.



Figure 8. Kamper and Kellermann moving the horn speakers (Van der Veen, 2014)

⁴⁰ Spatialisation is the composition of the positional sources of sounds via a speaker system.

⁴¹ A mono signal is a single signal travelling to all speakers

⁴² A stereo signal is split in order to travel to two speakers, allowing for panning and independent manipulation

The movement the spatialisation created, contributed to a dynamic environment, immediate and three-dimensional, a virtual acoustic space. Coupled with the dynamic lighting, and physical action, the soundscape of *Samsa-masjien* created a world which an attendant could truly be immersed in or 'inhabit', as Saunders puts it in the above quotation.

Chapter 4: *Everyday Falling* and *Na-aap* - Amplifying pain

In the previous reflections I have discussed the body in several configurations to sound and technology, focusing largely on individual bodies and their capacities for receiving sounds, manipulating objects in order to create sounds, and their own sonic potential in terms of physical functions like the voice and heartbeat. The types of conductive matter between bodies that I have discussed up to this point are shared synaesthetic experience and acoustic vibration. In this final section I introduce another connecting force between bodies, namely the *mirror neuron system*. This system refers to a sympathetic understanding between bodies which, although present in all the works previously discussed, is particularly relevant to segments from First Physical Theatre Company's *Everyday Falling* (2010) and Jaco Boucher's *Na-aap* (2013).

4.1 Body, sound, technology configurations

The primary focus in the following section is on how the body acts as generator for sonic material. In the segments from *Everyday Falling* and *Na-aap* it is not the autonomic functions of the body, like Donnarumma's muscle vibration or Borges and *herTz*'s heartbeat which engenders the sound, but the painful interaction between the surface of the body and an inanimate surface, namely, the floor.

In his paper "*Affect Regulation, Mirror Neurons, and the Third Hand: Formulating Mindful Empathic Art Interventions*" (2010), art therapist Michael Franklin introduces "the mirror neuron system" as being "[o]f particular importance to theories of attachment, art, and empathy" (160). He draws on the works of neuroscientists Gallese, Keysers and Rizzolatti to explain the fairly recent discovery of this 'neural mirror mechanism', present in both humans and primates, allowing for "an embodied 'as if' understanding between the observer and the observed" (160). This means that "our electrical system is able to respond as if what we have seen has been done to our bodies" (Di Benedetto, 2010: 14), our brains and neural system respond in a similar way whether we are ourselves undergoing an experience or whether we are experiencing another undergoing an experience. When we view someone performing an action or undergoing an experience, we may empathise with them on a psychological level. However, the discovery of the mirror

neuron system shows us that this empathy transcends psychology. It is in fact psycho-physiological as the same physical processes which are triggered in the observed, are triggered sympathetically in the observer (Di Benedetto, 2010: 15).

Stephen Di Benedetto writes about the particular influences of the senses in our experience of live performance and also refers to the mirror neuron system. According to him it is not only visual stimulation which may affect one's mirror neuron system. He asserts that "the more a performance evokes sensation, the more able it is to create a sympathetic response within the attendant" (2010: 14), thus the more senses stimulated, the greater the psycho-physiological effect. In both *Everyday Falling* and *Na-aap*, the use of sonic technology enhances the attendants' sensory stimulation, and thus their vicarious experience of the painful interactions between the performers' bodies and the floor

4.2. Everyday Falling

First Physical Theatre Company's piece *Everyday Falling* was performed in the Rhodes Box Theatre in Grahamstown in November 2010 and at the following year's Eastern Cape Schools Festival. It was choreographed by award-winning contemporary dance and physical theatre practitioner, Athena Mazarakis, and performed by company members Alan Parker and Siya Mbambaza. It combines live movement sequences with live text and other sound, some of which is amplified, and some of which is pre-recorded.

4.2.1 Context

4.2.1.1 Subject matter and text

Everyday Falling relied on the interaction between movement and language for the conveyance of its subject matter: literal and metaphoric associations with both the word 'falling' and the act of 'falling'. The movement in the piece was characterised by the juxtaposition of suspension and release, standing and falling, being in control and losing it. However, the loss of control - the act of falling - very rarely culminated in the inevitable collision, the painful crash onto the floor. It was repeatedly interrupted by the performers either catching their own falls, or the falls of the other performer. For the most part the interaction with the floor was light and controlled.

The tension between being upright and crashing onto the floor was what created much of the suspense in the piece.

The sparse text was constructed largely from two lists and variations on these lists. The first was introduced poignantly in the opening segment of the piece. Parker, who was held suspended by Mbambaza, was lowered to the floor, painfully slowly. The simple, elegant action was accompanied by his natural, unamplified voice, as he uttered the phrase “Every day I am falling”, followed by a list of metaphoric uses of the word ‘falling’, including “falling behind”, “falling short”, “falling in love” and “falling asleep”. As soon as Parker’s feet touched the floor he lifted one leg and began to lean backwards at an angle. The moment he lost his balance, he was caught by Mbambaza, who returned him to safety. The second list was of descriptions of bodies falling on various surfaces. Some examples are “body falling on wood”, “body falling on wood and sand”, “body falling into a chair” and “body falling on a wall”. These were illustrated through different combinations of sound and action.

The other main text element was a speech about the use of the word “falling” in the English language, delivered over the microphone by Parker. The essence of the speech was that ‘falling’, as it is not commonly done purposefully, implies some sort of ‘failure’: literally, “a failure to stay upright”.

4.2.1.2 Technical setup

In *Everyday Falling*, a low-tech approach towards technology was used. A portable amplification and CD-player system, connected to a microphone, was visible in the performance area. It was used by the performers on stage to play pre-recorded sound-effects of bodies falling on various surfaces, as well as to amplify their voices and other sounds made by their bodies. These included the sounds of tongues *clicking*, joints *cracking*, and the body landing on the floor. There was also pre-recorded sound, in the form of atmospheric musical tracks, which was played from the theatre’s overhead speaker system. One general lighting state, demarcating the performance area, persisted throughout the performance.

4.2.2 Descriptions and reflections

4.2.2.1 Synaesthetic synergy and mirror neurons

In *Everyday Falling* we were confronted with the images of bodies falling on various surfaces. The first time we were introduced to these images, they were illustrated purely through sound, played on the portable amplification system. Parker announced that what we were about to hear were “sound effects of bodies falling”. This was followed by a variety of pre-recorded sounds, played on the portable amplification system, of loud *banging* and *thudding* sounds. Each track was introduced by Parker in the form of a description of the sound: for example, “Track three: body falling on a mat many times with clothes and reverb” and “Track eight: body falling on a tiled floor”. This was accompanied by a movement sequence in which Mbambaza kept losing control over certain limbs, letting them fall towards the ground and then catching them, coming back to his original position on the chair.

There was light-hearted laughter from the attendants, which seemed to be prompted mostly by the descriptions of the sounds, rather than the sounds themselves. A reason for this may be that we could not clearly identify the sounds as several of them sounded quite similar. We had no way of knowing whether the sounds we were hearing were truly the sounds of the described impacts. To a certain extent the technology removed us from the painful impact. The transformation from sound to feeling was intellectual. The potential impact of the sound seemed to have been diminished by being pre-recorded and did thus not engage us physically. The scene was still delightful and entertaining. The sounds and their descriptions were humorous and Mbambaza’s physical sequence provocative.

The second time we experienced a body making contact with a surface was also the second time the list of metaphoric uses for the word ‘falling’ appeared, this time delivered on the microphone by Mbambaza. The list now also had an added reference to sound. “The sound of falling behind”, “The sound of falling between the cracks” and “The sound of falling in love”, amongst others, were illustrated by Parker through various physical responses, often with humorous effect, as these metaphoric actions are not usually associated with specific physical actions or sounds. Mbambaza held the microphone close to Parker’s movements, so that the sounds of his different body parts making contact with or landing on the floor were amplified. There was a lot of laughter, but far more audible groans and gasps from the

attendants. This time the reaction was prompted by the sound in combination with the action, more than the description. This time we were not imagining the painful actions suggested by the sounds of a recording. They were occurring right in front of our eyes and ears and were thus causing our mirror neurons to kick into action. The synaesthetic experience (intersense stimulation) of seeing and hearing Parker's body encountering the floor was causing our bodies to respond empathetically. Thus through stimulating us both visually and aurally, the performance was affecting us to the point of automatic reactions. In this segment Mbambaza's manipulation of the microphone was used as amplification for the interaction between body and floor. Technology was enhancing, instead of detracting from our sensory experience, as was the case with the pre-recorded sounds described above.

4.2.2.2 Immersive hallucination

Judging from the responses of the attendants, the final sequence was where the affective potential reached its summit. My description of the sequence is based on my own memories of being an attendant watching the piece performed in the Rhodes Box Theatre in Grahamstown, as well as an archival recording of this run in which the first couple of rows of attendants are visible, their reactions clearly audible.

Body Falling

(See Appendix C for link to video clip)

Mbambaza is sitting on a chair, his head resting on his hands. He watches Parker lying on the floor, having collapsed after his previous physical sequence. Suddenly and with no warning Mbambaza leaps out of the chair, high into the air and crashes loudly onto the wooden floor. There is an uncomfortable vocal response from the attendants. Mbambaza kicks off the floor, suspended on his right arm, before crashing to the floor once again. An even louder reaction from the attendants. An intake of breath. "Ooh!" "Yoh!" He rolls across the floor, lifts himself onto one hand again and drops loudly. "Noooo." With every impact the involuntary convulsion in my own body gets bigger. A rhythmic clapping of hands plays on the theatre's speaker system. Mbambaza dives "Heeey" and rolls without crashing. There is laughter. A feeling of relief. Two more falls evoke laughter. Actions of jumping and diving,

all involving Mbambaza hurling his body loudly onto and into the floor are repeated relentlessly as the laughter dies down.

At a certain point, Parker gets up off the floor, retrieves the microphone, and begins listing the various surfaces on which a body may fall, some of which were included in the pre-recorded sounds played on the portable amplification system earlier in the piece. One can clearly hear that he is still out of breath from his previous sequence, as he announces “Body falling on a tiled floor... body falling on a concrete floor....body falling down a flight of stairs”, etc. All the while Mbambaza is still jumping and crashing into the floor, clearly getting more and more exhausted. I can almost see, almost feel myself becoming out of breath; my own and Mbambaza’s body simultaneously colliding with the listed surfaces.

The sound of *clapping* hands is coming from behind, while the sound of Mbambaza repeatedly crashing loudly onto the floor is coming from the stage area and the sound of Parker’s out of breath voice is coming from the onstage amplification system as well as from him. I am enveloped by sound as I see several images, in front of me as well in my mind’s eye; hands clapping, bodies falling on various surfaces, Mbambaza falling loudly and insistently onto the stage. I am stimulated in so many ways that it becomes hard to separate the sensations from one another. I visualise a hand clapping onto a concrete floor, making the same thud with which Mbambaza’s body hits the stage, and two bodies crashing into one another like clapping hands, while Parker’s voice takes on the rhythmic quality of the clapping hands and his breath seems to flow out of Mbambaza.

By the end Mbambaza can barely lift his body off the floor. He finally collapses completely, with Parker’s last words “Body falling”. The lights go out.

In the final sequence of *Everyday Falling* the technology was not amplifying the sound of Mbambaza’s contact with the floor. The virtuosity of Mbambaza’s performance, the dives, rolls and loud crashes were enough to elicit initial response from the attendants’ mirror neurons. However, the amplification of Parker’s voice by the microphone, did contribute to my empathetic experience. His out of breath-ness

paralleled Mbambaza's, as he repetitively abused his body to the point of exhaustion, enhancing my sympathetic feeling of exhaustion.

The amplified text supplied us once again with images of bodies falling on various surfaces. This time, through the addition of intersense stimulation, seeing and hearing Mbambaza crashing onto the floor, my experience was far more potent. I experienced an almost hallucinatory effect, which included my entire body. Myself, Mbambaza, and the anonymous bodies falling combined into several physically experienced hallucinations of collisions.

This hallucinatory effect was amplified further by the pre-recorded *clapping* sounds coming from behind me.⁴³ Through the addition of the theatre's amplification technology I experienced sound from all around, immersing me physically in the world of the piece. Through the addition of the immediate falls being performed in front of me, and the many other layers of sensory experience, my bodily experience was transformed. Sounds and images combined and confused, acting in hallucinatory synaesthetic synergy, placing me and my body in immediate relation to the performance. The vocal reactions from my fellow attendants gave me the impression that they were equally affected.

4.3 Na-aap

Jaco Boucher's *Na-aap*, choreographed by Ina Wichterich, was a multimedia physical performance work which was first performed at the Clover Aardklop National Arts Festival in Potchefstroom in 2013, where it returned in 2014. In September of 2014 it formed part of the National Arts Festival's Cape Town Fringe, before showing at the ABSA KKNK in Oudtshoorn in 2015.

4.3.1 Context

4.3.1.1 Subject matter and text

The text used in *Na-aap* (Afrikaans for 'imitate' or 'ape') is an adaptation of an Afrikaans translation by Arnold Blumer of Franz Kafka's short story *A Report for an Academy* [Ein Bericht für eine Akademie] (1917). The short story takes the form of a first person account by an ape, Rooi Piet [Red Peter], who is captured by humans,

⁴³ Like the sound effects played earlier in the work, *clapping* is an example of a sound made by the human body, which had been captured through the use of recording technology.

and systematically, through imitation, adopts their behaviour in order to ensure his survival as performing monkey. Boucher again incorporated some of Peter Handke's *Kaspar*, along with autobiographical details from its lead performer, De Klerk Oelofse's, childhood and education. In an interview about the piece, Boucher drew a parallel between Rooi Piet's evolution and the human journey from childhood to adulthood, the way in which we learn language and acceptable behaviour through imitation and repetition, and posed that, in a sense, we are all "trained monkeys" (Boucher in CloverAardklopTV, 2013).⁴⁴

Rooi Piet's (d)evolution to humanity was manifested through the extensive use of the technological aids.⁴⁵ Oelofse used the microphone and the MIDI-player at several points during the performance, and interacted with the projections of his shadow behind him.

The distinction between Oelofse, the performer, and his character, Rooi Piet, seemed to become blurred by this interaction, highlighting the parallel that Boucher drew between apes and people (Boucher in CloverAardklopTV, 2013). Boucher constructed several moments of technological 'malfunction', causing ambiguity as to who was experiencing the interruption: Oelofse delivering his performance, or Rooi Piet delivering his report. An often exasperated Oelofse/Rooi Piet, stayed doggedly committed to completing his speech, while being faced with technological disturbances, which forced him to adjust his actions. At times it seemed as if the technology, or those controlling it, was teaching him how to behave. He was at the mercy of external forces. He became so caught up in the technological world that his own voice started coming from unexpected places and his own shadow started misbehaving, by appearing in strange places or imitating his actions. This could have been read as the force of the technology itself taking on almost sentient qualities, or, more simply, that the operators were imposing their will on the 'performing monkey' via technological means. Either way, an ambiguous relationship between manipulated and manipulator was established. For me this brought into relief humans' manipulation of and manipulation by technology and our manipulation of and by the educational and behavioural structures of society.

⁴⁴ Repetition was also a major element of the choreography

⁴⁵ The evolution here is ambiguous as the piece seems to question whether Rooi Piet's transition from animal to man is, in fact, a purely positive one.

One could say that through the extensive use of technology, Bouwer was introducing a third evolutionary element in the form of the machine. The human/machine relationship paralleled the ape/human and child/adult relationship expressed in the text, but without being overt or didactic. There did not seem to be any final judgement of either animal, human or machine, but the work as a whole did seem to emphasise the bleaker, more chaotic interactions between them.

4.3.1.1 Technical setup

In *Na-aap* the technical setup was relatively sophisticated. Bouwer and his team were kind enough to allow me to attend rehearsals in preparation for the Cape Town Fringe Festival, on the 12th and 13th of September 2014, where stage manager and sound operator, Rocco Pool, showed and explained the intricacies of the technical setup to me in the rehearsal space in Bree Street, Cape Town.

The floor of the intimate performance space was dominated by a 1.2m x 2.4m shallow, wooden box, known as a cage. The cage acted as sound box, amplifying the sound of Oelofse's physical action occurring on top of the box. Underneath the cage was a contact microphone, allowing the sound operator to record, amplify and otherwise manipulate the sounds of Oelofse's corporeal interactions with the cage. Also visible, was a handheld microphone on a stand, a mini MIDI keyboard, and two speakers behind and stage left of the performance area.⁴⁶ The microphones and MIDI keyboard were connected to an external sound card, which was connected to an Apple Mac laptop. The laptop was running Ableton Live, the same software that was used in *Samsa-masjien*. Sounds were sampled⁴⁷ via the microphones and MIDI keyboard, amplified, transposed⁴⁸, looped, and combined with pre-recorded sound, before being played back through the speaker system.

The visual components were no less complex. The stage was lit only by two sidelights and a video projector, projecting onto a mirror, reflecting the projection onto the flat from behind. This was done to obtain the correct size for the projection at a short distance. The flat was covered with calico, an opaque fabric which hid

⁴⁶ The acronym MIDI is short for musical instrument digital interface, and refers to a system which easily and inexpensively connects digital instruments to a computer (Swift, 1997 [online]). The MIDI keyboard is played like a piano, but is also capable of playing pre-recorded sounds, assigned to specific keys.

⁴⁷ Sampling is a digital recording process measuring a waveform at regular intervals, rather than continuously (Self, Brice et al, 2009: 412).

⁴⁸ Transposition refers to the manipulation of the pitch of sound.

most of the equipment behind it, but allowed light through, making the projection visible to the attendants.

An overhead projector, fitted with infrared transmitting plastic, was placed in front, between the attendants and the performers.⁴⁹ As infra-red is invisible to the human eye, no visible light was cast on the stage from this projector. Behind the calico flat was a camera that had been modified in such a way that only infra-red light was picked up. This allowed for the camera to record an unseen 'shadow' of the performer, cast by the infra-red transmitting overhead projector.

The camera fed into a second Apple Mac laptop, running interactive software designed especially for the piece by new media developer, Andries Odendaal. The software made visible and could digitally manipulate the infra-red shadow, before it was projected onto a mirror, which reflected the image onto the flat. Furthermore it interacted with the audio feed, relayed from the laptop running the sound, meaning that the sound could directly affect the digital image, without any action being taken by the operator.⁵⁰

The technology formed an integral part of the performance, and the two laptops and their operators, Rocco Pool on sound and Stefan O'Connor on projection, were exhibited in clear view of the attendants.

4.3.2 Descriptions and reflections

The following description of the excerpt from *Na-aap* is based on my experience of viewing the piece in Potchefstroom and at the Cape Town Fringe Festival, sitting in on rehearsals in preparation for the Cape Town Fringe Festival, and a recording of the work made at the Clover Aardklop Festival in 2014.

⁴⁹ Infra-red plastic acts as a filter which allows only infra-red light to pass through.

⁵⁰ The interactive software allows for a special kind of synaesthetic experience, defined by *The Oxford Handbook of Electronic Music* defines as "algorithmic synaesthesia", a term introduced to describe "multimedia works in which sound or image share either computational process or data source" (Savig et al, 2011: 296).

Skote

(See Appendix C for link to video clip)

On the calico flat is the projected image of a target and the word “*Skote*” (Shots). Oelofse is beside the flat; microphone in hand. He seems nervous and self-aware as he addresses the attendants.

“Ek kom van die Goudkus.” [I come from the Gold Coast.]⁵¹

A chuckle.

As he performs the following text he moves towards the centre of the cage. When his shadow falls on the flat behind him, he moves his arms to check whether his shadow is behaving as it should. It is. For now it is imitating his every movement. His reflection in the mirror behind the flat, which is visible from where I am sitting, is the third ‘ape’.

“Ek is aangewese op berigte van buitestaanders oor hoe ek gevang is. ‘n Jagekspedisie van die firma Hagenbeck – met sy leier het ek origins sedertdien reeds etlike goeie bottels rooiwijn geledig – het in die oewerbosse op die loer gelê toe ek teen skemer in die middel van die trop na die drinkplek geloop het.”

[For an account of how I was captured I rely on the reports of strangers. A hunting expedition from the firm of Hagenbeck—incidentally, since then I have already emptied a number of bottles of good red wine with the leader of that expedition—lay hidden in the bushes by the shore as I ran down in the evening in the middle of a band of apes for a drink.]

“Daar is geskiet.” [Someone fired a shot.]

Oelofse knocks himself against the head with the microphone. As he moves, his shadow doubles his movements on the flat behind him. A *dfff* rings from the speakers.

“Ek is die enigste wat getref is.” [I was the only one struck.]

⁵¹ This translation from the German is by Ian Johnston (2015).

Oelofse knocks himself against the hip with the microphone. *Bfff*.

“*Twee skote.*” [I received two hits.]

Oelofse bends down and puts the microphone on the floor. Two things begin to happen simultaneously.

The *dfff*, *bfff* sounds of the gunshots are looped over the next section of text and action. *Dfff...Bfff...Dfff...Bfff...Dfff...Bfff...* as Oelofse begins to perform a repetitive physical sequence representing an ape getting shot.

Oelofse takes a step towards stage left in the manner of a wounded ape. He stands up straight, doubled by the shadow behind him. His arms are stretched out, perpendicular to the trunk of his body, as if crucified. He falls to his left without stopping himself, crashing onto the cage. The sound of his body hitting wood echoes loudly through the space, sustained by artificial-sounding reverberation. I feel my own bones hit the floor. I can literally feel his contact with the cage through the sonic vibration in my chest. An uneasiness lingers with the metallic reverberation. I can taste it in my mouth. It tastes like blood. He gets up onto his haunches, takes two quick monkey-like steps on the spot, as if running away from the shooter. He lunges backwards with his upper body, and moves to his right with his wounded primate movement, leaving him in roughly same spot where he began. Every instance of contact between his body and the cage reverberates through the space. He stands up straight and stretches out his arms once more before crashing to the ground.

He repeats the sequence, but this time his shadow begins to act abnormally. While the shadow is performing the exact same sequence that Oelofse is performing, its timing and direction is slightly different. I am convinced that in this case the image has been pre-recorded, but I am also utterly confused as to where his real shadow is, as it was clearly visible a couple of seconds earlier.

After a few repetitions, his voice enters once more. This time it is coming from the speakers. Two pre-recorded versions of the same text are heard, simultaneously, but out of sync. One is performed in a calm, measured fashion and the other, anxious and desperate.

It is difficult to follow the words of the text. I am not sure if it is because of my intense focus on Oelofse’s physical action, my delighted confusion

about the shadow, or because of the many sonic layers superimposed onto one another. Am I seeing double? Am I hearing double? Am I about to faint? Is Oelofse?

Doubled by his shadow, he repeats the sequence, over and over, seemingly driven by the indecipherable text. The recorded text lasts for what feels like an eternity, but must be close to a minute. The sounds of his body hitting the cage and the repeated 'gunshots' are relentless. Every fall, every breath, every word feels less controlled, more painful, as the sound keeps building chaotically, frenetically, intoxicatingly, confusingly. I wish for it to end.

As the text comes to an end, my own exhaustion is paralleled by the sound of breathing I hear coming from the speakers. Suddenly the gunshots stop. Released from his sonic mandate, Oelofse drops onto the floor. He lies panting as the echo of his body hitting the floor one final time rings through the space.

4.3.2.1 Microphones and mirror neurons

As with the segment in *Everyday Falling* where Mbambaza used the microphone to amplify Parker's interactions with the floor, the microphones in *Na-aap* contributed to the activation of the attendants' mirror neuron systems. The immediate experience of the microphone connecting with Oelofse's body when Rooi Piet was shot, amplified the duet of bone and microphone. The interaction between body and microphone had a sonic result. Two surfaces interacted with one another in order to give each other a shared voice. In many ways this is similar to the microphone's interaction with the various surfaces described in *herTz*.

The sensory stimulation experienced by the attendant was multilayered, as the acoustic vibration was heard and felt. Through this stimulation our mirror neurons allowed us to feel the microphone colliding with our own bones. The vicarious experience here was not dependent on the language of the text. However, the text added a layer of context to the collision, allowing us to imagine the ghost of a bullet breaking through skin; not only through Oelofse's, but through our own.

When Oelofse began to crash repetitively to the floor, it was the contact microphone under the cage responsible for our enhanced sensory stimulation. Here the duet between surfaces was performed by the body and the cage. The

microphone did not create the sound, but captured it for amplification and manipulation. The extreme artificiality of the reverberation added by the software did not detract from my empathetic experience, perhaps because of the immediacy of the intersense stimulation, the live sight and sound of a body hitting the ground. On the contrary, the lingering metallic *crash* seemed to contribute to an overall sense of bleakness, as well as my own virtual experience of being shot, to the extent that the metallic *crash* was synaesthetically transformed into the metallic taste of blood in my mouth. As with the final extract from *Everyday Falling*, I began experiencing synaesthetic hallucination and virtually began to question whether the sounds and images were truly doubled, or whether I was just experiencing them as such due to a loss of blood.

The doubled text and the repeated, doubled image of pain, performed by Oelofse and his out of sync shadow were so relentless that I became immersed to the extent that I begin to long for an escape from my own painful experience. The boundaries between sounds and images became blurred, as they influenced and enhanced one another. As I was placed inside the performance by the vibrating sounds, surrounding and enveloping me from every angle, potential for affective transformation reached a climax. As my mirror neurons empathised with the performer, I was virtually transported from my seat onto the stage, becoming the performer falling onto the floor, becoming the ape taking the bullet.

Conclusion: Affective transformation

If an artwork or a piece of theatre could be fully captured through language, there would be very little point in its existence. Concepts can be analysed and images and actions described, but the final layer of meaning can only be grasped through personal experience. This experience relies on physical presence; on a psycho-physiological body, standing in relation to other psycho-physiological bodies and objects, on the sedimented associations of the habit-body, on the immediacy of the senses. It is this final layer of meaning that I attempted to grapple with in this thesis. This may seem like a contradictory endeavour, an attempt to write the unwritable, to capture the uncapturable, a virtual paradox. As such it is important to keep in mind that through reflecting on theatrical experience, one can make no claims to know or capture its full meaning. This does not mean that such reflections have no value. Any attempt to move towards a better understanding of experience has value for the theatre-maker, as experience could perhaps be said to be her/his main medium.

Affect, another paradoxical phenomenon, can also never be fully captured in language on paper. That is precisely the reason why it is such a relevant, albeit slippery, concept, when writing about art and, in this case, the theatrical experience. It sits comfortably in that which is not fully explicable. A final, concrete definition of affect eludes us. Perhaps because affect is not something concrete. It is a shimmering potential which cannot be destroyed or created, but manifests in various transformations. These transformations, or transitions from one state to another, may take many forms. They may be intellectual, spiritual, psychological, physical, all of the above and everything in between; a thought, an emotion, a feeling, goosebumps, disgust, revulsion, pain, pleasure, a felt vibration, a connection, a motivation, an insight, a shock, an epiphany, ecstatic transcendence, or a simple movement. Are these transformations not precisely what artists and theatre-makers attempt to bring about through their work?

In this thesis I have suggested that a theatre-maker has the capacity to effect such transformations through composing affect. Composing affect implies a method of guiding affective forces through the arrangement of various elements, in this case the human body, sound and technology. While this is certainly not the only possible

strategy, my reflections have led me to the conclusion that it is indeed a very potent one.

Sound's potential for bringing about affective transformation is not a new discovery. It has been known by humans for centuries and is, perhaps, inherently understood by any being that can hear or feel. This vibrational, virtual, synaesthetic phenomenon communicates on a level which may not always make sense, but shimmers with affective meaning. From a phenomenological perspective, the meaningful experience of sound can occur only through the body as the body is the site of the affective transformation. The body also brings about sound through its interaction with other objects and of its own accord by means of, for example, the voice and the autonomic functions. These sounds in turn effect new transformations. Through my reflections I have attempted to illuminate the contribution of technology to these affective transformations by discussing specific South African theatrical works, which place an emphasis on sound by exposing their sonic technology to the attendants and by incorporating the manipulation of sonic technology into the physical action of the performances. These works rely on these elements for their affective impact.

In *herTz* the main affective transformation occurred in the potential forming of shared connections. The sourcing sequence allowed for the attendants to connect to the space of the squash court and the amplification of the heart connected the attendant to the performer. These connections were established directly through the intersense stimulation of sight and sound and through mediation by sonic technology. Through the interaction between the body the microphone, the space, and the amplification system, the material sources of sounds were introduced to the attendant, orienting her/him in the world of the piece. This relied greatly on the performers' embodiment (or incorporation into their body schemas) of mediational technology. The *Erlebnis* transformed into *Erfahrung*, forming a sedimented layer in the habit-body of the attendant. In this manner the attendant became virtually connected to her/his immediate surroundings, while being allowed to be transformed by new *Erlebnis*, when the sounds returned in manipulated forms in new contexts. The amplification of sound through the system also engendered a feedback loop of information, connecting the performers to the technology, to the space, to each other, and to the attendants with whom they shared the sonic experience. This affected the performers, guiding their actions of creating and capturing sound.

The amplification of the heart connected the attendant to the body of the performer, allowing for insight into the physiology and psychology of the performer, and potentially into her/his own. This connection did not rely on language or any other form of semiotic meaning making. The connection was established directly through the use of the steth-mic and the amplification system.

The connections described above were established on a sensory level, particularly through hearing and sight. However, through amplification of the vibrational, the sound system made these connections physical. Immersed in a reverberating sonic field which surrounded the attendant from every angle, certain sounds could be felt resonating in the cavities of the body. The promiscuous wave of vibration connected everything it penetrated (attendant, performer, technology and other objects) in a web of shared experience as it permeated the space.

While both the sourcing sequence and the steth-mic had connective functions, they simultaneously had a potentially disorienting effect. In the sourcing sequence this effect was brought about by the abstraction of sounds' positional sources. The steth-mic's disorienting effect was its treatment of the performer's voice. Amplified from the chest, it took on an unfamiliar, otherworldly quality. These disorienting experiences had the potential to evoke different kinds of affective transformations, depending on an attendant's personal, sedimented associations. These may have included alienation, confusion, surprise, uneasiness, delight, combinations of these and many others.

The finale acted as a synergistic culmination of the experiences and transformations undergone throughout the work. Attendants' embodied associations with all the subject matter presented throughout the work, combined with their immediate sensory experiences, allowed for an endless array of personal and shared affective transformations to occur; physically, emotionally, psychologically, intellectually, and/or spiritually.

While seemingly affecting many attendants by means of its subject matter and text, *Samsa-masjien* also effected a virtual, physical transformation through its sensory onslaught. Once more the augmentation of vibration via the sound system, acted as a connective wave, encompassing everything in its wake into the acoustic space, causing attendants to feel the sound physically. A dynamic immediacy was created through the use of spatialisation and live vocal and contact microphones. Sounds created by bodies and the interaction between bodies and inanimate objects

were materially sourced from the world of the piece, but abstracted from these sources for the climactic third act, where the potential for affective transformation seemed to reach its summit. The synaesthetic immersion engendered through the synergy of sound, light and action in this act was so intense that, in some cases, it effected hypnotic, hallucinatory transformations, with reviewers reporting on out of body experiences and virtual insects crawling on the skin.

The excerpts from both *Everyday Falling* and *Na-aap* effected similar hallucinatory transformations in me. The painful collisions of bodies with various surfaces were augmented through various technological means, either through direct amplification of the sounds of these collisions, or through the intersense contribution of other sounds and images, or both. These augmented sensory experiences could empathetically affect the attendant, through the activation of her/his mirror neuron system, to the extent that she/he could vicariously experience the pain of the performers, virtually feeling it in her/his own body.

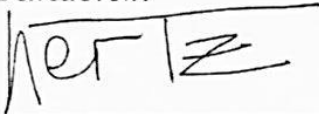
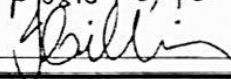
The potential transformations summarised here are by no means a comprehensive list of the potential transformations that were engendered through the different configurations of bodies, sound and technology in these works. They will also not have been experienced in the same way by all the attendants. Every transformation is personal, experienced in the constantly developing, psycho-physiological body of the individual, and as such no two experiences can be identical. However, the vibrational, virtual and synaesthetic affective potential of these works was undeniable.

Sound, by its very definition, vibrational, virtual and synaesthetic, is constantly affecting us. We breathe it in as we breathe in air. It enters into our bodies through our ears and permeates our skin from the inside and out, colouring our experiences, sometimes overtly, sometimes very subtly. These colours, blended, diluted, intensified through the use of technology may wash over and through our bodies and the bodies of those we share experiences with, immersing us, connecting us, affecting us, transforming us. These transformations may not always make sense to our logical minds, but through our bodies they take on immeasurable meaning.



Appendix A: herTz programme

The programme took the form of a double-sided card.

Front:

ATTENDANCE CARD			
Name: Rama, Arachna			Card. Nr : 42
Presentation: 	Date: <input type="checkbox"/> 13 th March 2014 <input type="checkbox"/> 14 th March 2014 <input checked="" type="checkbox"/> 15 th March 2014	Time: 20:00	Venue: SAC Squash Courts Worcester Str. Grahamstown; RSA
Concept and Direction: Hana Cilliers			
Cast/Crew Member #1: Hana Cilliers	Cast/Crew Member #2: Dylan Brokensha	Cast/Crew Member #3: Sevan Middleton	Cast/Crew Member #4: Tatleho Ramafalo
Cast/Crew Member #5: Palesa Theledi	Sound Operator: Jes Kilian	Sound Advisor: Ester van der Walt	
Stage Manager: Jes Kilian	Assistant Stage Manager: Gerhard de Lange	Design: Jes Kilian + Hana Cilliers	
Notes: Every space has its own set of sounds. The squash court echoes rubber balls on rackets and brick walls, squeaky shoes on wooden floors and grunts of exertion, determination and despair. Inside the player is the sound of his heart, pumping blood with increasing frequency as he competes to be the fittest survivor with the most admirers, as he competes for health and for passion, for life and for love.			
			Signed: 

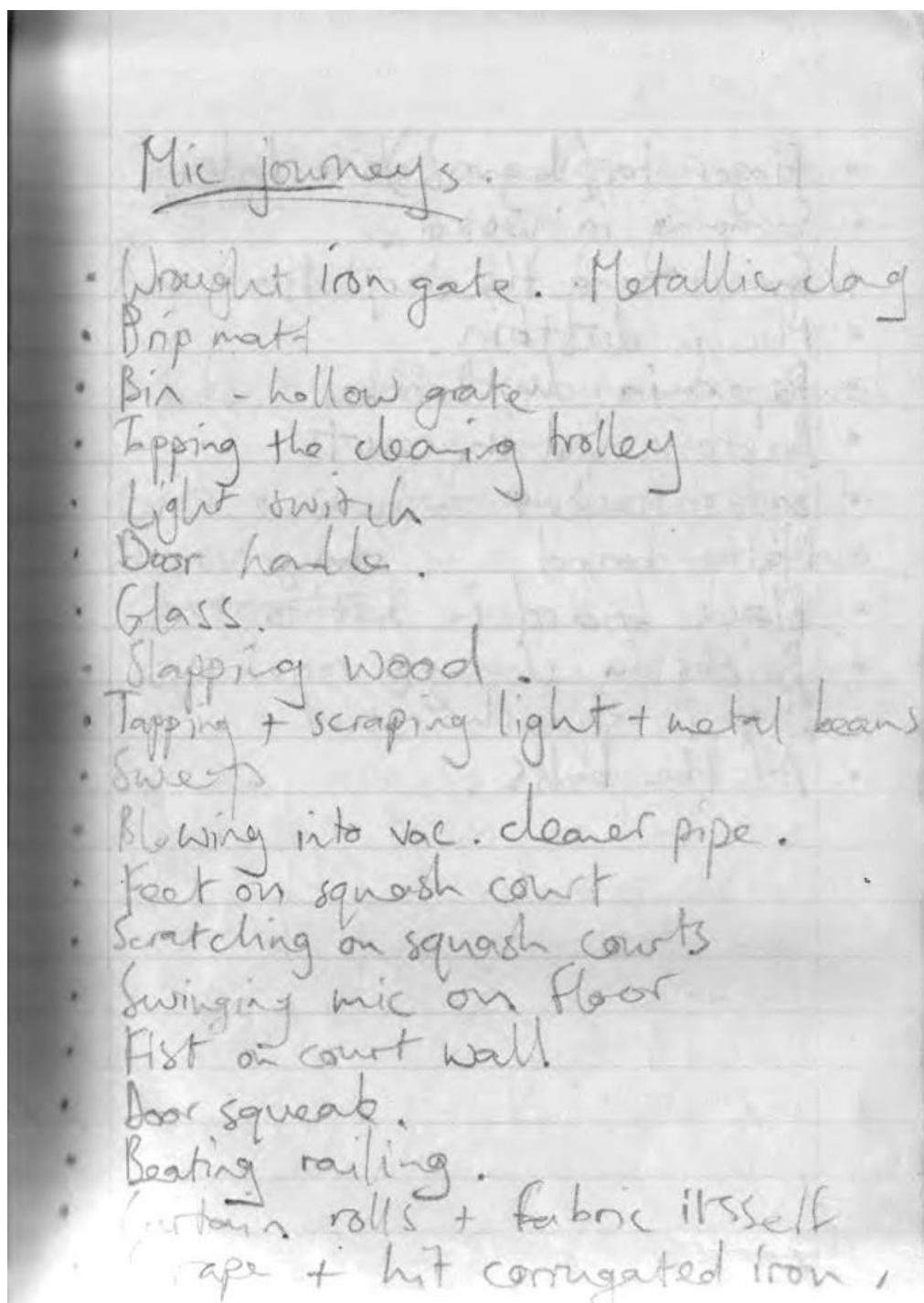
Back:

<u>Das Lied von der Wolke der Nacht</u>	<u>The song of the cloud of the night</u>	<u>Vedrai, carino</u>	<u>You will see, my dear</u>
<p>Mein Herz ist trüb wie die Wolke der Nacht Und heimatlos. Oh Du! Die Wolken des Himmels über Feld und Baum Sie wissen nicht wozu Sie haben einen weiten Raum.</p> <p>Mein Herz ist wild wie die Wolke der Nacht Und sehnsuchtsvoll. Oh Du! Die will der ganze weite Himmel sein Und sie weiss nicht wozu? Die Wolke der Nacht ist mit dem Wind allein.</p>	<p>My heart is murky as a cloud of the night And without home. Oh you! The clouds in the sky over field and tree They do not know what for Their room to roam is far and free.</p> <p>My heart is wild as a cloud of the night And longs for home. Oh you! It wants to be the whole wide sky And does not know what for? A cloud of the night is alone with the wind.</p>	<p>Vedrai, carino Se sei buonino Che bel rimedio Ti voglio dar! È naturale Non dà disgusto, E lo speciale Non lo so far. È un certo balsamo Ch'io porto addosso Dare tel posso Se il vuoi provar Saper vorresti Dove mi sta? Sentilo battere Toccammi qua!</p>	<p>You will see, my dear If you'll be good The cure I have for you! It's natural It won't give you disgust Though no apothecary Can prescribe it It's a certain balm I carry within me Which I can give you If you'll try it. You want to know Where I keep it? Then feel it beating Put your hand here!</p>
(from "Baal" by Berthold Brecht)	(translation by Ilana Cilliers)	(from "Don Giovanni" by W.A. Mozart, libretto by Lorenzo da Ponte)	(translation by Camila Argolo Freitas Batista)
			
<p><u>Thank you from the bottom of my HEART</u></p> <p>To Wesley Deintje for all your help during the developmental stages of the piece, not only for your creative advice and ideas, but also for long hours and backbreaking physical labour! To my supervisors Heike Gehring and Jeannette Ginslov for steering me into new directions, for your energy and enthusiasm, and for all your incredible ideas and advice. To Oliver Cartwright and Sonwabo Maqanda for months of technical support and exceptional patience. To Mr. Aidan Smith and Mr. Des Alcock for their kind permission to use the St. Andrews squash courts. To André Jourdan, Dees Naidoo and Paddy Donnelly for coming to my rescue when our video camera packed up. To Juanita Praeg, Alex Sutherland, Rob Murray, Ilka Louw and Tersia du Plessis for attending showings and offering invaluable advice. To the group of second years for being my guinea pig audience. To Ester van der Walt for sharing your sound expertise. To my squash players, Otto and Dylan. To Gerhard for stepping in at a crucial time and being so helpful and patient. To Jes for being my first mate, sounding board and safety net. To my wonderful cast/crew for embarking on this journey into the unknown with passion and commitment, for believing in the experiment, for late nights, lugging around equipment, jumping fences and running hard for life and for love! I love you guys! To Joy Short for housing and feeding me and offering constant support during the last 5 weeks. Lastly, to my parents, Sandra and Paul, my brother, Cornel, Matt Short and Wolf Britz for your unwavering love and support.</p>			
			

Appendix B: herTz selected process notes

October 10, 2013:

Mic journeys

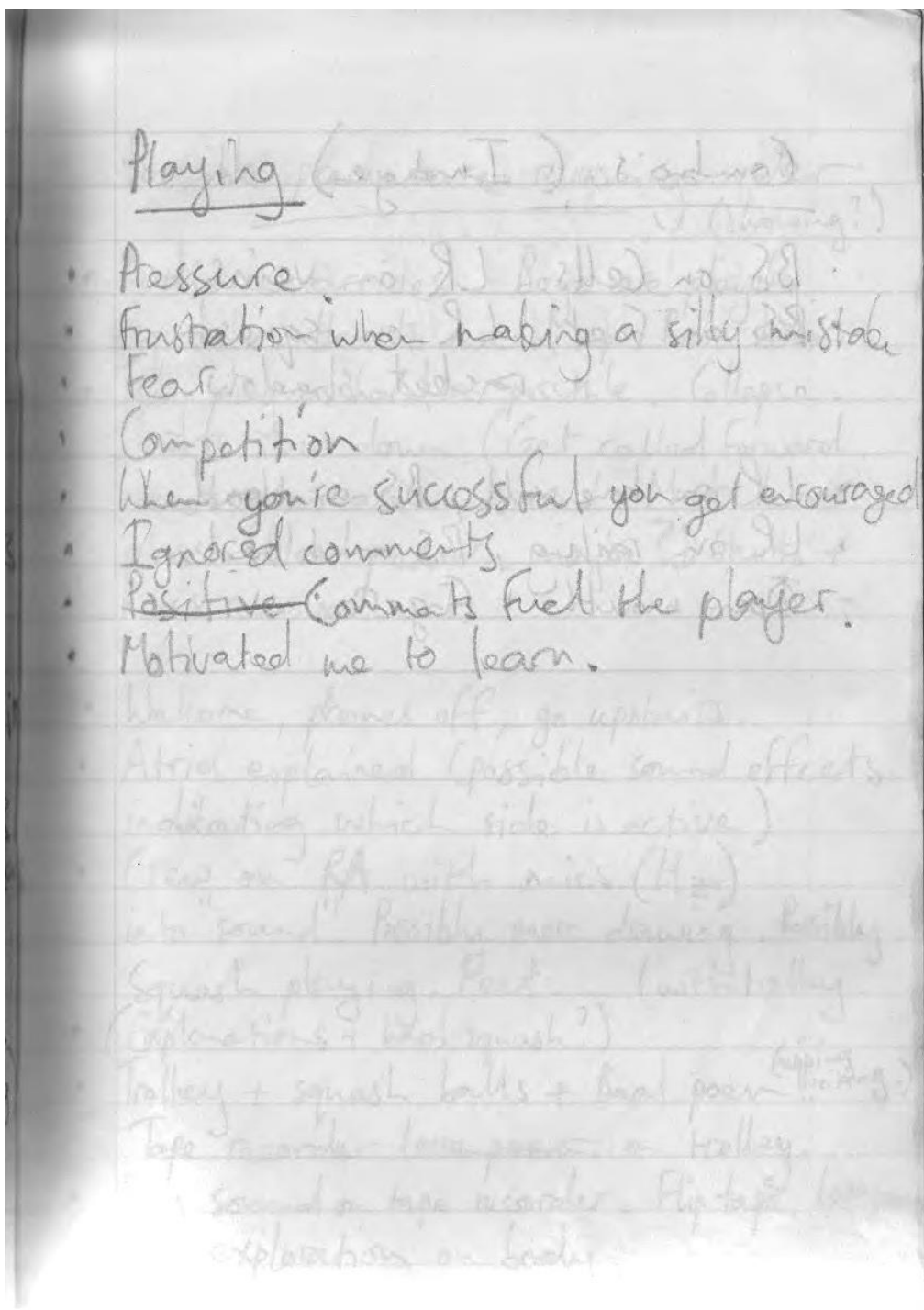


Mic journeys continued

- Finger tapping in door hole
- Scraping in wood
- Scratching the carpet
- Mic in dustbin
- Paper in dustbin
- Dustbin lid in courts
- Squash racket
- Notice board change room
- Black board in ~~bathroom~~
- Bricks in change room
- Drop in squash court
- All the balls

October 11, 2013

Reflections on squash: Playing



Appendix C: Links to reference material

1. herTz: The sourcing sequence

Reference for the description: The sourcing sequence (pp. 28-30). A series of audio clips from the sourcing sequence, recorded during the performance of 'herTz' on March 15, 2014 in the St. Andrews squash courts, Grahamstown.

Photograph: Copyright 2014 by Megan Grace Wright

<https://youtu.be/neEMK0yKiYU>

2. herTz: Vedrai, carino

Reference for the description: Vedrai, carino (pp. 46-47). The backtrack for the finale of 'herTz', built up from sounds sourced directly from the St. Andrew's squash courts. This is not all the sonic material for the scene. The live sound (the aria and heartbeat) were not recorded.

The video footage was downloaded from YouTube (bassamakasheh, 2007, November 15. Tumour of the Heart (Left Atrial Myxoma).

<https://www.youtube.com/watch?v=4B7Xs3QEIkq>) and projected onto the back wall of the left squash court.

<https://youtu.be/25LBWEAWXP0>

3. Samsa-masjien: Die geraasmasjien

Reference for the description: Die geraasmasjien (pp. 53-55). The backtrack for the third act of 'Samsa-masjien' (Wicomb, P. (2015). 'Samsa-masjien' musiek. [Included soundtrack]. In Anker, W. 'Samsa-masjien'. Pretoria: Protea Boekhuis.). This is not all the sonic material for the scene. The live sound of text, amplified and not, as well as amplified cutlery and a few other additional buzzes contributed to the sonic onslaught.

Photograph: Van der Veen, H. (Photographer). (2014, April 30). VDV4378 [Digital image]. Retrieved from

http://hansvdveen.dphoto.com/tag/samsa_masjien/photo/22519281

<https://youtu.be/6zRNQGbdLTQ>

4. Everyday Falling: Body falling

Reference for the description: Body falling (pp. 67-68). An excerpt from the performance in November 2010 in the Rhodes University Box Theatre, Grahamstown. (First Physical Theatre Company (Producer) & Mazarakis, A. (Choreographer). (2010). Everyday Falling [Archival DVD]. Grahamstown: Rhodes University Drama Department.)

<https://youtu.be/IO8HHNciblg>

5. Na-aap: Skote

Reference for the description: Skote (pp. 73-74). An excerpt from the performance in October 2014 at the Clover Aardklop National Arts Festival, Potchefstroom. (Bouwer, J. (Director and Producer). (2015). Na-aap [Archival digital video recording]. Unpublished digital video recording).

<https://youtu.be/hNbY95FgKqM>

Bibliography

Adams, K.R. (2010). Contemporary theatre and the experiential [Electronic version]. *The international journal of the arts in society*, 5(4), pp.153-163.

Anker, W. (2015). *Samsa-masjien*. Pretoria: Protea Boekhuis.

Borges, A. (2011, May 23). *INSIDE-OUT: a Sound art performance by Andre Borges* [Video file]. Retrieved from <https://www.youtube.com/watch?v=GzLxrxGMMD0>.

Borges, A. (n.d.). *Inside-Out project*. Retrieved August 6, 2013, from <http://andreborges-saxcretino.blogspot.co.za/p/inside-out-project.htm>

Brown, R. (2010). *Sound: A reader in theatre practice*. New York: Palgrave Macmillan.

Bouwer, J. (Director and Producer). (2015). *Na-aap* [Archival digital video recording]. Unpublished digital video recording.

Brey, P. (2000). Technology and embodiment in Ihde and Merleau-Ponty [Electronic preprint version]. *Metaphysics, epistemology, and technology: Research in philosophy and technology*, 19. London: Elsevier/JAI Press. Retrieved May 18, 2014 from https://www.utwente.nl/bms/wijsb/organization/brey/Publicaties_Brey/Brey_2000_Em_bodiment.pdf

Carpenter, E. & McLuhan, M. (1960). Acoustic space. In Carpenter, E. & McLuhan, M. (eds.), *Explorations in communication* (pp. 60-79). Boston: Beacon.

Cataldi, S.L. (2008). Affect and sensibility. In Diprose, R. & Reynolds, J. (eds.). *Merleau-Ponty: Key concepts* (pp. 163-73). Stocksfield: Acumen.

Cirbone, D.R. (2006). *Understanding phenomenology*. Chesham: Acumen.

Clough, P.T. (2013). My mother's Scream. In Thomson, M. & Biddle, I. (eds.), *Sound, music, affect: Theorizing sonic experience* (pp. 65-71). New York: Bloomsbury.

CloverAardklop. (2013, September 22). *Aardklop 2013: Jaco Bouwer praat 'Na-aap'* [Video file]. Retrieved from <https://www.youtube.com/watch?v=jUoD5loQVKs>

Damasio, A. (2003). *Looking for Spinoza*. London: Random House.

Deleuze, G. & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia* (B. Massumi, Trans.). Minneapolis: University of Minnesota Press.

Deleuze, G. & Guattari, F. (1994). *What is philosophy?* (G. Burchell & H. Tomlinson, Trans.). New York: Columbia University Press.

- Di Benedetto, S. (2010). *The provocation of the senses in contemporary theatre*. London: Routledge.
- Diprose, R. (2008). A guide to Merleau-Ponty: Key concepts. In Diprose, R. & Reynolds, J. (eds.), *Merleau-Ponty: Key concepts* (pp. 8-14). Stocksfield: Acumen.
- Donell, C.A. & Duignan, W. (1977). Synaesthesia and aesthetic education [Electronic version]. *Journal of Aesthetic Education*, 11(3), 69-85.
- Donnarumma, M. (2011a). *A PD framework for the Xth Sense: Enabling computers to sense human kinetic behaviour*. Retrieved November 3, 2013 from http://marcodonnarumma.com/publications/marco-donnarumma_a-pd-framework-for-the-xth-sense_PdCon2011.pdf
- Donnarumma, M. (2011b, 18 March). *Marco Donnarumma - Music for flesh II: Biophysical music for the Xth sense*. [Video file] Retrieved from <https://www.youtube.com/watch?v=ZsMVoeJs5OA>
- Donnarumma, M. (2012a). *Music for flesh II: Informing interactive music performance with the viscosity of the body system*. Retrieved August 27, 2013 from http://marcodonnarumma.com/publications/marco-donnarumma_mfii-informing-interactive-music-viscosity_NIME-2012.pdf
- Donnarumma, M. (2012b). *Proprioception, effort and strain in Hypo Chrysos: Action art for vexed body and the Xth sense*. Retrieved September 19, 2013 from http://cec.sonus.ca/econtact/14_2/donnarumma_hypochrysos.html
- Donnarumma, M. (2012c). *Xth Sense: Recoding visceral embodiment*. Retrieved August 27, 2013 from http://marcodonnarumma.com/publications/marco-donnarumma_xth-sense-recoding_CHI2012.pdf
- Duffell, D. (2005). *Making music with samples: Tips, techniques, and 600+ ready-to-use samples*. San Francisco: Backbeat Books
- Dyson, F. (2009). *Sounding new media: Immersion and embodiment in the arts*. Berkeley: University of California Press.
- Elliott, R. (2013). So transported: Nina Simone 'My Sweet Lord' and the (un)folding of affect. In Thomson, M. & Biddle, I. (eds.), *Sound, music, affect: Theorizing sonic experience* (pp. 75-90). New York: Bloomsbury.
- Elsaesser, T. (2009). Between *Erlebnis* and *Erfahrung*: Cinema experience with Benjamin [Electronic version]. *Paragraph*, 32(3), 292-312.
- First Physical Theatre Company (Producer) & Mazarakis, A. (Choreographer). (2010). *Everyday falling* [Archival DVD]. Grahamstown: Rhodes University Drama Department.

- Fischer-Lichte, E. (2008). *The transformative power of performance*. USA: Routledge.
- Frank, A. (1991). For a sociology of the body: an analytical review. In: Featherstone, M. (ed.), *The body, social process and cultural theory* (pp.36-102). London: Sage Publications
- Franklin, M. (2010). Affect regulation, mirror neurons, and the third hand: Formulating mindful empathic art interventions [Electronic version]. *Art therapy: Journal of the American Art Therapy Association*, 27(4), 160-67.
- Goodman, S. (2010) *Sonic warfare: Sound, affect and the ecology of fear*. Cambridge: MIT Press.
- Gregg, M. & Seigworth, G.J. (2010). An inventory of shimmers. In Gregg, M. & Seigworth, G.J. (eds.), *The affect theory Reader*. (pp. 1-25). London: Duke University Press.
- Griebenow, M. (2015, January 21). Stuk sleur mee, walg, onthuts en ontroer. *Netwerk24: Teater*. Retrieved September 30, 2015 from <http://www.netwerk24.com/vermaak/2015-01-21-stuk-sleur-mee-walg-onthuts-en-ontroer>
- Ihde, D. (1986). *Experimental phenomenology: An introduction*. New York: State University of New York Press.
- Ihde, D. (1990). *Technology and the lifeworld: From garden to earth*. Bloomington: Indiana University Press.
- Ihde, D. (2007). *Listening and voice: Phenomenologies of sound*. New York: State University of New York: Press.
- Ihde, D. (2011). Stretching the in-between: Embodiment and beyond [Electronic version]. *Foundations of science*, 16(2-3), 109-118.
- Johnston, I. (2015). *Franz Kafka: A Report for an Academy*. Retrieved November 3 2015 from <https://records.viu.ca/~Johnstoi/kafka/reportforacademy.htm>
- Kaufmann, F. (1966). Art and phenomenology. In Natanson, Maurice (ed.), *Essays in phenomenology* (pp. 144-156). The Hague: Martinus Nijhoff.
- Kim-Cohen, S. (2009). *In the blink of an ear: Towards a non-cochlear sonic art*. New York: Continuum Books.
- Kozel, S. (2000) Introduction to Part Eight: Post-linearity and gendered performance practice". In. Goodman, L. and De Gay, J. (eds.), *The Routledge reader in politics and performance* (pp. 257-63). London: Routledge.
- Kozel, S. (2007). *Closer: performance, technologies, phenomenology*. Massachusetts: The MIT Press.

Kozel, S. (2012). AffeXity: Performing Affect with Augmented Reality. *Fibreculture Journal* (21). Retrieved November 15, 2013 from <http://twentyone.fibreculturejournal.org/fcj-150-affexity-performing-affect-with-augmented-reality/#sthash.y9BZkDg7.dpuf>

LaBelle, B. (2010). *Acoustic territories: Sound culture and everyday life*. New York: Continuum.

Lehmann, H. (2006). *Postdramatic theatre* (K. Jürs-Munby, Trans.). London and New York: Routledge.

Loots, B. (2015, January 20). Scene It: Let your sense hypnotise you, as chaos logic in Samsa-masjien. *Theatre Scene Cape Town*. Retrieved September 30, 2015 from <http://www.theatrescenecpt.co.za/#!Scene-It-Let-your-senses-hypnotise-you-as-chaos-brings-logic-in-SamsaMasjien/caoc/AC3C1D66-484C-41B2-BC7C-730D65C0B10D>

Massumi, B. (2002). *Parables for the virtual: Movement, affect, sensation*. USA: Duke University Press.

Machon, J. (2009). *(Syn)aesthetics: Redefining visceral performance*. New York: Pgrave Macmillan

McHugh, S. (2012). The affective power of sound: Oral history on radio [Electronic version]. *The oral history review*, 39(2), 187-206.

McLuhan, M. (2005). *Understanding media*. London: Routledge.

Merleau-Ponty, M. (1962). *Phenomenology of perception* (C. Smith, Trans.). New York: Humanities Press.

Morris, D. (2008). Body. In Diprose, R. & Reynolds, J. (eds.), *Merleau-Ponty: Key concepts* (pp. 111-20). Stocksfield: Acumen.

Ndebele, N. (2015, January 29). Transcends linguistic limitations: Artistic power of Afrikaans a triumph. *Cape Times Thursday*, p. 9.

Pister, P. (2006). The spiritual dimension of the brain as screen: Zigzagging from cosmos to earth (and back). In Pepperel, R. and Punt, M. (eds.), *Screen consciousness: Cinema, mind and the world* (pp. 123-37). New York: Rodopi.

Reiser, M. (2010). Listening to the body's excitations [Electronic version]. *Performance research*, 15(3), 55-59.

Saunders, T. (2015, January 21). Cocooned layers of meaning. *CapeTimesOnline*. Retrieved September 30, 2015 from <http://www.iol.co.za/capetimes/cocooned-layers-of-meaning-1.1807084#.Vgv4w-yqpHy>

Savig, N. & Dean, R.T. & Bailes, F. (2011). Algorithmic synesthesia. In Dean, R. T. (ed.), *The Oxford Handbook of Computer Music* (pp. 294-310). New York: Oxford University Press.

Schrimshaw, W. (2013). Non-cochlear sound: On affect and exteriority. In Thomson, M. & Biddle, I. (eds.), *Sound, music, affect: Theorizing sonic experience* (pp. 27-43). New York: Bloomsbury.

Sedgwick, E. K. & Frank, A.. (2003). Shame in the cybernetic fold: Reading Silvan Tomkins. In Sedgwick, E. K. (ed.), *Touching feeling: Affect, pedagogy, performativity* (pp. 93-12). Durham and London: Duke University Press.

Self, D., Brice, R., Duncan, B., Hood, J.L., Sinclar, I., Singmin, A., Davis, D., Patronis, E. & Watkinson, J. (2009). *Audio engineering: Know it all*. United States: Elsevier.

Sewell, S. (2010). Listening inside out: Notes on an embodied analysis [Electronic version]. *Performance research*, 15(3), 60-65.

Shouse, E. (2005). Feeling, Emotion, Affect. *M/C Journal*, 8(6). Retrieved September 19, 2013 from <http://journal.media-culture.org.au/0512/03-shouse.php>

Snyders, M. (2015, January 19). Review: Samsa-masjien. *What's on in Cape Town*. Retrieved September 30, 2015 from <http://www.whatsonincapetown.com/post/review-samsa-masjien/>

Thomson, M. & Biddle, I. (2013) Introduction. In Thomson, M. & Biddle, I. (eds.), *Sound, music, affect: Theorizing sonic experience* (pp. 1-24). New York: Bloomsbury.

Thomson, P. & Sacks, G. (eds.). (2006). *The Cambridge companion to Brecht*. New York: Cambridge University Press.

Toadvine, T. (2008). Phenomenology and "hyper-reflection" In Diprose, R. & Reynolds, J. (eds.), *Merleau-Ponty: Key concepts* (pp. 17-29). Stocksfield: Acumen.

Van der Veen, H. (Photographer). (2014, April 30). VDV4346 [Digital image]. Retrieved from http://hansvdveen.dphoto.com/tag/samsa_masjien/photo/22519281

VisibleHB. (2009, April 17). *How to make my stethoscope microphone* [Video file]. Retrieved from <https://www.youtube.com/watch?v=iqjxOaplKbE>

Yost, W.A. (1994). *The fundamentals of hearing: An introduction*. San Diego: Academic Press.