Neurobiology, Empathy and Social Cognition: the potential benefits of theatre in traumatised communities.

Adrian Galley
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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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Abstract

The ubiquity of technology enables unprecedented contact between people, yet it neglects essential face-to-face communion; e-mail, text-messaging and even social media strip away the metadata of our interpersonal communications; the emotional cues and clues that are a necessary part of everyday social interaction. At the same time, the relentless densification of urban populations enforces proximity among strangers, with routine encounters increasingly bereft of emotional nourishment. The affective numbing that ensues shares many characteristics of post-traumatic stress disorder. The current study explores how exposure to theatre may help to maintain the emotional health of individuals alienated by the stresses of 21st century urban living; moreover, it examines how performance is able to facilitate emotional and social healing in post-conflict communities. An examination of the scientific literature reveals the evolution of emotion as part of a neurobiological mechanism facilitating social cognition. Tracing the progress of philosophical attitudes towards affect, one finds a pervasive wariness that is consistently reflected in the development of the performing arts from classical times to the present. Placing performance within the context of social ritual, the study is able to conclude that theatre is largely a manifestation of human biology, facilitating a pre-cognitive exploration of social contracts.

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Contents

Introduction

"Shut-up you fucking white bitch! Piece of shit!"

"Oh, no …"

"I said shut-up! Fuck you white bitch! Lie down!"

Rationale

On the evening of July 27th 2004, Vicki Bawcombe, my wife, and I fell prey to criminals in a vehicle hijacking and abduction incident that was characterised by excessive violence and sexual degradation. (Kemp, 2004) The incident has had a profound and lasting effect on how we view ourselves in the context of our society and its values; how we position ourselves in relation to crime, poverty, greed, abuse, violence and the attendant ills with which our society is afflicted. In the aftermath of that episode repeated reference was made by others to our miraculous survival, attributing it variously to our good luck, our presence of mind, and even our training as actors. My initial response was to acknowledge the insights proffered whilst inwardly dismissing them as facile; I was convinced that these opinions were fuelled by a common misconception that actors are adept at donning masks to conceal their true feelings and are thus able to maintain control of a situation. I had to reject the view that we had somehow managed to bluff ourselves out of a life-threatening situation. On subsequent reflection, however, I have been tempted to concede that there may well be some substance to the observations.

During the psychological debriefing sessions that followed the event, Vicki and I were struck by how similar our subjective experiences were. We were both acutely sensitive to the subtle shifts of power that played out that night and shared the perception that our relationship to our tormentors was not one of 'us' versus 'them'. Instead, we had found ourselves in a communal situation involving four players with potentially conflicting objectives. However, there appeared to be a defining objective that each one of the four of us shared by virtue of our common humanity; the mutual imperative to get out alive. Despite persistent attempts on the part of the strangers to define our relationship as adversarial, we perhaps instinctively resisted the urge to objectify them. Most of the real negotiation that led to the mutually

acceptable ‘win-win-win-win’ outcome was undoubtedly nonverbal, relying on the reading of and responding to emotional clues and cues.

This is, of course, the essential language of theatre; our immersion in the world of theatre and our training as actors did perhaps contribute in some way to our survival. I have come to realise over time that our lives may well have been spared by a shift in dynamics from that of confrontation between reciprocally objectified adversaries to that of cooperation between mutually dependent individuals. This experience of an awakening insight into each other’s subjective experience is what is usually referred to as empathy.

I have been a working actor, writer and director in the media of stage, television and film since the mid 1980s. In 2004, shortly before the hi-jacking experience, I had begun working in an academic environment training student actors. Subsequent to this traumatic experience, in my work with fellow actors and students I became more fascinated by the subtle emotional dimensions of performance and the capacity for audiences to be moved by a theatrical experience. Intrigued by the very nature of empathy, my reading led me to the field of neuroscience where current research is providing fresh insights into the role emotion plays in defining human experience. There I began encountering research that appears to validate many of the principles by which actors have been working for generations; research that appears to offer fresh insights into the teachings of Stanislavsky and the work of practitioners such as Myerhold, Brecht and Grotowski.

I have been motivated to examine these new insights in the context of social cognition as defined by the transaction between audience and performer and the interface between theatre and society.

Summary

The central research question of this study is: to what extent can exposure to theatre maintain the emotional health of individuals within society and how is performance able to facilitate healing in traumatised communities? Drawing on my experience of close to three decades in various aspects of theatre practice as an actor, writer, designer, director and teacher, I have been compelled to consult the literature in various fields of scholarship to validate my observations and to gain further insight into the role of emotion in both performance and everyday social interaction.

In the first chapter I answer the secondary question as to the precise nature of emotions. I turn to the scientific literature and, from the perspective of evolutionary biology, develop an insight into the neuroscience of affect. In common with many other species, human beings relate to and interact with their environment by responding to information provided by their senses, however the processing of the sensory data occurs mostly beyond the purview of our consciousness (Damasio, 2005). Recent neuroscientific studies indicate that humans and their mammalian relatives collect and process information about their environment in a far more dynamic and complex manner than accepted wisdom would suggest, and moreover, they show that emotion is a fundamental component of the underlying mechanisms (Bartels and Zeki, 2000; Eisenberger and Lieberman, 2004).

Of particular interest is the phenomenon of seemingly intuitive interactions between independent agents within a social environment (Goleman, 2007). Current research provides evidence of dedicated brain circuitry in humans that is incomplete in the absence of social interaction (Keysers and Gazzola, 2006). Moreover, specific areas of the brain have been identified whose sole function appears to be the perception of intentions and the anticipation of the actions of others (Rizzolatti and Craighero, 2004). According to Keysers and Gazzola, the central neural mechanisms concerned invoke pre-cognitive emotional feedback systems; an observation which suggests that social communion and interpersonal relationships are predicated on a capacity for affect. In this vein I argue that an ability to perceive feelings and to experience emotion is central to the optimal functioning of both the human organism and the social structures within which it exists. I conclude this section with the assertion that a facility for inter-subjective experience, or empathy, is vital to the efficient functioning of social groups.

Throughout the argument I refer to successive developments in scientific knowledge and technological innovation, noting how they have enabled challenges to be brought against the hegemonic thinking of their particular epoch; I am guided in particular by Damasio's confrontation of Descartes' dictum *cogito ergo sum,* which had placed rational thought at the centre of existence.

My second chapter adopts a historical perspective to address the question: how has theatre practice responded to shifting philosophical and political attitudes towards emotion?

Classical Greek and Roman scholars were aware of the role emotion plays in rhetoric, acknowledging that the most persuasive speeches attend to both logic and feeling (Benedetti, 2007). However, by the advent of the twentieth century, theatre-makers were still grappling with the mind-body dichotomy bequeathed them by Descartes, the subsequent elevation of reason through the Enlightenment and Diderot's definitive proclamation that emotions are antithetical to effective performance (Gordon, 2006). I examine the contributions of Stanislavsky, his contemporaries and their various descendents during the first half of that century, taking care to locate them within their respective intellectual mileux and political contexts, while evaluating key aspects of their work through the lens of the current neuroscientific literature.

One of the most significant findings of cognitive neuroscience is that both thought and feeling are essentially embodied phenomena (Lakoff and Johnson, 1999); a verdict that ultimately validates Stanislavsky's monistic intuition that emotion is rooted in the body and is linked to physical action (Moore, 1965). This position is further endorsed by the work of research psychologist and neuroscientist Susanna Bloch who, with her colleagues, has categorised primary emotional states by their distinct, objectively quantifiable, physiological manifestations (Santibañez and Bloch, 1986; Bloch, Orthous and Santibañez, 1987). Bloch has gone on to conduct extensive work with actors, devising a method of inducing such states through the intentional physical manipulation of postural attitudes and breathing patterns (Bloch, Lemeignan and Aguilera, 1991; Bloch, 1993; 2006). I conclude with the conjecture that the brain curcuitry of social cognition is able to co-opt this faculty to induce a vicarious experience of the emotional state of another: empathy.

The third chapter of this study continues to trace the development of theatre and performance through the second half of the twentieth century in order to answer the

question: with the mind firmly located in the body, how does theatre accommodate the cosmological implications and how does neuroscience account for transcendent, spiritual and profound aesthetic experience?

The prophetic vision of Antonin Artaud had placed the body at the centre of performance, and Polish director Jerzy Grotowski's work attempted to give practical expression to this elusive notion. Although I reference a number of theatre-makers in this section, it is Grotowski's trail out of traditional theatre and into ritual that provides direction for my research. An examination of the scientific, philosophical and mystical literature allows me to present Grotowski's journey as one driven by a desire to embrace the paradoxes presented by monism, those contradictions that had previously been solved by splitting mind from body. I argue that the revolutionary physicists of the time endowed Grotowski with the necessary intellectual fortitude: quantum-theory is able to accommodate apparent contradictions through the adopting the notion of complementarity and transcending the strictures of binary logic (Greiner, 2000).

The literature reveals that an affinity for metaphysical monism drew Grotowski to an exploration of eastern religious teachings, a pursuit wherein he discarded dogma in favour of the underlying spirituality: 'Secular Holiness' (Lavy, 2005). In order to locate the material roots of the mystical Nirvana, I consult the scientific literature and discover similar neural correlates for transcendent states induced through meditation, through the use of psychoactive drugs and by means of traditional ritual practices (Bowker and Bowker, 1998; Newberg et al. 2001, 2003; Biello, 2007; Nelson, 2011).

As Grotowski abandons the conception of theatre-as-presentation in favour of theatre-as-ritual, I turn to the literature of cultural anthropology and consider the implications of Victor Turner's interstitial 'liminal' state, where individual participants in ritual practice are acutely aware of and reciprocally affected by their co-presence in time and space (Turner, 1969). Turner's conception of social-drama (1986) allows me to position theatre alongside other post-industrial forms of social-ritual, both religious and secular, that serve to promote the embodiment of mythology in evoking the divine, in celebrating rites-of-passage or in healing social breaches. I conclude with the assertion that theatre lies at the nexus of biology and culture: it is a 'liminoid' social ritual through which a society is able to examine its defining

narrative and, through a process of embodiment of reason and affect, to contemplate the possibility of alternatives.

My final chapter sets out to answer the question: how can theatre promote social healing?

Drawing on the preceding research, I begin by examining the South African Truth and Reconciliation Commission as an example of social-ritual. Consulting the literature on transitional justice, I place the Commission at that juncture where the legal and moral matrices are interlaced, arguing that its capacity to promote healing lies substantially within its performative dimensions. A perusal of the psychological literature offers insights into the nature of Post-Traumatic Stress Disorder, its destructive effects on the psyche of the individual and on the broader social fabric (Herman, 1994; Culbertson, 1995; Shay, 1994; 2002; Field, 2006). I investigate the limitations of language in conveying the varied dimensions of experience and adopt Diana Taylor's notion of the performed *repertoire* as a viable repository of knowledge to supplement the archive (Taylor, 2003). I then recall briefly a number of theatrical manifestations of the TRC repertoire before examining in some detail *Truth in Translation*, a project that was initiated with the overt intention of fostering dialogue and promoting healing among diverse communities burdened with the legacy of conflict.

I conclude this study with observations on the capacity for theatre and performance to promote social healing, together with some caveats revealed by insights gleaned through my research. I review my argument, highlighting implications that arise and noting ongoing research in the various fields I have explored. Finally, I provide suggestions as to possible areas for future exploration.

A Neurological Basis for Empathy.

> "Suit the action to the word, the word to the action …
> to hold as 'twere the mirror up to nature: to show
> virtue her feature, scorn her own image …"
> *Shakespeare: Hamlet, Act 3, scene 2, 17–24*
>
> "Here's looking at you, kid."
> *Rick Blaine in Casablanca (1942. [Film] Dir. Michael Curtiz)*

We sit on the floor face to face, each closely scrutinising the other's features. For the first time I note the faint freckles on her nose and how incredibly long her eyelashes are. We are being encouraged to mirror our partner's expressions and what begins as a grotesque face-pulling exercise finally settles into a more subtle mutual interrogation. I replicate a twitch at the corner of the mouth and at once her brow knits, ever so slightly. By now we are engaged in a wordless dialogue and it becomes unclear which of us is the subject and who is the mirror; my fleeting sense of doubt immediately raises *her* eyebrow; I feel a slight smile and *her* eyes twinkle. On command she turns away from me and I grab the rolled-up newspaper, preparing to beat her over the head. It's all part of the exercise and I'm simply following instructions, but I can't do it. I am all at once overcome by a feeling of intense anguish and I break down sobbing.

What happened during that acting class at Wits Drama School in the early 1980s unsettled me; I had no idea what had transpired, but I sensed that it was something profound and the incident has stayed with me ever since. However, thanks to a chance discovery at a laboratory in the Italian city of Parma a decade or so later, and the subsequent scientific investigation it has sparked, I have begun developing some insights into my unanticipated experience.

In this small metropolis better known at the time for its dried ham and hard cheese, Giacomo Rizzolatti was in a laboratory heading up a team of scientists monitoring neural activity in the brains of macaque monkeys as they performed a series of routine actions (Di Pellegrino et al, 1992). The team was investigating a group of neurons in the inferior pre-motor cortex of the monkeys' brains, observing how they become active or 'discharge' during certain goal-directed hand movements, such as reaching for and grasping at food. Various accounts suggest a researcher either tried to snatch a peanut for himself or was legitimately trying to reset the experiment, when he unwittingly altered the course of neurological enquiry. The wired-up monkey simply watched as the scientist extended his hand towards the morsel

when, quite unexpectedly, the neurons being monitored discharged, or 'fired' in the same manner as if the monkey had performed the action itself. Subsequent investigation confirmed that the group of neurons associated with the planning and execution of motor functions became involved as the subject merely observed another performing an action. What's more, the research established that the more specific, *intentional* and goal-oriented the observed action, the more *strongly* the neurons were activated. The scientists concluded that the pre-motor neurons concerned were not only able to direct actions on the basis of internal coding, but also on the basis of decoding the *meaning* of observed actions.

Monkey see, monkey do

In this chapter, I examine the implications of the discovery of mirror-neurons on the study of emotion and human behaviour, with particular emphasis on social interaction. I begin by giving an overview of how recent technological advances have afforded increasingly detailed insights into the workings of the brain: the nature of consciousness and different ways of knowing (Anderson, 1993). I continue by exploring the inner world of conscious and non-conscious bio-regulatory mechanisms and consider the interaction between *cognitive* and *affective* dimensions of experience in decision-making processes, as outlined in Damasio's somatic marker hypothesis (1996). I investigate how a working knowledge of our physical and social environments is assimilated by the brain via a coordination of input from various sensory mechanisms: those responsible for sight, sound, smell, touch, taste and a number of other lesser recognised modalities.

We rely on our senses to provide accurate real-time data, but survival within a dynamic environment depends on accurate predictions of future consequences (Berthoz, 2000). For example, I investigate some of the complex neurophysiological mechanisms that allow a driver to anticipate the appearance of a child as a ball bounces into the road. I go on to discuss how the brain is able to simulate models of reality, drawing on different categories of knowledge and memory, in order to anticipate future events (Bergson, 2007). I conclude by illustrating how these mechanisms ensure survival within the social environment, where success is often dependent on the ability to discern the intentions of others, to predict their actions and to anticipate their needs. Throughout this study I locate theatre within the social arena; I argue that it is a mechanism through which these necessary skills may be exercised and developed.

It is important to stress that the brain is a complex organ; it would be foolish to suggest that any aspect of neural function could be reduced to the contribution of an individual structure, much less a specific type of cell. Nevertheless, the discovery of mirror-neurons has been hailed as the most important finding in neuroscience in recent years; eminent neuroscientist Vilanayur S. Ramachandran claims its significance rivals the discovery of the double-helix structure of DNA in molecular biology (2000; 2006). He argues that mirror-neurons were involved in 'the great leap forward' in human evolution - a sudden explosion of human mental abilities and culture a mere 40 000 years ago that saw the development of tools, art, clothes, religious belief and possibly even language. Ramachandran suggests that these sensorimotor neurons are involved in many hitherto unexplained socially cognitive characteristics of the human mind, including the ability to learn through imitation, the ability to assimilate language, the apparent facility for 'mind reading' and the capacity for empathy.

However others are more sceptical. Jacob and Jeannerod (2005) argue that the case for mirror-neurons is somewhat overstated and that at best they may facilitate imitative learning. They maintain that the motor theories spawned by the discovery of these specialised brain cells do not adequately support the degree of social cognition required in order to know another's mind. The so-called 'Theory of Mind' is the ability to attribute states of mind to others that are different from one's own beliefs, desires and intentions (Carruthers, 1996). It is a concept familiar to the contemporary behavioural and social sciences although it has its philosophical roots in Descartes which, as I will argue, gives rise to a significant paradox.

In their critique of mirror-neurons and the associated motor theory of social cognition, Jacob and Jeannerod appear to conflate two divergent approaches to Theory of Mind, namely *simulation* theory and *theory*-theory (Gallese and Goldman, 1998). Simulation theory characterises Theory of Mind as a particular kind of knowledge allowing one to anticipate another's mental state by putting oneself in the other's shoes, effectively 'simulating' them. I submit that this school of thought is clearly supported by the discovery of mirror-neurons. However the two critics, while accepting the tenets of simulation theory, base much of their argument on the alternative paradigm that describes Theory of Mind as a detached theoretical process rather than an innate feature.

Referring to Rizzolatti's original experiments, the detractors argue that whether executing or observing the action being performed, neither primate is "… involved in any kind of non-

verbal intentional communication … [the] agent intends to grasp a fruit, not to impart some information to his conspecific" (Jacob and Jeannerod, 2005:21). In this way they conclude that the discharge of the mirror-neurons is not a socially cognitive process at all. However, I argue that the critics erroneously equate *action* intention with *communicative* intention. I submit that social cognition does not rely on the intention to communicate as much as it does on the capacity to perceive. For example, consider the evolutionary advantage of predicting the next move of an adversary despite their best conscious efforts not to signal their intentions. I maintain that we see this evolutionary legacy in action each time two opponents square off in a sparring-ring. Perhaps there's something to be said for outwitting the card sharp with the fabled 'poker face'.

Neural wi-fi

Of relevance to theatre practice, I note here that the influential Russian theatre-maker Konstantin Stanislavsky (1961) was aware that goal directed behaviour on-stage is more compelling than apparently unmotivated action. Scientific research has validated Stanislavsky's remarkable insight: the connection between the representation of observed actions on a neural level and the *intention* behind those actions was first established in a series of experiments in which a screen was placed between a watching monkey and the target-object of the agent being observed (Umiltà et al. 2001). The monkeys were tested under a range of circumstances during which they looked at an experimenter, who was either grasping an object in full view, or simply miming the action with no object actually present. The monkeys then witnessed the same action, but this time with the final critical component hidden by a screen: the hand-object contact.

Umiltà and her colleagues confirmed that the mirror-neurons were unlikely to discharge during mimed action. However, the same brain-cells fired strongly when the monkey *knew* the object to be present behind the screen and could therefore mentally represent the action. It became clear that the *intention* behind a goal-directed action is critical to the involvement of the mirror-neurons in the brain of the observer. The researchers concluded that the specialised brain cells are in fact involved in action understanding. A separate study confirmed their observations, but it went further by demonstrating that the phenomenon is not solely dependent on the visual modality (Kohler et al. 2002). This study established that mirror-neurons that activated during the observation of a noisy action, such as the ripping of paper, responded equally to the isolated *sound* of the action.

It would be scientifically unsound to draw inferences about humans simply by extrapolating the monkey findings, but due to ethical considerations invasive single-neuron studies have not been done in humans (Crick et al. 2004). However, increasingly sophisticated technology has enabled researchers to prove indirectly that a human mirror-neuron system does indeed exist. In fact, the case for mirror-neurons in humans has become increasingly difficult to refute as the quality of the accumulated data steadily improves with each technological innovation in the laboratory.

As the existence of these specialised neurons in humans is central to my argument, I present a brief overview of the technology involved in verifying their presence. The earliest method of peering into the brain was electroencephalography (EEG), which records electrical activity along the scalp as it is produced by the firing of neurons (Niedermeyer and Lopes de Silva, 2005). As far back as the 1950s EEG studies had detected activity in the motor cortex of a person observing an action performed by another individual. (Rizzolatti and Craighero, 2004). More sophisticated innovations in the intervening decades have confirmed these observations with mounting reliability as the data is rendered in greater detail, thus ensuring refined accuracy. For instance, the technique of Transcranial Magnetic Stimulation (TMS) doesn't simply record data, but actively stimulates the nervous system (Fitzgerald, Fountain and Daskalakis, 2006). This effectively non-invasive technique 'prods' the brain through the skull with electrical impulses, and then monitors responses. TMS studies have left no doubt that a mirror-neuron system does exist in humans but, more significantly, the investigations reveal that the human system possesses important properties not observed in monkeys (Patuzzo et al. 2003).

It was already known that mirror-neurons in monkeys do not respond to mimed actions (Umiltà et al. 2001). However Simone Patuzzo and her colleagues found that intransitive actions, apparently meaningless movements, sparked some degree of mirror-neuron activity in humans. In addition, they found that the human mirror-neuron system is more finely tuned than that of monkeys: in humans, the systems are able to code for all the smaller movements making up a larger action and not just for the broad action itself. I suggest that this would account for the human ability to imitate in accurate detail the actions of others. But more importantly, as I will demonstrate, it suggests a more sophisticated capacity in humans for understanding the *intentions* of others through the observation of their actions. I submit that this insight is of clear and far-reaching consequence to theatre practice.

The most compelling evidence for the presence of mirror-neurons in humans has been provided by the latest innovations in the laboratory, enabling more complex observations of the brain through the creation of images rather than the measurement of electrical activity. The first of these, Magnetic Resonance Imaging (MRI), is able to detect the behaviour of water molecules in the presence of a magnetic influence; a significant percentage of the human body is composed of H_2O molecules which are electrically polarised and thus oscillate in response to an alternating electromagnetic field (Filler, 2009). Neurosurgeon and prolific inventor Aaron Filler explains that the density and composition of different tissues varies, causing the responsive behaviour of the water molecules to fluctuate. The varying degrees of magnetic 'resonance' enable the scanner to detect contrasts and so to build up a visual image of the internal tissues.

A subsequent innovation saw the development of Functional Magnetic Resonance Imaging (fMRI), which has enabled the most significant brain imaging studies to date (Pekar, 2006). American biophysicist James Pekar explains that this type of scanner detects levels of activity in the tissues of the brain by monitoring the behaviour, not of water molecules, but of oxygen-carrying haemoglobin molecules in the blood: the vessels of the brain change in appearance according to fluctuating levels of blood oxygenation. Pekar describes how these studies take advantage of a phenomenon where increases in neuronal activity are accompanied by local increases in oxygenated blood supply; changes in blood flow and other related factors are mapped in order to shed light on regional changes in brain activity. The advent of the fMRI scan has enabled researchers to observe the functional brain in the process of performing its multifarious tasks. In this way scientists are able to develop an understanding of how the mirror-neurons interact with other specialised cerebral areas, including those known to be involved in the processing of language and speech (Gandour, J. et al. 2006), those dedicated to the recognition of places and faces (O'Craven and Kanwisher, 2000), and those associated with the processing of emotion (Ochsner et al., 2002). Once again, I assert that such observations have significant implications for the performing arts.

Ways of knowing

The dynamic nature of the data collected through fMRI scans provides a valuable insight into the relationship between brain structure and brain function and, in so doing it begins to explore the territory that lies between *declarative* and *procedural* knowledge. Experimental psychologists recognise a distinction between knowledge that can be verbalised and reported,

and that which is inferred through the observation of behaviour (Anderson, 1993). Of course these two 'ways of knowing' often co-exist: the layout of a computer keyboard can be memorised and recited as declarative knowledge or it can be embodied as part of a typing skill or procedural knowledge. If I am asked to describe where the 'Q' is located on the keyboard I have no idea how to verbalise my response, such declarative knowledge having atrophied through lack of use. But the little finger on my left hand will extend itself and twitch as if trying to show the way; a case in which I quite literally seem to have more knowledge in my *pinkie* than in my head.

There is, however, yet another way of knowing that persistently defies objective verification, and that is the experience of consciousness itself (Bob, 2011). Certain aspects of consciousness can be explained in terms of the standard tools of the cognitive sciences, where a phenomenon is described through a reductive examination of computational or neural mechanisms (Chalmers, 1995). This line of thinking defines consciousness through a number of observable phenomena, Chalmers explains, each of which can be scientifically described. These include the ability to distinguish between the states of wakefulness and sleep; a capability for discerning and reacting to environmental stimuli; the facility for integrating information through a cognitive system; a capability to access internal states, to report mental states and the ability to focus attention and deliberately to control behaviour. These are of course all characteristic of consciousness, but they all fall short of explaining the vital component of *subjective* experience.

To illustrate this point I present a dramatisation, and note where the analogy becomes tricky.

> It's the bedroom of a contemporary middle class South African suburban home. All is quiet, bar the sound of deep breathing as two forms under the duvet are illuminated by the cold moonlight streaming through a crack in the curtain. She stirs.
>
> "Darling? Are you awake?"
>
> "Mmmm." (*The ability to report wakefulness. Check.*)
>
> "Did you hear that?"
>
> "Huh?"
>
> "There it is again!"
>
> "Ssssh! I heard it." He sits up, now fully alert. (*The ability to discriminate and react*

to environmental stimuli. Check.)

"What do you suppose it is?"

"I don't know, let me think. Did you leave a window open?" (*The ability to integrate information through a cognitive system. Check*.) A bedside light goes on.

"I'm scared." (*The ability to* r*eport a mental state. Check*.)

"I'm going down there to see what's going on." (*Focusing attention. Check*.)

"Be careful. Oh, Hmm. (Gasps) Feels like my heart is in my throat!" (*Accessing an internal state. Check*.)

"Stay calm. Shhh. Breathe. Deep breaths."

"Ok. … Aaah …. Hmm. I'm a bit better now."

He leaves the room. A moment passes. Silence. She makes to follow him, then decides against it. (*Modifying behaviour. Check.*)

A peal of laughter rings out downstairs. She shrieks. He reappears, carrying the cat.

"It got caught in your knitting. Knocked over a vase." He chuckles.

So far, so good; the above behaviour exhibits each of Chalmers' marks of consciousness. But then the situation takes a curious turn.

"Don't mock me!" She begins to sob.

"It's OK. I'm not mocking you."

"You knew all along! You tried to scare me!" She screams at him. The cat leaps out of his arms, scratching him in its haste to escape.

"Ouch! Stupid cat! Now look what's happened."

"Oh, baby! You're bleeding!" She tries to comfort him. He shrugs her off.

"It's OK. It's just a scratch."

"Let me clean it."

"I'm fine!"

"Now you're cross with me!"

"Don't over-react."

"I was scared."

"Of course you were."

There is a moment as they each take stock of the situation.

"Why are you looking at me like that?"

In the second part of the scenario the interchanges appear to have become more convoluted, less rational, as each of the participants responds to the situation quite firmly from their individual subjective perspective. Neither is sufficiently aware of the other's state of being and so each makes assumptions as to the other's motives, demonstrating a more elusive component of consciousness; the problem of *experience*. The American thinker Thomas Nagel is most famous for his essay *What it's Like to be a Bat* (1974), in which he describes what philosophers call 'qualia'; the subjective *quality* of conscious experience. When we think and perceive, he explains, there is an observable flurry of mental activity as information is processed. However, there is also a *subjective* aspect to consciousness which is not readily measured.

> But no matter how the form may vary, the fact that an organism has conscious experience *at all* means, basically, that there is something it is like to *be* that organism … fundamentally an organism has conscious mental states if and only if there is something that it is like to *be* that organism something it is like *for* the organism [all emphasis in the original]. (ibid.:436)

Co-pilots in a perceptual universe

So consciousness would appear then to have two distinct components that seemingly co-exist, as if in parallel. A pioneer in the field of artificial intelligence, Alan Newell, chose to reserve the term 'consciousness' to define subjective experience, while those phenomena readily defined by the standard tools of the cognitive sciences he referred to as 'awareness' (Newell, 1990). This suggests that human beings habitually hover between the two modes of consciousness; one can be responsive to a particular activity that holds one's full attention and readily recall the details, while having scant recollection of another in which one interacts with one's environment with limited awareness, as would an automaton. I have lost count of how many times I have driven along a familiar stretch of road, ending up somewhere other than at my intended destination! Force of habit seemingly asserts itself through inattention and I am hard pressed to proffer a suitable explanation for my tardiness.

Francis Crick, who in 1962 shared the Nobel Prize in physiology or medicine for the discovery of the structure of DNA, suggests that there is an evolutionary advantage for a

creature to possess these two interacting modes of consciousness, "one to provide a limited number of rapid, stereotyped unconscious responses and the other, parallel but slower, for more measured conscious responses to more complex situations" (2004:275). This advantage is explained by zoologist Kay Holekamp in relation to her research on the social behavior of spotted hyaenas (2007); she suggests that the evolution of intelligence in mammals is characterized by an ability to learn from experience and to modify behavior accordingly.

Holekamp describes how all animals are born with a set of innate or instinctive behaviours of the kind that allow spiders to spin complex webs at first attempt or for small mammals to have a knee-jerk reaction and to flee from sudden noises. However, she notes that in a changing environment, some of these 'fixed' reactions can become counter-productive, reducing the probability for survival and reproduction. Fortunately though, the capacity to learn enables an animal to respond and adapt to change in its own lifetime. I argue that in the higher mammals this ability to learn extends from purely personal experience to a vicarious third-person experience through the involvement of mirror-neurons. I propose to show that the learning resulting from observation and neural mirroring brings about significant changes to the brain's neural wiring (Hebb, 1949), and almost certainly contributes to Ramachandran's 'great leap forward' in human evolution (2000, 2006).

It is tempting to view the parallel states of consciousness in terms of the Cartesian paradigm that emphasizes the schism between mind and body, reason and emotion. But more recent evidence based on clinical studies of neurological patients suggests that the two modes of consciousness interact, with the subjective emotional experience being firmly within the loop of reason (Damasio, 2005). Neuroscientist Antonio Damasio asserts that emotion, evoked by subjective experience, assists the reasoning process rather than disrupting it, as had been assumed by Descartes. He believes that emotions are central to an integrated view of brain, body and mind, and stresses the importance of an evolutionary perspective where bioregulation ensures homeostasis, essential for continued survival particularly in more complex organisms. Damasio concludes that disorders of emotion can kill in both animals and humans (1998).

A series of complex bioregulatory mechanisms enables an organism to respond with appropriate behaviour to changes, in both the external and internal environments, to ensure future survival (Norris, 1996). Most of this activity continues below the level of awareness: I

feel the urge to make myself a snack and decide to head off to the kitchen to prepare something tasty. When my partner asks what I'm up to, I'm hardly likely to respond with an explanation about the neurons in my hypothalamus detecting a decline in my blood-sugar levels thus triggering a series of events in my neural circuitry which ultimately resulted in the institution of a hunger-state whose only remedy at this point appears to be the consumption of a toasted cheese sandwich, "do you want one?" That's because the entire process described here involves no explicit knowledge, no obvious display of options and their consequences and no conscious mechanism of inference: all I know is that I'm hungry (De Kloet et al. 2005). Damasio considers feelings and the experience of emotion to be the highest-order direct expression of bioregulation in a complex organism, concluding that body regulation, survival and mind are intimately interwoven within biological tissue. "Curiously, it happens most strongly not far from the pineal gland, inside which Descartes once sought to imprison the nonphysical soul" (Damasio, 1998:123).

Think again, with feeling: way-points in the brain

The terms emotion and feeling are often used interchangeably but Damasio suggests separate expressions: *emotion* describes the pre-cognitive change of physical state in response to a stimulus, while for him the term *feeling* describes the mental state that arises from the experience of emotion. An *emotional state* can be objectively measured in terms of physiological changes within the body. Damasio explains that the subjective mental state of *feeling* includes a representation within the central nervous system of these visceral changes, together with alterations in cognitive processing caused by secondary signals resulting from the initial stimulus.

It would appear that Damasio's research, in essence, explores the neurobiological foundations that underpin the philosophy of the pioneering nineteenth century psychologist William James who had speculated on the nature of emotion.

> Our natural ways of thinking about these standard emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. My thesis on the contrary is that *the bodily changes follow directly the* PERCEPTION *of the exciting fact and that our feeling of the same changes as they occur* IS *the emotion* [all emphasis in original] (James, 1884:189-190).

James described the primacy of emotion over cognition, noting that it follows a sequence of events: an arousing physiological stimulus - linked to the sympathetic and parasympathetic

nervous system - triggers the corresponding emotion, which in turn is registered as a feeling. The often quoted example he uses to illustrate his argument is that of a man running from a bear; does he run because he is scared or is he afraid because he is running? James challenged the assumption that the bear is the source of the fear and argued that the perception of the 'exciting fact' causes immediate changes in the body, such as a constriction of the blood vessels and a quickening of the pulse, which in turn leads to a psychological sensation called emotion.

Emotion is therefore clearly tied to the reasoning process, but it has also been argued that emotion plays a role in memory, understanding and the capacity to learn, so necessary for the survival of complex organisms in a changing environment (Holekamp et al. 2007). I maintain that memory and the emotions are so closely coupled that it is difficult to develop insights into the one without a reasonable grasp of the other. It is the relationship between reasoning, decision making and learning that form the basis of Damasio's 'somatic marker hypothesis' (1996).

Damasio suggests that evolution has bequeathed a mechanism for streamlining complex decision-making where rapid responses are required in the interests of survival. Many of these reactions are innate and instinctive, but Damasio argues that other responses are learned through experience and embedded in our brains for future reference. As noted earlier, emotions tend to be associated with lived experience and originate as a visceral response and a change in somatic state; these states are monitored by the brain through somatosensory networks and as they give rise to secondary brain-to-brain impulses, they are manifested as feelings. A lived experience may include either advantageous or disadvantageous outcomes, resulting alternatively in pleasant or unpleasant feelings, both of which are recorded as somatic markers. Damasio suggests that these markers serve as reference points for informing future judgements; a bad outcome connected to a particular response-option, results in an unpleasant gut-feeling.

It can be said that the purpose of reasoning is to arrive at a decision, which is to select an appropriate response to a given set of circumstances, either choosing a verbal option consisting of a set of words and the manner of their combination, or a non-verbal course of action and a strategy for its implementation (Mercier and Sperber, 2011). Of course a verbal and physical reaction often go hand-in-hand, but it is important to note that these responses

are plucked from myriad possibilities and processed in the fleeting *present* moment, drawing on the *past* in order to predict and influence the *future*. The somatic marker hypothesis concerns itself with the neurobiological underpinnings of this "…all-consuming, ceaseless process of creation [which] is what reasoning and deciding are about" (Damasio, 2005:165).

Most relevant to the present study is that Damasio's research points to the essential role of emotion in the *social* environment. He refers to a number of clinical patients he'd observed with damage to specific areas of the prefrontal region of their brains; their intellectual abilities were largely intact but he noted severe impediments in their personal and social decision making capabilities (Damasio et al., 1996). The patients experienced a range of difficulties, from planning their day and deciding on activities, to selecting suitable friends and partners; the choices they made were often neither personally favourable nor socially adequate. Damasio reasoned that while high-level abstract thought may tend towards a purely rational process, the closer the factors under consideration encroach upon the social and personal domain, the more likely a role emotion plays in arriving at a decision (Damasio, 2005).

Damasio is not without his detractors, notable among them being a scholar in medieval philosophy, Andrew Gluck (1999), who appears to be reluctant to rock Descartes' boat. He suggests that Damasio is misguided in relying on the tools of empirical science to arrive at metaphysical conclusions, accusing him of pursuing a logical fallacy that presupposes that which he sets out to prove (Gluck, 2007). Gluck argues that metaphysical assumptions are inherent in the scientific enterprise, and so helpfully suggests a compromise whereby a pluralistic approach is adopted; different disciplines are encouraged to use different metaphysical frameworks, as dictated by the limitations of their subject matter. In this vein he puts forward *physical monism* as the most suitable for the sciences, *neutral monism* for aesthetics and *mind/body dualism* for the social sciences. The logic of this proposition suggests to me that should three men set out to sea in a tub, one may be compelled to fall off the edge of the earth whilst his colleagues go on to survive a complete circumnavigation. Gluck insists that he takes this position because of the limitations of the scientific paradigm to deal with subjectivity and phenomena like consciousness; he's concerned that a partial view may disguise itself as the complete picture.

I am aware that the cross-disciplinary nature of my own research courts paradoxes that must be acknowledged. I therefore concede that Gluck's argument may have something to contribute to discussions about consciousness and the reality of the self, and it addresses some questions as to where our subjective experience of reality fits within the scientific world view. But he offers no direct critique of Damasio's ideas; neither does he mount a cogent defence of Descartes. As a classical scholar Gluck offers a helpful perspective, demonstrating how our thinking about consciousness and the self is encapsulated in the conceptual understanding of each historical period, which in turn reflects the prevailing social and political ideology (2001). In other words, we choose our metaphysics because of our beliefs which are largely dictated by our particular historical epoch. For the purposes of my current research, however, I feel obliged to maintain the perspective of evolutionary biology despite its attendant metaphysical baggage. In this stance I count myself fortunate to be living in the Age of Aquarius and not that of Copernicus.

Navigation Tools: biological gyroscopes and sextants

As I have been arguing, our external environment is extremely complex in its ideological, social, cultural and physical dimensions and we are fortunate to be able to negotiate this landscape through our parallel faculties for thinking and feeling. But before we can even begin to assess our predicament, it is revealing to consider how the dynamic data concerning our environment is collected and transported to the brain for processing, wherupon appropriate responses are generated to be implemented in real time. Our experience of the multifaceted milieu in which we are submerged is necessarily dictated by the input from our senses, the most commonly acknowleged being those of sight, sound, smell, taste and touch. But, there may be more: close your eyes for a moment and, without peeking, locate the end of your nose with the tip of an index finger. Now try it with the other hand. Is it a fluke, is it magic, or could it be a sixth sense? What you have demonstrated is indeed a generally unappreciated vestibulary sense by which we locate and orient ourselves in space with feedback from proprioceptors in our muscles and joints and the otolithic organs in our inner ear (Berthoz, 2000).

It seems humans possess many more sensory modalities than meet the eye, as it were. In addition, the brain is able to adapt its own structure in response to environmental demands; neuroplasticity of the adult brain has been demonstrated in fMRI studies (Kolb and Whishaw, 1998; Draganski et al., 2004; Daraganski and May, 2008; Begley, 2008). There are even well

documented cases of blind individuals honing their capacity for echolocation, creating composite 'images' of their environment through auditory feedback alone, as does Nagel's bat (Blach, 1997). Daniel Kish, who lost his sight in infancy, cites Diderot's 1749 account of a blind friend "so sensitive to his surroundings that he could distinguish an open street from a cul-de-sac" (2009:32). Kish trains blind individuals in the use of echolocation to the extent that they are able to navigate their environment with remarkable competence; to play basketball and to ride a bicycle using no more to guide them than the sound of clicks produced by the tongue. He speculates that 'flash-sonar' is able to create an image for blind individuals as vivid as the intermittent static impressions created for the sighted by a stroboscopic lamp, the commonly experienced nightclub 'strobe'.

Kish believes it likely that humans unconsciously depended on a degree of echolocation in the days before artificial lighting, when they had to find their way round in the dark. There is evidence that echolocation is an innate human capacity with at least one study concluding that children who are blind "naturally acquire echolocation skills during their developmental years through the spontaneous use of audition" (Blach, 1997:150). In light of this information it is clear that humans do possess more than five senses, but precisely how many make it onto the list of valid modalities is not quite as plain; we commonly refer to an individual possessed of a strong 'sense of self', for example, just as we allude to the significance of a 'sense of responsibility', not to mention the social capital to be garnered by demonstrating a 'sense of humour'. While this comment is intended flippantly, recent studies suggest that a facility for humour is indeed a relatively recent evolutionary development: "[It] may have coevolved with another cognitive specialization of the great apes and humans: the ability to navigate through a shifting and complex social space" (Watson et al., 2007:314).

Remembering the future

Stanislavsky's conception of a dramatic gesture as defined by units, objectives and a super-objective along a through-line of action (Sawoski, 2007), appears to have anticipated a more recent line of scientific inquiry: the examination of how our senses interact and how the brain co-ordinates their input, provides insight into the human capacity for social cognition. Alain Berthoz (2000), a French researcher into the physiology of perception and action, proposes we classify the senses according to their perceptual functions rather than defining them by the particular receptors they employ. In this way, he argues, a subject's goal becomes a defining factor as the senses are engaged individually and in concert to direct the organism along a

path towards its objective. Perception and action are thus inextricably linked; each of the senses calls on those properties of each receptor that it may need, while the brain filters the messages received according to its own plans.

Berthoz's understanding of the senses suggests an enquiry into how the brain is informed by the receptors: how it regulates their sensitivity and directs attention; the manner in which the brain combines messages from the receptors; and how it estimates their value according to an internal *simulation* of the expected consequences of an action. Berthoz is at pains to stress that the brain functions in the mode of a flight-simulator, rather than as a computer-simulation: the whole action is orchestrated by internal models of physical reality, interactions between real neurons, rather than abstract mathematical operations. "Biological models must be embodied in physical reality just as the brain is incarnated in the body" (Berthoz, 2000:22).

Much of the behavioural data examined thus far suggests that a plan of motor-action is assembled in the brain ahead of an action, but more recent studies indicate that the plan is continually altered during execution (Paillard, 1996; Saunders and Knill, 2003). This is facilitated by sensory feedback loops which rely on a forward model, integrating sensory inflow and motor outflow, continually evaluating the consequence of the motor commands. "The ability of the motor system to estimate the future state of the limb might be an evolutionary substrate for mental operations that require an estimate of sequelae in the immediate future" (Desmurget and Grafton, 2000).

If I am able to stretch my hand out to intercept a moving ball, it is because of neurons that are *sensitive* to the path of the ball rather than an inherent capacity to calculate the velocity and trajectory of the projectile before it hits the glass patio-door. Having averted the unintended consequences of a missed catch in the slips during a youthful backyard cricket match I am grateful to the neurons in my superior colliculus, a specialised brain structure involved in anticipation and motor prediction (Stein and Meredith, 1995). This is the same structure that allows a cat to pounce on a darting mouse: it is able to identify cues from a number of sensory receptors, to extract pertinent signals and to direct the execution and correction of movements carried out by a number of effectors in an elegant choreography of eyes, head, trunk, limbs and paws.

Continuing this line of argument, it is clear that the target becomes crucial in describing a biologically generated action. When contemplating a moving body, physicists would tend not to concern themselves with goals, and even less with intentions, most likely confining their interest to the characteristics of the propelling force. However, even a naïve observer will often describe the motion of a body with reference to its destination; our lived experience tells us that a movement is always going somewhere. This is because perception is both active and predictive: the cat pounces on the spot where the mouse will be at a future point in time when the rodent is to meet its destiny; the chameleon's tongue unfurls to intercept the unsuspecting fruit-fly at its future position within three-dimensional space or, more accurately, in four-dimensional time/space .

So perception is actively engaged in the present while anticipating what has yet to occur based on our previously lived experience. From an evolutionary perspective, we owe our very survival to unconscious predictions that occur on a cellular level within our bodies as the past and future collide in an active present. Already in the late nineteenth century, the pioneering Scottish neurologist David Ferrier had submitted the view that we are able to predict the future through internal simulations that draw on our memories.

> In calling up an idea, or when engaged in the attentive consideration of some idea or ideas, we are in reality throwing into action, but in an inhibited or suppressed manner, the movements with which the sensory factors of ideation are associated in organic cohesion (Ferrier, 1876:285).

Memory is expressed at all levels of cerebral functioning and is widely considered to be a basic property of the brain (Schacter, Norman and Koutstaal, 1998; Gabrieli, 1998). As noted earlier, knowledge is recognised as being either declarative or procedural, depending on the type of memory employed: declarative or explicit memory is devoted to storing facts and recalling events, whilst implicit, procedural memory includes that which serves the acquisition of skills and habits (Anderson, 1993). I submit that an understanding of the neural underpinnings of memory may help to clarify the role it plays in the relationship between perception and action.

If goals and intentions are crucial in defining an action, I suspect that the fabled 'sense of direction' that precludes many from simply stopping to ask the way, may well be an innate capacity. The type of memory primarily associated with negotiating the external environment is broadly known as spatial memory, and includes such phenomena as topographic and

topokinetic memory which allow us to locate a place and find our way back to it (Berthoz, 2000). The vestibular apparatus in the middle-ear is intimately involved in constructing such memories to the extent that even a blindfolded individual would retain data of a journey as if on a geographic map. I recall being alerted to this faculty as my wife and I were forcibly being transported out of town after being abducted at gunpoint one night during a hi-jacking incident as described earlier (Kemp, 2004).

Lying on the floor of our vehicle I was able, in my mind's eye, to follow the route by which we were leaving the Cape Town suburb of Observatory. By the time it became clear that we were travelling on a highway, I was quite certain we were on the N2 headed towards Somerset West rather than either the N1 bound for Paarl or the N7 West Coast road. Studies have shown that the brain can provide estimates of direction as well as of distance travelled solely from inertial information supplied by the vestibular organ receptors, the otoliths and semicircular canals located in the inner ear (Ivanenko et al. 1997). I remember feeling frustrated that we had been forced to lie face-down as this was somewhat disorienting, but I nevertheless was able to compensate and somehow translate the sensations into a 'map' as if I were sitting upright and facing the direction in which we were travelling. Although all the information on which I was able to draw was ostensibly egocentric, there appears to have been a constant factor of external origin, against which I was comparing data; no doubt an internalisation of the effect of gravity (Berthoz, 2000).

Earlier studies had suggested that humans are able to form composite topographical knowledge through the dual functioning of two processing modes (Sholl, 1992). In order to accurately position the body according to spatial relationships within its external environment, a model was proposed whereby a *body-centred* mapping of extra-corporeal space through feedback from the vestibular and sensorimotor systems interacts with a *representational* mode where the feedback from all the external senses is processed by consulting stored representations of the physical environment. "Central space structures then emerge from the processing of a polymodal inflow of changing re-afferent information, generated by the displacements of the body within its environmental frame" (Paillard, 1991:174). More recent research has confirmed the cooperative relationship between action-oriented egocentric systems of orientation and allocentric positioning systems; aligning the bodily defined left and right axis with the geographically determined north-south axis (Wang and Spelke, 2000). The body-based system is able to operate quite independently, although it

functions in parallel with neural representations of the environmental geometry; constant updating between the systems ensures greater accuracy. "…the egocentric nature of perception and imagery require that input to and output from allocentric systems are mediated by transient egocentric representations" (Burgess, 2006:555).

Neural broadband: navigating the social world

Such is the complexity of the mechanisms required to navigate physical space. But the environment that humans inhabit is defined by more than familiar landmarks; there exists a complex and dynamic interaction between the individual and other biological entities within the topographical frames of reference I have described. Berthoz believes the discovery of mirror-neurons lends support to his contention that the brain contains schemas within its neuronal structure, "…a repertoire of *preperceptions* [emphasis in original] linked to a repertoire of actions … the brain can simulate actions to predict their consequences" (2000:20). His view is congruent in this aspect with Damasio's somatic marker hypothesis; however I argue that mirror-neurons have a greater significance: they provide a further validating mechanism through which we are able to position ouselves within our *social* environment. And furthermore, as Damasio suggests, by overlooking the role of emotion we limit our chances of understanding our own mechanisms of bioregulation, "… especially as it regards the relation between an organism and the most complex aspects of an environment: society and culture" (2001:102).

Psychologist and author Daniel Goleman has been documenting the emerging field of the 'social neurosciences': how the brain drives social behaviour and how the social environment in turn influences the brain and biology (2007). He places mirror-neurons at the center of the neural circuitry that operates as we interact; we grasp the minds of others through direct simulation rather than by conceptual reasoning; through feeling, not thinking. Goleman describes the 'social brain' as the sum of the neural mechanisms that orchestrate our interactions within the social milieu, including our thoughts and feelings about other people and our various relationships. A specialised structure within the brain is emerging as the locus of interaction between cognitive and emotional functions: the 'anterior cingulate cortex' (Allman et al., 2001). Allman and colleagues considered the anterior cingulate cortex to be highest order structure in the limbic system, integral to intelligent behaviour: emotional self-control, focused problem solving, error recognition, and adaptive response to changing conditions.

Within this structure is a rich supply of another specialised class of neurons that has been identified: studies have suggested that 'spindle cells' are related to our ability to focus attention on a complex task; they are believed to integrate a variety of reward-related emotional and cognitive brain functions (Moss and Damasio, 2001). Spindle cells are rich in receptors for the particular brain chemicals associated with social interactions: serotonin, dopamine and vasopressin are known to be involved with the experience of depression, pleasure, love, and euphoria (Goleman, 2007). Another area where spindle cells are abundant is the orbitofrontal region of the prefrontal cortex, which activates during emotional reactions to others, most particularly those of empathy and romantic love (Bartels and Zeki, 2000).

The spindle cells are so named because of their shape: a large bulb at one end and a long, thick extension, from which branch-off the dendrites and axons that serve as intercellular wiring (Allman et al., 2002). Goleman notes that a neuron's capacity for speed of transmission increases with the size of the long arms that project to other neurons. The disproportionately large dimensions of spindle cells in relation to other neurons is analogous, I suggest, to high-bandwidth internet connections. They ensure the extremely rapid transmission of information - laced with emotional overtones - to diverse parts of the brain, particularly to those highly specific motor centres that control vocalisation, facial expression and autonomic function (Nimchinsky et al., 1999).

While most types of neurons in the human brain are found in other mammals, spindle cells are only found in our closest evolutionary relatives; but whereas orang-utans, gorillas and chimpanzees have upwards of a few hundred, human beings have close to a hundred thousand of them (Goleman, 2007). Significantly, spindle cells have been shown to develop postnatally in humans; they are not present at birth and begin to appear in the anterior cingulate cortex at around four months, continuing to proliferate along with the development of this structure into young adulthood (Allman et al., 2002). The postnatal development of the spindle cells is particularly significant in the light of recent studies that lend credence to the notions of neuroplasticity mentioned earlier, the ability of the human brain to change as a result of experience (Kolb and Whishaw, 1998; Draganski et al., 2004; Daraganski and May, 2008; Begley, 2008). There is strong evidence that *lived experience* impacts on the development of spindle cells, thus influencing the acquisition of skills associated with social cognition. "The survival of postnatally originating neurons … is enhanced by environmental enrichment; by contrast, stress diminishes the production of these neurons" (Allman et al.,

2001:115). Allman and colleagues suggest that spindle cells may have a role in all of the slowly maturing functions of the anterior cingulate cortex, such as emotional self-control and impulse inhibition. In addition, there is some speculation that spindle cells may account for why some individuals are particularly sensitive to their own feelings as well as to those of others, making them more keenly socially aware.

> People who have a high level of emotional awareness are especially good at accurately detecting and discriminating emotional signals in themselves and others. Thus, a greater number of emotion targets may be identified within, or more internal emotional information may be generated from, a given external emotional stimulus (Lane et al, 1998:529)

The self and the other: empathy and fellow-feeling

Clinical psychologists have long been aware of the phenomena of sympathy, empathy and more extreme variants of emotional contagion (Hatfield, Cacioppo and Hapson, 1994; Barsade, 2002). The father of psychoanalysis, Sigmund Freud, warned therapists to maintain their emotional distance from clients, advising a physician to "… put[s] aside all his feelings, even his human sympathy" (1958:115). Carl Jung, on the other hand, stressed that since emotions are contagious, the patient's emotional state will have an effect on him despite the therapist's efforts to remain detached. "He cannot do more than become conscious of the fact that he is affected … It is even his duty to accept the emotions of the patient and to mirror them" (Jung, 1968:155).

It is perhaps ironic that the 'social brain' may even be behind what many would call anti-social behaviour, but placed in the necessary evolutionary context this paradox is somewhat dissipated. Incidents of emotional contagion that result in a frenzy of mob violence are well documented, from the Los Angeles riots of April 1992 (Harvey-Lintz and Tidwell, 1997) to the more recent spate of xenophobic bloodletting in South Africa (Hadland, 2008). Without intending to wade into sociological speculation, I note that much of the literature reflects these cases to be rooted in adverse socio-economic conditions. I submit that under stressful circumstances there may be a greater tendency to adopt violent strategies. This perspective is borne out by psychologist Elizabeth Hatfield's assertion that before the industrial revolution the development of 'kindness' as a human trait was inhibited by the 'ghastly' conditions under which people laboured (1994:117).

Hatfield and her colleagues refer to historical periods, before the enlightenment of the eighteenth century, which they maintain were characterised by violence, suspicion towards others and a lack of strong emotional ties between individuals. They describe the mass hysteria associated with the 'Black Death' of twelfth century Europe, the 1789 storming of the Bastille that heralded the French Revolution and the New York City riots of 1863 that left scores of dead and injured in its wake. Given this context, a widespread sense of powerlessness amid extremely adverse circumstances is evidently able to mobilise entire communities to coordinated action.

The Nobel Prize-winning Bulgarian author Elias Canetti completed an extensive study on crowd behaviour, in which he describes a lynch mob as a group of individuals who coalesce through the collective contagion of a single passion as they descend on their victim. "Every arm is thrust out as if they all belonged to one and the same creature … the actions of all participants unite" (Canetti, 1984:49). It is my assertion that mirror-neuron activity attuned to a common purpose facilitates an alignment of biological systems; in Canetti's mob the possibility of empathy for the target of their rage is excluded as the multifaceted humanity of the 'other' is diminished to the status of a simple object.

The Austrian-born Jewish philosopher Martin Buber (2002) proposed that one's existence is defined by encounters with other individuals or inanimate objects and that one's interactions are characterised as either monologues or dialogues as expressed in the word-pairs *Ich-Es:* I-It or *Ich-Du:* I-You. In the 'I-It' relationship mode, an individual treats things and people alike as objects to serve his own ends, whereas an 'I-You' relationship is typically a meeting of two beings characterised by mutuality and exchange. Buber argues that an individual is at all times engaged with aspects of the world in one of these modes.

> The world is twofold for man in accordance with his twofold attitude.
> The attitude of man is twofold in accordance with the two basic words he can speak.
> The basic words are not single words, but word pairs.
> One basic word is the word pair I-You.
> The other basic word is the word pair I-It; but this basic word is not changed when He or She takes the place of It.
> Thus the I of man is also twofold.
> For the I of the basic word I-You is different from that in the basic word I-It (Buber, 1996:53).

Buber's I-It interactions, an individual has no empathy for the other person; there is no resonance with the other's inner state. This mode of being is familiar to many parents of

multi-tasking teenagers who believe themselves capable of following a dinnertime conversation while simultaneously 'texting' a friend under the table or surreptitiously browsing the tunes on an iPod; the lack of connection is all too obvious for the recipient of the blank stare. In contrast, Buber's I-You mode of interaction is one that is engaged with our most rewarding relationships: our close friends, family members and intimate partners. It is when such relationships are functioning optimally that, as Goleman (2007) suggests, the brain circuitry of the individuals concerned becomes synchronised in a single feedback loop involving mirror-neurons, the cingulate and orbitofrontal region and, via the spindle cells, the widely dispersed emotional areas of the brain.

Of course, if all this circuitry were activated in each and every encounter with the supermarket check-out attendant, the bank official and the car-guard, it would burn out in no time flat. As Buber proposes, we encounter our world in an endless oscillation between the two poles of *Ich-Du* and *Ich-Es*. At the 'I-You' apex of the pendulum's arc, each of the individuals, being reciprocal targets of the other's empathy, feels 'felt'; they feel that the other person shares their feelings, understands them and has genuine concern (Håkansson and Montgommery, 2003). At the other apex of the pendulum's trajectory, moving through indifference to outright exploitation, the target of the 'I-It' relationship feels used and discarded. In practice, relationships are relatively fluid; every 'It' is a potential 'You', but when one expects to be treated as a 'You', the cold shoulder of 'It' treatment comes as a painful blow. "I was really pleased to see her and she cut me dead." Ouch!

I argue that a cohesive community depends on the relatively unhindered swing of the pendulum: adverse circumstances left unremedied, as Hatfield and colleagues suggest (1994), could lead to dire social consequences.

Empathy-overload: the urban trance

In the late twentieth century and early twenty-first centuries, the large metropolitan environments have been increasingly characterised by fractured communities living cheek-by-jowl. New York, for example, has a heterogenous population with diasporic communities forging distinct cultural niches in its midst (Laguerre, 2003). London is no different, claiming to be one of the most ethnically diverse cities on earth, with more than 300 languages spoken among more than 50 non-indigenous communities (Lee, 1997). Johannesburg, Durban and Cape Town are increasingly playing host to communities from elsewhere on the continent

and, given South Africa's history of apartheid segregation and spatial planning, I maintain that even indigenous groupings seeking economic and political integration continue to find themselves relegated to economically subaltern and culturally distinct enclaves. I argue that under these circumstances the mainstream social landscape is littered with cliques, subcultures and other social factions that reflect the multi-layered ethnic mix, providing myriad opportunities for 'in' and 'out' groupings. 'Us-Them' relationships are a restating of Buber's 'I-It' pairing in the plural. "Here the world is divided in two: the children of light and the children of darkness, the sheep and the goats, the elect and the damned" (Buber, 1996:13). By definition, the relationship between one of 'Us' and one of 'Them' is one devoid of empathy; should one of Them have the temerity to address one of Us, they will not be heard, and so are the seeds of hatred sown.

History is littered with examples of one group that turns violently against another in the manner of the Catholics and the Protestants in Ireland, the Serbs and the Croats in the Balkan states and the Hutus and the Tutsis of Rwanda (Pearson, 2001). However, I argue that in the modern urban environment, populated with a variety of subcultures, cliques and gangs, the distinction between those who belong and those that don't becomes more nuanced. The 'in' group can round on one of its own for any of a number of reasons and 'One of Us' can instantly become '*Not* One of Us', with the individual banished to social isolation. I watched as my son at an all boys school was ostracised by his circle of friends for no reason other than that on the rugby field many of them were being elevated to the 'A' team while he seemed content to pitch up and play for the 'C' team. Canetti describes a 'hunting pack' as the most primitive dynamic unit among men; they often choose to inflict the death penalty on an individual through expulsion.

> The individual is marooned where he is at the mercy of wild animals without any kind of defence or where he will starve. The people to whom he formerly belonged will have nothing to do with him anymore; they are not allowed to shelter him or give him food; any intercourse with him defiles them and makes them guilty. Solitude in its most rigorous form is the ultimate penalty here; separation from one's group is a torture which very few can survive (Canetti, 1984:50).

The pain of rejection feels very real; we frequently refer to 'hurt feelings', 'broken hearts' and even 'being gutted'. However, one recent study has shown that these descriptions go beyond the poetic license of a Country and Western song; the pain of physical injury and the sting of social estrangement share the same neural substrate: the dorsal subdivision of the

anterior cingulate cortex, the structure in the limbic system discussed earlier, where emotional and cognitive functions interact and where adaptive responses are coordinated (Eisenberger and Lieberman, 2004). It is argued that the overlap in function is evolutionarily adaptive: due to mammalian infants requiring maternal care for an extended period, a separation could prove fatal. The researchers suggest that as the social faculties evolved, existing pain mechanisms for detecting and averting physical danger were commandeered in order to identify threats of social separation: "... pain captures attention, disrupts ongoing behaviour, and motivates action aimed at regaining safety and mitigating painful experience" (ibid:294). The emotional drive to 'mitigate painful experience' can be particularly compelling, and I argue that it can lead to seemingly irrational actions with devastating consequences.

Beyond the tipping-point

Cognitive scientist Steven Pinker (1999) describes the process whereby an individual is able to brood over a thought, an idea or a perceived injustice, to the extent that their resentment provokes a loss of reason and they enter an *amok* state of blind rage. A number of 'spree-killers' have been described after the event as socially isolated individuals who 'snap' and transmute into automatons as they mete out their vengeance (Pantziarka, 2000). One of the more famous cases involved two 'outsider' schoolchildren at Columbine High School in Colorado in the United States (Cullen, 2004; Block, 2007). On April 20 1999, Eric Harris and Dylan Klebold embarked on a massacre, killing 12 fellow students and a teacher before committing suicide.

It was by no means an isolated incident, described as only the fourth deadliest attack in the history of that country; a United States Secret Service report documents 37 such incidents, committed by 41 individuals over a 25-year period (Vossekuil et al. 2002). In a recent case in South Africa, 18 year old Jaco Harmse arrived at the Nico Diederichs Technical High School in Krugersdorp on 18 August 2008 wearing a mask, a replica of those worn by members of the heavy-metal band *Slipknot,* and brandishing a ceremonial Samurai sword. Later that Monday morning 16 year old Jacobus Pretorius was dead, his throat having been slit, and a number of bystanders were injured. Evidence presented to the court indicated the killer had a desire "to be noticed" (Langer, 2008).

Toxic work environments have produced their fair share of spree-killers, with the phrase 'going postal' gaining currency following a series of incidents; between 1986 and 1997 more than 40 people were gunned down by spree killers in at least 20 incidents of workplace rage within the US Postal Services (Califano et al. 2000). The official report following an investigation concluded that the postal services are unfairly tarnished, implying that the phenomenon is more widespread. "Postal employees are only a third as likely as those in the national workforce to be victims of homicide at work" (ibid:3). It would appear to be relatively common then for a lone-wolf to reach a tipping-point and to violently command attention.

Provocative author Mark Ames (2005) describes killing sprees in both workplaces and schoolyards as 'political acts', analogous with the 11 September 2000 attacks on New York's World Trade Centre. He argues that oppressive environments produce the odd rogue individual, pointing out that the history of slavery itself is marked by very few *mass* uprisings. This, Ames puts down to an innate human tendency to become submissive after being separated from one's cultural context, ultimately to become complicit in one's own oppression. He provides a compelling argument that slavery continues to be mythologised, only in the service of the status quo.

> For contemporary Americans slavery is acceptable material only if framed as a device imposed by evildoers, an obstacle to be overcome by heroes, rather than as an ordinary and highly adaptive condition that releases an entirely unheroic side of our psychology ... Through time slavery has adapted and mutated itself into our modern condition. It is by examining this process that we will ultimately have answers to what creates the rampage murders of today (ibid:34)

Without disagreeing with Mr. Ames, I argue that some of the perennial questions regarding our ability to coexist in relative harmony with other members of our species may one day be settled through a detailed examination of the social brain. I propose that a more thorough understanding of the processes of empathy, will give insight into the cultural instruments through which social cohesion may be promoted and maintained. It is evident that the mechanisms of empathy support a number of basic behaviours that are crucial for the reproductive success of animals living in groups: vicariousness of emotions; mother-infant responsiveness; social facilitation; alarm and the modelling of competitors and predators (Preston and de Waal, 2001).

Empathy and social healing

The literature provides a wealth of evidence to suggest humans have an instinct for altruism; it is most strongly evident within an individual's immediate social circle, but extends to other members of the community under particular circumstances (Goleman, 2007). A 1973 study conducted among seminary students concluded that someone in a hurry is less likely to interrupt their mission to render assistance to someone in distress, ironically even if they are on their way to deliver a sermon on the biblical Good Samaritan, "…thus inadvertently confirming the point of the parable" (Darley and Batson, 1973:107). Otherwise upright citizens are often too preoccupied with their individual agendas or even susceptible to the silent assumptions they make about others.

Goleman conducted research on how the closure of mental hospitals had turned the streets of New York into a psychiatric ward, an experience he says has opened his eyes to the plight of the homeless (2007). He shares an anecdote wherein he observed a shabby, shirtless man lying motionless on the steps outside a New York subway with people simply stepping over his prone figure in their rush to get somewhere. Curious, Goleman crossed the street for a closer look. The moment he stopped to check on the stranger, others stopped too. Within moments someone had called an ambulance, while someone else had brought food to help revive the unfortunate individual who, it turned out, was a Spanish speaking man who had been wandering the streets for days before collapsing from hunger. Simply by taking notice, Goleman had directed the attention of others to the man's plight. Paying attention allows for emotional connections; without attention, empathy doesn't stand a chance.

A recent incident that occurred not very far from my home in Cape Town illustrates how we are able to allow preconceptions to influence our response to the plight of others (Meyer, 2010). Early one morning, Lucky Selepe, a security guard at a local supermarket noticed a woman sitting on the pavement in front of the Kenilworth Medicross Centre, a local clinic. A number of personnel from the facility had evidently passed her by, as had other members of the public. Selepe had been doing the night-shift and as he completed his final rounds, he went to take a closer look. He discovered that the woman was barefoot and sitting in a pool of blood; she had evidently been badly injured. The moment he took interest, others began paying attention and soon she was in an ambulance on her way to Vincent Pallotti hospital.

It was discovered that the woman was Gubela Mji, the head of the Centre for Rehabilitation Studies in the Health Faculty at Stellenbosch University. On her early morning walk, she had been assaulted and robbed of her shoes and socks, and had stab wounds to her head and face. When questioned later, the clinic personnel admitted they had ignored her as they assumed this black woman to be a drunk and homeless person who had been involved in a fight. Such unfortunate stereotypes are built up through regular encounters with the large numbers of alcoholic homeless that roam the streets of Cape Town and for whom there are insufficient social services.

It may be social divides or cultural rifts that numb us to the plight of others, but I suggest it is equally due to the ubiquitous 'urban trance' that allows us to live in close proximity with others without being distracted from our personal preoccupations. I have always marvelled at the hospitality of rural communities where I have been treated by relative strangers as a long lost member of family. Gubela Mji was mistaken for a homeless person in her hour of need and not worthy of compassion. Ironically her academic area of expertise lies in the field of disability among the homeless.

> I was born in a rural village that by today's standards one would describe as impoverished, though that is not how we thought of ourselves. Sharing was the norm and was not questioned … I was rediscovering in conversations with homeless disabled people a capacity that I recalled from my childhood to recognise myself in others, a capacity that had been slowly eroded by the rationality and instrumentalism of my medical training and the bureaucracy and alienation of urban living (Mji, 2007:350-353).

That capacity Mji describes is best expressed in the Nguni proverb: *umuntu ngumuntu ngabantu*, the closest English translation for which is 'a person is a person through other people'. It is most often referred to, simply, as *ubuntu*.

In this chapter I have argued that fellow-feeling facilitates social cooperation and that many historical and contemporary examples of public violence and the rupture of the social fabric are characterised by a lack of empathy and an objectification of 'the other'. I have traced the capacity for empathy to the efficient functioning of the neural networks of social cognition, including spindle-cells and mirror-neurons. I have also highlighted the composite interconnectedness of sensory modalities and the mutually dependent capacities for thinking and feeling in negotiating the complexities of our social environment. The notion of neuroplasticity suggests that the optimal functioning of the 'social brain' can be compromised

under adverse conditions, but that this is reversible; the brain can be encouraged to reconfigure itself with the appropriate positive stimulation. I will go on to make the case for the unique position of theatre and performance to provide such remedial stimulus.

The Passions, the Humours, Tempers and Sensibilities

> "To be or not to be …"
> *Shakespeare: Hamlet, Act 3, scene 2, 56*
>
> "Cogito ergo sum"
> *Rene Descartes: 1637. Discourse on the Method: IV*
>
> "Ke nako: Feel it, it is here ™"
> *FIFA: Slogan of the 2010 Soccer World Cup*

As a young boy growing up the least robust of four brothers I often overheard my mother introduce me to others as 'the sensitive one'. That is to say I was the cowboy who, when circumstances necessitated, would allow himself to cry. This display of emotion was often prompted not so much by a skinned knee as a bruised ego, but was cause for some embarrassment to those around me; my father would regularly implore me to grow up, to pull myself together or simply to control myself. I recall the sense of achievement I felt when, around the age of twelve, I finally managed to conquer that aspect of my personality which had brought such shame. I had at last robbed the neighbourhood bullies of the rewards for their regular taunts and turned saltiness to sweet victory. It is with a degree of hindsight gleaned from my current research that I realise this rite of passage marked for me the triumph of Descartes: I had ultimately managed to separate mind from body, feeling from intellect and reason from emotion.

I feel, therefore I think I am

The disengagement of mind and matter, this misapprehension as to what we are and how we operate, can be traced back to Plato the Classical Greek thinker. But the notion is more familiar to us through his intellectual descendant, the seventeenth century French philosopher Rene Descartes (Damasio, 2005). This so-called 'Father of Modern Philosophy' has dominated much of our thinking since the Age of Reason, his dualistic view of human existence defining us as a mind and a body that interact causally with each other but which remain two distinctly separate things. The splitting-off of parts of our selves, sometimes emphasising the importance of one aspect over the other, has been particularly evident in the theatre; the twentieth-century fascination with role of the actor in particular has tried to integrate our material being with what might be called the more transcendental or even spiritual aspects of our selves (Roach, 1993).

In this section I find the courage to challenge Descartes head-on and argue for an integrated approach to the mind-body conundrum, where emotion is accorded the dignity it has long been denied. The 17th century French philosopher proves to be an obstinate adversary though, but I'm fortunate to be able to call on the support of influential thinkers and practitioners in both the theatre and the science laboratory in making my case. Among my literary sources, I am informed by Joseph Roach (1993) and Jean Benedetti (1998; 2007), and I'm guided largely by the insights of Rhonda Blair (2000; 2002; 2008) who has done extensive research into the acting process and the application of cognitive science.

I begin by looking to the earliest recorded obsession with the Passions, where the Classical teachers of oratory in Greece and Rome understood that skilful exploitation of emotion could persuade a judge to accept the validity of one's plea (Quintilian, 1920). I continue to track the fascination for feeling as it carried over naturally into the theatre where, with the help of a great thinker of the French Enlightenment Denis Diderot, emotion was treated with a wary scepticism that continued well into the 20th century. I discuss how Diderot's *Paradox of the Actor* (Beck, 2000) came to exemplify the divergent approaches to theatre that characterised much of the past hundred years: Stanislavsky and his descendants assumed a stance of naturalistic monism, viewing the emotions as part of an organic whole; his detractors held to a mechanistic view that sought to hold emotion at bay lest it clog-up the works.

Although I turn to Stanislavsky to illustrate much of my argument, it is with the proviso that it is short-sighted to assume that the practitioners of the past were groping towards the certainties that are now at hand, each contribution being validated by the extent to which it anticipated Stanislavsky. To do this would be as conceited as to suggest that the human species represents the *telos* of existence and that evolution has now achieved its objective. In his *On the Origin of Stories*, Brian Boyd echoes Darwin and argues for a 'biocultural' approach to art and literature, viewing developments as part of an open-ended system with no final destination in sight. "A Darwinian system . . . remains open, unpredictable, and free. It cannot presuppose a best option, an ideal fit, a goal that can be precisely determined beforehand" (Boyd, 2009:122). Accordingly I suggest that Stanislavsky, his contemporaries and their successors were influenced in their praxis by the ebb and flow of the *zeitgeist*: I argue that the legacy each leaves is not a definitive snapshot but a moving target reflecting shifts in the intellectual and ideological environments within which they operated.

Stanislavsky, for example, initially tried to reach the subconscious through the deliberate use of emotional memory techniques, where feeling follows thought (Stanislavsky, 1961; 1964). However, his ongoing research ultimately led him to refine his approach with a method of physical actions, where feeling follows action (Stanislavsky, 1989). The neuroscientific notions of 'computational theory of mind' (Pinker, 1999) and the 'motor theories of cognition' (Di Pellegrino et al. 1992; Hecht, Vogt and Prinz, 2001), provide perspectives which help to straddle the paradox. Finally, I introduce the neuroscientific approach of 'emotional induction' (Bloch et al. 1987; 1991; Bloch 1993; 2006), which demonstrates how affective states can be generated through purely physical means with minimal cognitive involvement. I conclude by arguing for the distinctly material, embodied nature of emotions.

Feeling our way back to the future

The historical record of developments in rhetoric and the theatre reflects a perpetual theme: the precise nature of the emotions and their appropriate deployment. Of course the phenomena we now refer to as emotions were at various junctures called the Passions, the Humours, Tempers and Sensibilities; it is incumbent on current researchers to contextualise outmoded terminology. For example, there was no notion of biology as a distinct field of scientific enquiry until the nineteenth century, but this did not preclude earlier thinkers from contemplating the mysteries of nature and the human body. Aristotle turned his attention with apparent ease from the poetics to midwifery and made no distinction between his philosophical and scientific investigations, dissecting and analysing rather than theorising (Aristotle, 2004). In *The Art of Rhetoric* he defined and classified the Passions in typically forensic fashion, concluding that they could be either pleasurable, painful or a blend of both and grouping them as either negative or positive (Benedetti, 2007).

The Greek philosopher stressed the importance of emotion to effective rhetorical delivery: a sound legal argument, sympathetically delivered, was more likely to find favour with a judge. In Classical Rome, some three centuries later, the central role of emotion continued to be recognised in both the theatre and the courtroom; Cicero took the effective coordination of the voice and body as his model for persuasive oration (Roach, 1993). The following century saw Quintilian write the twelve books of *Institutio oratoria,* in which he describes rhetoric as *bene dicendi scientia*, or 'the science of speaking well' and wherein everything concerning delivery and gesture is analysed in great detail, including the 'truth of feeling'.

> The prime essential for stirring the emotions of others is, in my opinion, first to feel those emotions oneself. It is sometimes positively ridiculous to counterfeit grief, anger and indignation, if we content ourselves with accommodating our words and looks and make no attempt to adapt our own feelings to the emotions to be expressed… Consequently, if we wish to give our words the appearance of sincerity, we must assimilate ourselves to the emotions of those who are genuinely so affected, and our eloquence must spring from the same feeling that we desire to produce in the mind of the judge (Quintilian, 1920:433).

Quintillian concludes, paradoxically, that true emotion should be deeply felt by the one 'faking it'. This sentiment reflects the ancient belief in a spiritual realm and the way in which the human body works: the intensity of the emotional experience is due to the volatile effect on the blood of inhaling the spirits. It was thought, for example, that the Greek god Apollo took the form of intoxicating vapours, breathing himself into the Pythoness of Delphi and speaking through her (Pocock, 1997). To this day we hear reference to any manifestation of unusual creativity as being 'inspired', literally breathed-in, such achievements being readily attributed to the agency of a Divine guidance.

Straddling the widening gulf

The rhetoric of the passions dominated discussion on the theatre until the late eighteenth century when Denis Diderot proclaimed in his 1773 *Paradoxe sur le comédien* (Morley, 2005), that the great enemy of consistent performance and good acting was the intrusion of Sensibility, the capacity to feel and to be swept away by strong emotion (Strasberg, 1987; Roach, 1993; Gordon, 2006; Benedetti, J. 2007). He believed, like Descartes before him, that man is a machine, that emotion is inherently prone to deception and is thus dangerous; Diderot questioned how an actor can be "both harpsichordist and harpsichord, subject and object, self and creation of the self simultaneously" (Beck, 2000:264). Descartes had earlier likened the human body to the workings of a clock.

> It is true that one can have difficulty in believing that the disposition of the organs alone is sufficient for producing in us all the movements which are not determined by our thought; that is why I shall here try to prove it; and to explain the whole machine of our body in such a way that we shall have no more reason to think that it is our soul which excites in it the movements which we do not experience as being guided by our will, than we have to judge that there is a soul in a clock, which makes it show the hours (Descartes, 1664:226).

Descartes' mechanistic view of the world led a number of practitioners into the twentieth century rejecting theatre's organic nature, intent on reducing an actor's status to that of a puppet. Stanislavsky became particularly frustrated with Gordon Craig, the influential

theorist and designer, and his determination to dispense altogether with actors and to replace them with the *Über-Marionette.* A notable production of Hamlet was conceived to be defined by an assortment of moving metal screens, prompting Stanislavsky to comment that "… the sheer weight would have necessitated rebuilding the entire theatre and installing hydraulic machinery" (Roose-Evans, 1996:43). For his part, Craig believed players to be subject to the "tyranny of their own emotions" and apt to destroy the harmony of the 'art-object' (Benedetti, 2007:176). While Craig advocated the total subordination of the actor to the *concept* of the production, Stanislavsky was determined to embrace the paradox in creating a dynamic theatre; the actor as a human being always coexists with the performed persona – the harpsichordist is indeed the harpsichord - and so for him a workable theory would have to accommodate *both* aspects to remain true to the actor's experience (Beck, 2000).

It is important to note that, as Joseph Roach (1993) has pointed out, Stanislavsky's theory grew out of his practice; his methods were firmly grounded in the science and culture of his time but they were the result of an ongoing process of problem solving and exploration. His career as both artist and teacher was driven by a desire to develop and strengthen in himself and in his actors a consistent capacity to engage vitally with the roles they tackled. His aim was not to create an elegant theory of acting but rather a practical toolbox allowing actors to approach their roles in a systematic fashion.

Like Diderot, Stanislavsky was well aware of the volatility of emotions, but his practice and research had liberated him to an extent from the circumspection of both Platonic idealism and Cartesian dualism. What's more, as Benedetti notes, he was living in an intellectual climate, where the relationship between reality and art was being questioned by the introduction of technologies like photography. For example, Leo Tolstoy had pointed out in an 1897 essay, *What is Art?,* that art had a capacity to induce an emotional response in the spectator through the conscious arrangement of the appropriate signs. His observations were particularly applicable to the Stanislavsky's work with actors. "… if a man is infected by the author's condition of soul, if he feels this emotion and this union with others, then the object which has effected this is art" (Tolstoy, 2009:153). As Blair (2008) points out, Stanislavsky had through his own practice discovered that the audience's awareness is not detached or analytical but rather stirred by the recognition of a common human experience.

Marketers, advertising executives, consumer analysts and motivational trainers in today's commercial environment would be hard pressed to disagree with Stanislavsky's assertion that our daily behaviour is largely based on necessity and intention; we feel certain needs and we respond to them - if we are thirsty we drink and if we are hungry we eat. The latter day experts on human behaviour who seek to turn their insights into profits would agree further that our behaviour is moderated by our aspirations; our dreams lead us to formulate intentions, set goals and strive to achieve them.

As shown in the previous chapter, it is through interacting with our environment that our emotional resources become evident, particularly when obstacles litter the path. Whether attempting to satisfy a hunger out of necessity or intentionally reaching for a dream there is always the chance of success or failure; the behaviour of others may either help or hinder us in our individual efforts to realise our ambitions, while under adverse physical circumstances, people really do die of hunger or thirst. It is the tensions created through the interplay of needs and desires and the forces that alternatively aid or hinder their satisfaction that produce actions capable of stimulating authentic emotional resonance in an observer.

Finding a pulse in the Promethean clay

Looking back on Stanislavsky's work through the prism of our current scientific knowledge, it is clear he was a man of his time, and I would argue that in some aspects of his legacy, he is proving to have been ahead of his time. More than half a century after his death, cognitive scientists, neurophysiologists, and psychologists are validating Stanislavsky's fundamental intuition on human behaviour. Linguist, cognitive scientist and philosopher Steven Pinker invokes the *computational theory of mind* in asserting that the brain, a "physical hunk of matter" (1999:64), allows us to make sense of the ethereal world of meaning and intention; intelligence, desires, behavior, and body are interconnected. What Stanislavsky had left for those who followed in his wake was essentially a way of connecting behavior, body, emotion and intelligence, through the notion of a character wanting something or pursuing a goal. The computational theory roots the human organism in a physical realm that links symbols, neurons, sense organs, belief, and behavior. Blair observes that most of the terms Pinker uses have been employed in some way by Stanislavsky and his heirs, including such influential twentieth century theatre practitioners as Grotowski and Peter Brook (Blair, 2008). Pinker emphasises the central role of biology with its embedded notions of emotion and instinct, flying in the face of the post-modernist view that reality is socially constructed. However

Pinker takes care to highlight the limitations imposed by a nature/nurture binary. The dichotomy between 'biology' on the one hand and 'social construction' on the other, he argues, excludes the possibility of a third option: certain constructs are "products of a complex mind designed to mesh with what is in nature" (Pinker, 1999:57).

From this position, I argue that the central elements of Stanislavsky's work are rooted in evolutionary biology; his lasting influence is due to the fact that his work reflects how we function organically. I further suggest that while culture and conscious choices have an effect on our behavior, our notions of self are grounded in our being as physical organisms. Moreover, as Blair (2000) maintains, Stanilvasky's work applies to styles of theatrical presentation beyond the restrictions of naturalism; the capacity for theatre to engage audiences transcends notions of realism, forms of representation and mimesis. No matter the style of presentation or degree of abstraction, an audience member recognises the presence of one or more fellow sentient beings; we are engaged by the exhibition of intelligent behaviour that appears to be motivated by will, desire, and objectives. I argue that any successful presentation of live theatre, of whatever form, is driven by such an internal logic. Even a complete phantasm, an alien being plucked from thin air, can be simultaneously compelling on the levels of emotion and cognition: science fiction author David Alexander Smith suggests two requirements for creating such an appealing creature:

> One, they have to have intelligent but impenetrable responses to situations. You have to be able to observe the alien's behavior and say, 'I don't understand the rules by which the alien is making its decisions, but the alien is acting rationally by some set of rules.' . . . And two, they have to care about something. They have to want something and pursue it in the face of obstacles (Quoted in Pinker, 1999:61).

I maintain that humans have evolved to be highly alert for signs of intelligent life: it is this capacity for anthropomorphism that has allowed Walt Disney's creations to define a generation of cinematic fantasy from Mickey Mouse to Pixar's *Wall-E* (2008). Moreover, I contend that the essential contract between performers and audiences is biologically underwritten: the 'willing suspension of disbelief', allowing audiences to be transported into a speculative world of *possibility*, is predicated on an unconscious detection on the part of the audience of familiar biological processes. Through the skilful manipulation of the mechanisms of human behaviour, theatrical collaborators are able to invoke mirror-neuron networks, thus completing the emotional feedback loops that oblige spectators to endorse artifice as fact (Rizzolatti and Craighero, 2004; Keysers and Gazzola, 2006).

In addition, abstract concepts are held in the brain as mental representations in 'mentalese', cognitive scientist Jerry Fodor's (1976) language of thought. The computational theory of mind describes how these images are connected to fundamental structures of language which are embodied in the two elementary metaphors of place and agency (Pinker, 1999). Abstract thought and embodied experience converge, thus clarifying the relationship between reality and imagination central to Stanislavsky's 'magic *if*'. "… our work on a play begins with the use of *if* [emphasis in original] as a lever to lift us out of the world of actuality and onto the plane of imagination" (Stanislavsky, 1964:59).

Divergent views or misplaced emphasis

Many of Stanislavsky's intellectual descendents agree that the imagination should underpin an actor's performance within a set of 'given circumstances', but there have been differing interpretations as to how this aspect should relate to another crucial element of theatrical presentation, that of motivated *action*. I suggest that current research in the neurosciences may provide some clarity on the divergent schools of thought that prevailed throughout the twentieth century. What I believe amounts to a difference in hierarchical emphasis of emotional memory in relation to motivated action, fuelled disagreements between Stanislavsky and his detractors in Europe, while in America vigorous debate ensued among that country's most influential acting teachers after aspects of Stanislavsky's earlier work began catching on there.

Pinker's (1994) assertion that emotions and passions are set off in the mind purely by specific mental representations, images, and ideas would appear to lend credence to proponents of 'affective memory'. However it is worth noting that Stanislavsky himself eventually turned away from these aspects of his earlier praxis, placing increasing emphasis on goal-directed action, which is more likely to find correlates in current 'motor theories' of social cognition (Di Pellegrino et al. 1992; Hecht, Vogt and Prinz, 2001). These models propose that mirror systems in the brain allow an observed action to trigger an action-simulation at a covert level, engaging the motor systems together with those brain structures concerned with the sensory consequences of the action being simulated. Vittorio Gallese (2004) argues that this neural simulation applies equally to actions, intentions and observed expression of emotions, whereby we share to some degree the inner states of others with whom we are interacting. He takes care, however, to emphasise the distinction between his notion of *simulation* and that of the proponents of Simulation Theory of Mind.

> According to Simulation Theory, the pretend state used by the interpreter in order to understand the behaviour of the agent is the result of a deliberate and voluntary act on the side of the interpreter. The simulation process I am discussing is instead *automatic*, *unconscious* and *pre-reflexive* [emphasis in original] (Gallese, 2004:169).

The motor theories of social cognition describe ways of experiencing the world and of gaining knowledge of the social environment primarily through our capacity to feel rather than through our ability to rationalise, and the mirror-neuron system provides the harmonic sounding-board. There is, for example, strong evidence to suggest the compromised emotional responses and impaired social functioning in people exhibiting autism and those of psychopaths are due to abnormal or absent mirror neuron activity (Agnew et al., 2007).

Political polar-shifts

I have previously stated my contention that the development of theatre practice tends to be shaped by the prevailing intellectual climate, consistently responding to the world view of its particular epoch. But this may equally be said of the ideological circumstances; I maintain that an analysis of theatre cannot be divorced from the socio-political context of its nativity. In the early part of the twentieth century the notion of art and its purpose was being redefined throughout Europe with the emergence of a series of movements such as Post-Impressionism, Cubism, Fauvism and Futurism; art was being defined by its very artificiality, where what humans produced was considered infinitely more important than the natural world (Benedetti, 2007). The *zeitgeist* was given a powerful ideological expression by the Russian revolution and the resurgent writings of Diderot found favour with the new Soviet order (Miller, 1971); his revolutionary science, atheism and materialism sparked critical debate as several new editions of his *Paradoxe sur le comedien* were released more than a hundred and forty years after the work was penned. As Roach recounts, in the preface to one such edition the Commissar of Education and Enlightenment, Anatoly Lunacharskii, noted that there were two styles of acting vying for historical supremacy:

> … one, turning inward, draws on the actor's own inner psychological resources of *self* [emphasis in original] and leads to subjective impressionism; the other, drawing on the actor's powers of detached observation, opens outward on the objective world, on nature and society (Roach, 1993:196).

Two titans of the Russian theatre came to personify this contradiction, each appearing to inhabit one of the poles, although I suggest that Stanislavsky and Myerhold were no more than two sides of the paradox-coin.

The young Vsevolod Meyerhold had been a founder member of the Moscow Art Theatre with Stanislavsky, the figure who had dominated the theatrical landscape before the revolution and a man to whom he remained devoted despite their apparent disagreements. Each of the men went on to develop his own system of actor training rooted in the principles of Diderot's revolutionary text and both turned to the psychophysiological research of the time. However the two differed as to the role of emotion and the experience of feeling in the process of acting: Meyerhold dismissed the older man's efforts aimed at recreating lived experience on stage, as entirely too subjective, describing them as a form of 'self-hypnotic narcosis' (Benedetti, 2007). In opposition he devised his system of 'Biomechanics', a technique for achieving maximum physical preparedness and responsiveness, but in which the creation of a theatre performance is no different to the production of consumer goods in a factory. His approach was informed by Taylorism, the scientific organisation of labour for maximum efficiency, which was being championed in the new Soviet Union (Blair, 2008). At the time the nascent field of psychology was developing into an objective science of behavior, underpinned by the ideological assumption that external conditions determine human nature. This implied that an objective and controlled manipulation of the physical environment would influence the inner state of the person (Roach, 1993).

It was Myerhold's contention that no meaningful distinction can be drawn between the psychological and the physical, between the vital and the mechanical; a view which I suggest was not far removed from that of his erstwhile mentor. Meyerhold had not worked with Stanislavsky for a number of years, during which time the master's System was constantly being revised and updated based on his regular work with actors and his changing appreciation of the science of that period. Examining the timeline of the two men's careers (Leach, 2003), I believe Meyerhold would have had little knowledge of Stanislavsky's later notions of intentionality and physical action and suggest that his criticisms were largely misplaced. He did concede much later that he had failed to appreciate the significance of certain actions Stanislavsky had given him as a young actor in rehearsals for *The Three Sisters* (Benedetti, 2007). Nonetheless his misrepresentations of Stanislavsky gained currency with the *avante-garde* and notably, German director Bertold Brecht (1965;1977) who went on to pioneer an 'epic' style of theatre characterised by the *verfremdungseffekt.*

Objectivity and shifting subjectivities

Elements of Myerhold's 1906 production of *Balaganchik* (Crone, 1994) suggest that Brecht may have been influenced by aspects of biomechanics, as they appear to have characterised much of his work: eliminating curtains; changing scenery in full view of the audience; revealing 'stage secrets' and creating runways that connect spectators with the actors. But above all, it was Brecht's strategy of defamiliarising the presentation that distinguished his theatre as one intended to create a consciousness that would facilitate transformation in a society ripe for change. The *verfremdungseffekt* was calculated to make the everyday seem strange and unfamiliar and therefore open to rational evaluation (Brecht, 1977). Although Brecht's stated intention was to promote criticical engagement with the presentation rather than evoking empathy, which he believed would cloud the intellect, the dynamic nevertheless continued to include emotions and feelings; the audience is invited to identify with the *performer* who in turn exposes contradictions within the *character*'s behaviour. "This is one of the most fundamental tenets of epic acting, promoting a type of spectatorship capable of infinite degrees of self-reflexiveness" (Gordon, 2006:234).

I argue that it is this aspect of shifting perspectives that defined epic theatre, rather than emotional detachment. It is the thrust of my thesis that theatre's capacity to create empathy is one of its greatest strengths as an agent for change: by inviting a spectator to be emotionally 'moved' as they experience events from the conflicting perspectives of *multiple subjectivities* they are encouraged to confront the paradox on both rational and visceral levels.

I am fortunate enough to have experienced this phenomenon both as a performer and as a spectator in two separate productions that use shifting subjectivities to great effect. In a presentation of David Mamet's *Oleanna* (1993) at the Baxter Theatre Studio in 2005, I played John, a professor anxiously waiting for the university to sign off on his tenure when one of his female students accuses him of sexual harassment. During rehearsals I became aware of the pitfalls of tackling such a role: there are aspects to this persona that were immediately distasteful to me; he is patronising and dismissive and appears to relish the status advantage he enjoys over Carol. As an actor I was forced to set aside my personal misgivings, however, and to probe beneath the surface of his annoying idiosyncrasies. By the time we were ready to perform the piece I had managed to reconcile myself with a complex personality who is essentially a product of the choices he has made under a

particular set of circumstances and according to the set of values he embraces; I had discovered how, under similar conditions, I would have made the identical choices.

But as the onstage power struggle progressed in the presence of an audience it became a challenge to remain emotionally rooted in the character's reality, to resist the temptation to stand in judgement of the man as I felt the sympathy swing to his adversary. I was aware the members of the audience were making their own discoveries, as acute silence was alternately punctuated by restlessness, the odd stifled gasp or even a derisive snort emanating from the auditorium. Despite the actor's need for approval I had to remain committed to the subjective dimension of the character I inhabited, affording the audience the opportunity to 'know' him the way I did. Following the performance the foyer and bar buzzed with heated arguments surrounding gender roles, manipulation and the abuse of power within the dynamic of relationships between authority figures and their subordinates.

More recently I attended a performance of David Harrower's *Blackbird* (2007) presented at the University of Cape Town's Intimate Theatre. Here two characters confront each other over a series of incidents amounting to sexual abuse of a minor that had taken place fifteen years previously. Throughout the tangle of recriminations, accusations and explanations, I became acutely engaged in each character's emotional point-of-view as the balance of power fluctuated, warped and finally melted altogether. As I watched, each shift in perspective resulted in a moment of *verfremdung* while I was forced rationally to contemplate the validity of my loyalties. Even as I write I continue to feel gutted at the recollection and I'm not sure whether to blame Stanislavsky or Brecht.

Hitting moving-targets from a distance

Although he did have certain reservations, Brecht was a stated admirer of Stanislavsky (Brecht and Mueller, 1964) and was particularly complimentary towards his work with the body which, as I've noted, represented a significant departure from Stanislavsky's earlier work with emotional recall. It is clear that Stanislavsky himself never considered his System to be a *fait accompli* and it remained a work in progress until the time of his death in 1938. The final 10 years of his life were devoted to the development of his 'method of physical actions', based on the 'objective aspect of the mindbody continuum' (Roach, 1993:197). Renowned Polish director and theatrical innovator Jerzy Grotowski acknowledged

Stanislavsky's influence on his own work and considered Stanislavsky's research into psychophysical actions to be his most significant legacy (Sacharow, 2004).

Brecht continued to be skeptical of Stanislavsky's earlier fascination with the 'cult' of subjectivism and attributed the more progressive 'method of physical actions' to the "influence of Soviet life and its materialistic tendencies" (Brecht, 1965:124). I suggest however, that Brecht's perspective was clouded by a skewed version of Stanislavsky he had encountered while in exile in New York in the 1930s. One of his earliest collaborations in his adopted city was with a supposedly 'left-wing' group who claimed to use the Stanislavsky 'system' but who treated his play *Die Mutter* "as an excuse to explore their own feelings." (Benedetti, 2007:198). This episode led to a reportedly acrimonious parting of ways although neither he nor the cast could have known at the time that Stanislavsky had specifically denounced a narcissistic concern with actors' emotion. "Love art in yourself and not yourself in art" (Stanislavsky, 1989:250).

There is some irony that, while Brecht had misread some of Stanislavsky's principles, he has himself been the subject of a widespread misconception: that his theatre is purely didactic and, as a consequence, unavoidably dull. On the contrary, both the tone and the fundamental attitude of Brechtian performance is one of irony and irreverence. "A theatre that can't be laughed in is a theatre to laugh at. Humourless people are ridiculous." (Brecht, 1977:173) The sense of enjoyment or *spass,* to which Brecht aspired, he found in popular entertainment forms such as silent films, cabaret, and music-hall clowning, in street performance and sports matches (Gordon, 2006). In this aspect I believe Brecht echoed Myerhold, whose work showed a direct influence of the *Commedia Del Arte* mixed in with the common Russian tradition (Crone, 1994).

Above all, Gordon notes, Brecht aimed to replace the 'bourgois theatre'of escapist illusions and emotional manipulation with a form that actually expressed the realities of twentieth century life. He believed that Naturalism mesmerised by stressing the total coherence of the theatrical illusion, while Expressionism disarmed the spectator by emphasising the subjective power of complete identification with the emotions of the characters (Brecht, 1977). He held that both forms functioned by deception, *exploiting* the empathy between actor and spectator. Nevertheless Brecht realised that he was increasingly being seen as someone who promoted intellect over feeling and was troubled by this false polarisation.

> It becomes clear to me that the antagonistic configuration 'reason in this corner – emotion in that' has to go. The relationship of *ratio* and *emotion* [emphasis in original], with all its contradictions, has to be examined minutely, and opponents cannot be allowed simply to present epic theatre as rational and counter emotional." (Quoted in Benedetti, 2007:95).

Brecht had by now encountered the inevitable limitations inherent in Cartesian dualism and had clearly expressed his determination to confront, if not entirely embrace, the paradox. In doing so he was able to acknowledge that the stage is inhabited by actors who are live, passionate, contradictory and three-dimensional people rather than stuffed animals in a museum, and his actors are able to "… succeed in being people because of our principles, not in spite of them" (Brecht, 1977:235).

Stanislavsky meets the American Dream

Meanwhile Stanislavsky's influence had reached the shores of America in the early 1920s, during a visit by the Moscow Arts Theatre. It is worth noting that his earliest teachings were being transplanted into a different ideological climate to that which prevailed in Europe and, in particular, the Soviet Union. I suggest that the 'cult of subjectivism' found fertile soil in the socio-political ethos of America. There were differing interpretations of his work with various individuals laying claim at some point to the 'true' principles Stanislavsky had initially articulated, and figures such as Stella Adler, Sanford Meisner and Lee Strasberg each continued to develop their own particular technique with independent exploration of the psychological literature of the day. The differences in approach came to reflect what I contend were essentially competing theories of emotion as either a cognitive phenomenon or an embodied experience, although the relationship between these apparent polarities is being shown by current research in cognitive neuroscience to be considerably nuanced (Damasio, 2005).

By the time of the 'Cold War' stand-off between the United States and the Soviet Union in the 1950s, the personally expressive approach to performance called 'Method' acting had thoroughly penetrated American popular consciousness (Conroy, 1993). The commercialisation of culture under capitalism saw such iconic Method actors as Marlon Brando and James Dean regularly depicting rebel heroes marked by an authentic individuality. The 'cult of subjectivism' flourished in America largely due to the star system that had come to define the commercial practices of Hollywood (Naremore, 1988).

It is worth noting that Stanislavsky's teaching reached his American counterparts second-hand: following a tour with the Moscow Arts Theatre to the United States in 1923 and 1924, actress Maria Ouspenskaya remained behind with a colleague, Richard Boleslavsky, who had already spent some years there (Carnicke, 1998). Together they established the American Laboratory Theatre where they trained local actors in Stanislavsky's System.

Among the first beneficiaries of this instruction was Lee Strasberg, together with Harold Clurman and Stella Adler. Strasberg went on to collaborate with Clurman in forming the Group Theatre, a collective dedicated to the creation of a disciplined ensemble of artists, founded on the principals espoused by Stanislavsky (Clurman, 1983). Two other individuals who were to become leading figures in the development of theatre in America, Stella Adler and Sanford Meisner, were among the Group Theatre's original members. From relatively early in the life of the project, there were disagreements over Strasberg's excessive focus on emotion; it was felt that affective memory was only part of the "Stanislavsky puzzle" (Gordon, 2000:47).

When the Group Theatre disbanded barely ten years after its inception internal differences were widely cited, and theatre historian Wendy Smith agrees that the problems inherent in communal life contributed to the difficulties they faced. However she argues that another obstacle proved insurmountable: the "external pressures posed by a society set up to offer individual rather than collective rewards" (Smith, 1994:427). While the group enjoyed critical success, the box-office takings remained modest with the artists leading a hand-to-mouth existence. These circumstances made individual members vulnerable to overtures from Broadway or Hollywood producers who could offer them stardom with its attendant financial spoils in place of lofty principles and penury. It is clear that Stanislavsky's ideals were being subjected to forces rather different from those encountered in Soviet Russia. New York critic and theatre practitioner Robert Brustein notes that the American version of the Stanislavsky system created many more movie stars than theatre artists.

> Stanislavsky had famously demanded of his company that they love the art in themselves rather than themselves in the art, which was his way of urging them to be dedicated actors instead of egocentric careerists. By contrast, one of Lee Strasberg's leading examples of a great American actress was Marilyn Monroe. (Brustein, 1997:30).

Three influential teachers to emerge from the vestiges of the Group Theatre experiment had significant differences in their individual approaches, but Strasberg, Adler and Meisner

shared the same goal for the actor as Stanislavsky had: to live truthfully under imaginary circumstances, to strive for "the creation of this inner life of a human spirit, and its expression in artistic form," (Stanislavsky, 1964:16). The extent to which each of them may or may not have departed from Stanislavsky's intentions has been the source of much recrimination and debate, but all three went on to have a major impact on American theatre and actor training. I propose that their distinctive contributions provide an opportunity to examine the implications of Stanislavsky's research outside of its original Soviet milieu, a welcome opportunity to re-contextualise an area of inquiry that is, by definition, highly subjective.

The most controversial of the three is Lee Strasberg, whose name is synonymous with the Method. The key elements for Strasberg were relaxation, concentration and affective memory – the ability to recall in vivid detail a personal situation that evokes a desired feeling. Through practice and experience he devised sequences of drills, underpinned by a basic logic that progressed from the simple to the more complex, shifting the focus of attention from external objects to internal objects that exist only in the imagination. The exercises were designed with the purpose of training "the actor's sensitivity to respond as fully and as vividly to imaginary objects on stage as he is already capable of doing to real objects in life" (Strasberg, 1987:123). In biological terms these exercises relate to how an organism is able to negotiate its environment or 'given circumstances' in order to prioritise and accomplish its goals (Berthoz, 2000).

Rock, paper, scissors: biology trumps ideology

Pinker describes the ability to shift the 'spotlight of attention' between a conscious 'serial' processing and an unconscious 'parallel' processing where only information relevant to the task at hand is routed to the conciousness (Pinker, 1999:140). He explains that certain sensory information, which is relevant only some of the time, should nevertheless be accessible to a computation if and when it becomes pertinent; it exists in the interim as free floating mental representations. Computational theory asserts that what we consciously percieve is actually a highly processed product: consider our ability to eavesdrop on a conversation across a crowded room, particularly when mention of our own name emerges from the acoustic cocktail. Stanislavsky appears to anticipate this approach when describing the link between attention, interest, desire and creativity (Stanislavsky, 1964:87-90). Pinker seems to endorse this when identifying the main features of consciousness as "sensory awareness, focal attention, emotional colouring and the will" (1999:136), Stanislavsky describes mind, feeling

and will as "three impelling movers in our psychic lives, three masters who play on the instrument of our souls" (Stanislavsky, 1964:266). Both of these perspectives align with Strasberg's conclusion that "the most effective way of arriving at the actor's imagination, emotion and inspiration [is] through concentration and affective memory" (1987:67).

Pinker's notions of behaviour, focal attention, mental representations and information processing are equally useful in explaining the 'repetition' exercise that underpins Meisner's approach (Meisner and Longwell, 1987). But I propose that they shed a more significant light on the immediacy and emotional specificity of the relationships Meisner's training encourages actors to create in performance. The fundamental exercise underpinning the approach requires actors to work with partners, each closely observing and responding *impulsively* to what they receive from the other. At its simplest the game involves a straightforward repetition of the partner's utterances in a neutral and unaffected manner. With the emphasis on spontaneity rather than pretense or contrivance, this apparently mindless repetition would appear to be aimed at distracting the actor's rational faculties and allowing impulsive, emotion-based responses to come to the fore. From a neurobiological perspective Pinker argues that evolution has handed down an apparent 'firewall' between passion and reason to mandate the emotions with the task of evaluating the credibility of propositions being contemplated by the intellect.

> The intellect is designed to relinquish control to the passions so that they may serve as guarantors of its offers, promises and threats against suspicions that they are lowballs, double-crosses and bluffs (Pinker, 1999:412).

I propose that Meisner's exercise allows actors to breach this firewall in order to replicate behaviour that is emotionally spontaneous and unshaped by habitual conditioning. Pinker's perspective also begins to hint at why emotionally credible performances are able to move audiences in profound ways; abstract thoughts are given expression in embodied emotional experience and mind is transformed into matter.

Embodiment of thought and feeling

Emerging neuroscientific research appears to confirm this interdependence of 'thinking' and 'feeling'; philosopher Mark Johnstone and linguist George Lakoff (1999) refer to three significant findings of cognitive science: the mind is inherently embodied; thought is for the most part unconscious; and abstract concepts are largely metaphorical. From this position they suggest that our intellectual faculties are rooted in the sensorymotor system; rational

inferences are computed by the same neural architecture used in perception and body movement. From the perspective of evolutionary biology it is conceivable that our capacity for reason grew out of the motor and sensory systems that had already evolved to allow us to function within the physical environment. This suggests that our sense of our 'selves' located in time and space, and such notions as causality and even morality, arise directly out of our experience of our physical being. Many of our common metaphors of expression echo this legacy with such phrases as to 'grasp' an idea, to be 'beside' oneself or to act on a 'gut feeling'. It is no small coincidence that an irksome individual is frequently referred to as 'a pain in the neck'; more often though, the 'pain' is indelicately located in a rather more private part of the anatomy, indicating an acute somatosensory awareness on the part of the commentator.

Stanislavsky appears to have preempted these arguments with the culmination of his life's work in his *Method of Physical Actions*, based on his conviction that our psychological and physical beings are indivisible and that truthful fulfilment of a physical action involves an actor's authentic emotion. "The physical action is the 'bait' for an emotion" (Moore, 1965:92). Among the most influential figures in American theatre and actor training, Stella Adler (2000) is the only one to have had any personal contact with Stanislavsky, having spent some weeks with him in Paris in 1934. She had been sceptical of the undue emphasis being placed on emotional memory and her time with Stanislavsky reaffirmed her commitment to the importance of action; that "feeling is a by-product of doing" (Hammer, 2000).

A recent innovation that seeks to manage emotions purely through physical means has been developed by Susanna Bloch, a research psychologist specialising in neurophysiology. For her, emotion is "a complex functional state of the entire organism, which includes physiological activity, expressive behaviour and inner experience" (2006:34-35). Bloch considers her research on emotion to be experimental demonstrations of William James' (1884) view, referred to in the previous chapter, that emotions are manifestations of bodily changes that occur immediately following the perception of an 'exciting fact'.

Neuroscientist Joseph LeDoux (2000) conducted studies that precisely mapped the limbic system, proving that there are two routes of transmission for sensory perception: information first travels through the thalamus and via a single synapse to the brain's emotional centre - the amygdala - before a second signal reaches the neocortex or 'thinking brain'. This

branching allows the amygdala to begin to respond *before* the neocortex is able to mull the information through several levels of brain circuitry to initiate a more finely tailored response. "The cortical systems that try to do the understanding are only involved in the emotional process after the fact" (LeDoux quoted in Barry, 1997:18).

Bloch divides the study of emotion into three strata, the physiological, expressive and subjective levels (Chabora, 2000). The *physiological* research concerns itself with the visceral manifestations of emotion: the endocrine, chemical, molecular and autonomic respiratory reactions. The *expressive* domain includes the somatic indicators of emotion: muscles, posture, gestures, facial, vocal and controlled respiratory movements. The focus of investigation at the *subjective* layer stresses the internal, affective and personal experience of emotion: what we call 'feeling'. Bloch is clear that these three levels of emotion exist in constant and dynamic interaction, with changes on the one level registering consequent adjustments on each of the others. Echoing Damasio, Bloch (2006) is careful to note that emotion and feeling are not one and the same; rather feeling is a cognitive product of emotion. In addition, she stresses that a human being is always experiencing an emotion and thus is always feeling. Accordingly, emotional indicators are constantly communicating something in a non-verbal, paralinguistic mode, whether intentionally or otherwise. This unconscious expression of emotions, running as a perpetual parallel process, communicates information that is often more salient than that contained in the words being spoken. By way of illustration, I offer the following scenario of blissful domesticity:

> We're in the living-room of a contemporary middle class South African suburban home. He comes in through the front door and takes occupation, carelessly dumping his briefcase in the armchair, tossing his keys on the coffee-table and draping his jacket over the back of the sofa as he announces his presence.
>
> "I'm home! Where's my precious?"
>
> "Where else? How was your day?" She strolls into the room and they exchange a peck. She begins rearranging his discarded stuff as he replies.
>
> "Presentation went well. Client was impressed. Not so sure about the agency though. Yours?"
>
> "Hmm?" She is distracted.

"Your day. How was it?"

"Oh. It was OK."

"But then I say, who's more important, the client or … 'OK'? You sure?"

"Ja, no. It was fine."

"Good. But John doesn't know which side his …" He interrupts himself, contemplating her for a moment.

"What?" She is startled.

"Are you OK?"

"No, I said I'm fine."

"There's something wrong."

"Nothing's wrong." She laughs, flippantly.

"It's OK. You don't have to tell me if you don't want to."

"There's nothing to tell. You wouldn't understand."

"Aw, honey. My love! You can trust me. What is it?"

"It's nothing. It's stupid."

"No, it's not. C'mon …" He reassures her.

"Well. Last night. At the Nicholsons …"

"Ja?"

"Frank said he liked my new hairstyle."

"I heard that. It was an honest compliment."

"But you just sat there. You said nothing. And the look Julia gave me …"

"But what could I say? He's right."

"You could have agreed. Or something."

> "But I do! It's a great cut. I've told you before, it suits you … brings out your …"
>
> "It's too late now!" Clearly upset, she leaves the room. He stands there, stunned and trying to work out the logic of what has just transpired.

As the 19th century German philosopher Friedrich Nietzsche pointed out when referring to human behaviour and the spoken word, "One can lie with the mouth, but with the accompanying grimace one nevertheless tells the truth" (Quoted in Rabin, 1994:187).

This 'cognitive dissonance', I argue, is fundamental to the dramatic tension that characterises many types of theatrical performance, forming the bedrock of what we call 'subtext', that which is evoked rather than explicit and which is perceived on a purely emotional level. Incidentally, I attended a lecture in which theatre and film director Sir Peter Hall made a convincing argument concerning the use of masks in the Classical Greek theatre. He suggests they were not primarily intended to create a megaphone (as is often supposed), but rather to create cognitive dissonance, the fixed visage being at odds with the large passions being expressed through vocal and physical means (Hall, 2005).

Emotional nuts and physical bolts

Bloch's research into the physical stimulation of human emotions began in 1970 as an interdisciplinary investigation, in a medical school laboratory in Santiago, together with colleague Guy Santabiñez and the Chilean theatre director Pedro Orthous. "The study was not concerned either [*sic*] with the causes which may produce an emotional state, nor with cultural implications or social consequences, but with the emotional state *per se* [emphasis in original]" (Bloch, 1993:124). Accordingly they spent two years measuring the heart rates, blood pressure, temperature, breathing, facial and bodily postures of both normal and neurotic human subjects, among whom were professional actors and students of psychology.

Using emotional memory techniques and deep hypnosis Bloch and her team were able to generate a vast body of data which, on analysis, rendered specific repeated patterns of breathing, facial expression, body tension and postural behaviour associated with the corresponding autonomic markers indicating *pure* emotional states. Bloch would come to refer to these reproducible arrays of indicators as "effector patterns" (Bloch et. al. 1987). The data was particularly significant in that it was generated through an *interdisciplinary* approach that transcended the dualistic body-mind view that had traditionally fragmented the emotional event: experimental psychologists would concern themselves with the more

measurable external characteristics of emotions while physiologists examined the internal chemical, electrophysiological and neurohumoral processes. Bloch notes that the *subjective* states of emotion had hitherto been kept safely out of scientific hands, being best left to the speculative musings of the philosophers and poets.

Bloch continued to work with actors and emotional effector patterns, honing the findings of her earlier research, and identifying six distinct categories on the matrix of primary emotional states: *happiness,* characterised by laughter, pleasure and expressions of joy; *sadness*, marked by crying and indicators of sorrow, grief and depression; *fear*, including anxiety and panic; *anger,* with displays of aggression and hate and characterised by attacking behaviour; *tenderness*, including friendship and love of the maternal, paternal and filial variety and *eroticism* marked by sensuality and lust (Santibañez and Bloch, 1986).

The last two categories are of particular interest when considering the differentiation between primary or basic emotions and secondary, mixed emotions: tenderness and eroticism generally co-exist and the one is frequently mistaken for the other, often with dire social and even legal consequences. However Bloch's initial research established that they are quite distinct in their particular configuration of physiological parameters such as heart rate, blood pressure, skin resistance, and skin temperature as well as in their underlying autonomic neuroendocrine and neuromuscular reactions. The same is true for each of the other basic emotions which are akin to the primary colours on an artist's palette; most of the emotions we experience in our day-to-day existence consist of idiosyncratic blends of two or more of the 'big six'. Jealousy, for example, could consist of a mix of fear, anger and erotic love in one person; while in another an undertone of sadness might prevail. A further factor to consider in the blending of emotions is their relative duration and intensity: "emotions may be 'phasic' if they are short-lived or 'tonic' if they are maintained in time" (Bloch, 2006:59). So a bad mood is a state of anger maintained over a period of time, while anxiety is a state of chronic and lasting fear and depression reflects a state of enduring sadness.

Many ancient practices such as yoga are founded on the principle that breathing and emotion are interconnected and techniques of respiratory control have for some time been a recognised treatment for distressing episodes of panic attack (Clarke et. al 1985; Rapee, 1985). It's also been known for some time that 'laughter is the best medicine', and studies have confirmed that certain positive emotional activities are effective modifiers of

neuroendocrine hormones involved in the classic stress response (Berk et al., 1989). Bloch was able to demonstrate similar reciprocal dynamics between the various levels of the emotional event and through her research with actors was able to isolate, across a wide emotional spectrum, those somatic elements of passion that can be voluntarily controlled and reproduced at will. She found that the precise and conscious control of the *expressive* elements of respiratory and muscular-skeletal configuration galvanises biofeedback mechanisms which in turn trigger the corresponding involuntary *physiological* factors, arousing the *subjective* component of a particular emotional event. One of the fundamental tenets of my thesis is that the involvement of mirror-neuron systems extends the emotional experience beyond the individual and into the community and that this is substantially significant to theatre practice.

Hands-on the emotional joystick, drawing breath

While I was heading the department of actor training at the South African School of Motion Picture Medium [*sic*] and Live Performance (AFDA) in 2005, I participated in a series of workshops conducted by Jeanette Ginslov, a movement specialist who had trained with Bloch in her *Alba* technique. My first-hand experience of this process of stimulating emotional responses through adopting conscious breathing patterns and postural attitudes was something of an epiphany: much of what I thought I understood about the nature of emotions, all at once I now *knew* on a visceral level. I experienced pure anger, tears, laughter and fear, but my consciousness was unencumbered by personal emotional memories and I was free to fill the cognitive vacuum with whatever associations I cared to invite. But what was for me the most astounding discovery in those sessions was the powerful *empathic* sensation I experienced when merely observing another actor being put through their paces. Time and again I found myself catching my breath as my corporeal being resonated with another individual's inner state while they were given over to the experience of even the most subtle of pure emotions. I felt like Pavlov's dog salivating at the sound of a bell or, more accurately, one of Rizzolatti's monkeys contemplating the allure of a peanut.

The interdisciplinary nature of Bloch's research challenged the scientific paradigm, particularly through its focus on the subjective dimension of emotional phenomena. As a consequence she had to be particularly rigorous in recording her results before being accepted for publication in peer-reviewed scientific journals. But Bloch is steadfast in her assertion that "the observer's judgement should be taken as a scientifically valid element, particularly

in the study of emotions" (2006:90), arguing that a naïve witness is able to correctly identify the specific emotion being induced by a faithful reproduction of the effector patterns. Based on my subjective experience I propose that it is through the involvement of mirror-neurons that an un-primed observer is able to recognise the emotions; not through a conscious process of identifying the signs, but through an analogous subjective feeling.

Among the commentators who have criticised the research of Bloch and her colleagues is Paul Eckman (2003), a pioneer in the study of emotion with particular regard to facial expression; he is considered to be an expert in the field of deceptive behaviour, or 'lie detection'. He questions Bloch's categorisation of basic emotions: like her he identifies six classes of primary emotion, but includes *surprise* and *disgust* on his list, while excluding *erotic love* and *tenderness* (Eckman, 1988). Bloch points out, though, that her research refers to basic human emotions in a Darwinian evolutionary and adaptive sense; they are biologically primitive with a "particular evolutionary significance, in relation to a need to survive for both the individual and the species" (2006:50). Apart from their clearly differentiated specific effector patterns, this difference in conceptual approach would explain Bloch's inclusion of tenderness and eroticism alongside the typically accepted basic emotions of joy, sadness, anger and fear. In this context, disgust and surprise would be described as secondary emotions. Furthermore, it must be noted that Eckman's overriding consideration is facial expressions which he found to be common across cultures for the same emotional state (2003). Bloch and her colleagues used facial expression as just one of the indicators of emotion and consequently did not involve themselves with micro-expression in the manner of Eckman's minute detailing of individual muscular actions. If any single aspect is granted principal focus in Bloch's research, it is respiration, which as Frans Boiten points out, is commonly accepted as being connected to emotion but which had been curiously neglected in serious investigations until she, Santabiñez and Orthous took the plunge (Boiten, Frijda and Wientjes 1994).

Embarking on a course of inquiry that straddles science and the humanities courts inevitable risk, and Bloch has had to contend with differences of opinion on both sides; some theatre practitioners, for example, fear that actors will once again be reduced to 'bio-mechanical robots' (Chabora, 2000). But Bloch's contribution doesn't negate any of the more established approaches and should not be seen to displace thorough textual analysis, detailed characterisation and commitment to the inner life of the role. If anything, her approach has

provided an additional tool, a physiological and organic means of consciously reaching the unconscious, which would no doubt please Stanislavsky. She has also validated through science the poetically expressed conviction of the visionary French playwright, poet, actor and director Antonin Artuad that an actor is an 'athlete of the heart'.

> For breath, which nourishes life, allows its stages to be ascended rung by rung. And an actor can arrive by means of breath at a feeling which he does not have . . . Breath accompanies feeling, and the actor can penetrate into this feeling by means of breath provided he knows how to select among the different kinds the one appropriate to the feeling (Artaud, 1959:137)

Artaud detour: the cruel plague

As a leading proponent of the surrealist movement of the 1920s, Artaud rejected rationality in all its forms and is today hailed more for his prophetic vision than for any methodological approach to his work; his lasting legacy was identifying the body as the primary site of performance (Gordon, 2006). At a time when Stanislavsky was refining his method of physical actions, Artaud had likewise become obsessed with the bodily incarnation of thought (Driver, 1969). He denounced all notion of Cartesian dualism, proclaiming that theatre is not for the elevation of the spirit but rather for the direct revelations of the physical being, "… the body of the actor working directly on the nervous system of the audience" (Ward, 1999:126). Artaud believed that performance arose out of sacred rituals that cruelly overwhelm the senses in a mystical, metaphysical experience.

Stanislavsky had long emphasised the 'fourth wall' or traditional proscenium as a frame for the performance, separating it both from the world of the audience and the external social environment. Brecht, on the other hand, sought to collapse the boundary between performance and spectator, notably allowing the auditorium to remain illuminated as his actors directly addressed the audience. Artaud's vision was to go even further: to allow theatre to penetrate the flesh of both performer and spectator with the physical experience of the passions transmitting themselves like a plague from the bodies of the actors to those of the onlookers. His *theatre of cruelty* was conceived as a thoroughly visceral incarnation that aspired to put the spectator at the centre of the theatre and to treat them "… like the snakecharmer's [*sic*] subjects and conduct them *by means of their organisms* [emphasis in original] to an apprehension of the subtlest notions" (Artaud, 1959:81). It is clear that for Artaud the path to enlightenment lay in direct feeling rather than abstract contemplation. In

the light of the recent discoveries in the neurosciences that suggest a capacity for the direct communion of the passions, Artaud appears to exhibit a prophetic sense of theatre existing in that liminal realm where biology and culture intersect. A week before his death in 1948, he addressed a letter to Paule Thévenin, a lifelong editor of his writings.

> … I will devote myself from now on
> exclusively
> to the theatre
> as I conceive it,
> a theatre of blood,
> a theatre which at each performance will stir
> something
> *in the body* [emphasis in original]
> of the performer as well as the spectator of the play,
> but actually,
> the actor does not perform,
> he creates.
> Theatre is in reality the *genesis* [emphasis in original] of creation:
> It will come about … (Schumacher, 2001:233)

I have traced the phenomenon of emotion and the shifting attitude to affect from classical times to the present day, noting how attitudes to the Passions have reflected both the cosmology and the political perspectives of the various epochs. Although theatre practitioners reflected these shifts in philosophical points of view, I have shown that current neuroscientific perspectives reveal that the foremost theatrical figures were at the leading-edge of intellectual climate-change. I contend that the advantage they enjoyed was that through practical exploration of abstract ideas they had all along been practicing 'embodied philosophy': giving bodily expression to abstract musings, simultaneously engaging intellect and emotion and in so doing, courting intuition.

Artaud never saw his distinctive vision realised, but the notion of the body as site of performance inspires a lineage that includes Jerzy Grotowski, Richard Schechner and Peter Brook, a view of theatre that relies first and foremost on the continuous physical *presence* of the actor to the spectator. I propose to argue that as our civilisation moves deeper into the 21st Century, the notion of presence becomes an increasingly vital element in our construction of both the personal and the environmental gestalt. In the shrinking global village of the internet, communities are becoming paradoxically disconnected and fractured amid the ubiquity of

impersonal email and text messaging, while we gravitate towards social networking and the ironically named ‘facebook’ in search of communion.

While the cybernetic pioneers of artificial intelligence strive to replicate the emotional dimensions of cognition, innovators in communications technology have singled out the simulation of presence, a sense of ‘being there’, as their new frontier (Witmer and Singer, 1998; Waterworth and Waterworth, 2001; Slater, 2002; Watts, 2011). In their quest for this Holy Grail they are turning to the emerging neuroscientific research on empathy and presence to guide them. I suggest Theatre practitioners do the same in order to take stock, more fully to understand and better to exploit our fundamental evolutionary heritage. A neurobiological understanding of *presence* provides insight into how the human organism survives, both within its physical environment and through a mutually beneficial interaction with its community.

Present Company: Theatre and Social Ritual

> That absence doth sharpen love, presence strengthens it;
> that the one brings fuell, the other blowes it till it burnes cleare.
> *Thomas Overbury, (2009:190)*

> Morton Hull: Do you realise that more people will be
> watching you tonight, than all those who have
> seen theatre plays in the last forty years?
> Chance the Gardener: Why?
> *Being There, (1979. [Film] Dir. Hal Ashby.)*

A small group of black protestors sings mournfully outside the venue where the inquest is being held. A uniformed white policeman keeps watch over this display of defiance, a portrait of composure; his eyes in a fixed gaze partly shielded by the patent-leather peak of his standard-issue hat, his lips drawn thin beneath his youthful moustache.

Senzenina	[What have we done?]
Sono sethu ubumnyama	[Our sin is that we are black]
Sono sethu yinyaniso	[Our sin is the truth]
Sibulawayo	[They are killing us]
Mayibuye i Africa.	[Let Africa return.] (Pollard,1999:113).

Now the dirge breaks into a chant. The gathered crowd becomes restless. The policeman's temple pulses as if keeping time with the chant as he clenches his jaw.

Impimpi! Hayi. Hayi.	[A spy! No. No.]
Impimpi!	[A spy!]
Voetsek! Voetsek!	[Get out! Get out!]
ugathsha lona	[This one's a traitor]
Voetsek!	[Get out!]

It is 1985 and South Africa is living under a repressive State of Emergency; the smell of suspicion attaches itself readily to anyone seen to be collaborating with the authorities and mob-lynching is not uncommon. A black man elbows his way to the front of the crowd that has gathered. Well-dressed and overly-respectful, he tentatively steps up to the policeman. "Askies, my Baas, please can you help me?"

The cop tuns his head and stares the man down.

"Askies meneer ... but the tsotsis, they stole my car just now."

The policeman is taken aback; a momentary twitch of his brow, a flicker of doubt. He is torn; he has a job to do and how he responds at this moment could undermine his primary purpose.

He cannot ignore the man, but the 'uniform' and fake insignia he wears confer upon him no statutory authority. In fact, he is not a policeman at all. He is an actor.

I was playing the role of this young constable in a production of Saira Essa's *Steve Biko: The Inquest* (1985) at the Wits Theatre in Johannesburg. Each night in the foyer, as a prelude to the performance of the play itself, the actors – in character – would mingle with the audience and create an improvised scenario. However the complainant who had materialised was not a member of our ensemble and this turn of events was not part of the set-up. As a fledgling actor I suppose I should have been flattered that at least one person had been convinced by my characterisation. But here was a man in genuine need, and I was no more than an impostor; a sheep in wolf's clothing! Thankfully the front-of-house manager was able to take my cue as I barked an order for him to drop everything and assist the man. Nevertheless I was thoroughly rattled by the encounter as the magical world of make-believe collided with the social reality out of which it arose and within which it exists.

> The core of theatre is an encounter. The man who makes an act of self-revelation is, so to speak, one who establishes contact with himself … It is the experience which we take upon ourselves when we open ourselves to others, when we confront ourselves with them in order to understand ourselves – not in the scientific sense of re-creating the context of an epoch in history, but in an elementary and human sense. (Grotowski, 1984:56-59)

Confronting the encounter

In this section I argue that theatre is a cultural expression of an evolutionary imperative rooted in human socio-biology. Approaching theatre as a manifestation of social-ritual through which society is able to know itself (Turner, 1982), I set out to reveal it as a means through which individuals may construct their identities in relation to a social group, and through which the group explores a common identity, rediscovering, reinvigorating or reinventing their binding narrative. I begin by examining the work of a man perhaps destined to take up Artaud's discarded mantle: Polish theatre director Jerzy Grotowski hailed the French prophet as a man who "…knew that the transgression of myth renewed its essential values" (1984:89).

I present Grotowski as a man shaped by and responding to the evolving intellectual climate in which he operated, a climate inspired by the revolutionary physicists of his time (Baggot, 2011). I suggest that quantum theory endorsed Grotowski's endeavour to embrace apparent contradictions and to reconcile the divergent approaches of his forebears, in pursuit of

body/mind integration. Eclectic in his methodology, Grotowski deliberately courted seemingly incongruous propositions, adopting spiritual practice while discarding religious dogma in a quest for 'Secular Holiness' (Lavy, 2005). I go on to argue for a material basis to mystical states and profound aesthetic experience by consulting the scientific literature that locates the neural correlates of transcendent consciousness (D'Aquili and Laughlin, 1975). I proceed to establish similarities between those altered states of consciousness variously induced through meditation, through the use of psychoactive drugs and by means of traditional ritual practices (Bowker and Bowker, 1998; Newberg et al. 2001;2003; Biello, 2007; Nelson, 2011).

Turning to the work of cultural anthropologist Victor Turner, I identify an analogue for transcendence in the interstitial 'liminal' state of ritual, an intuitive phase of creative possibility flanked on the one side by a structured past and on the other by a reconstituted, ordered future (Olaveson, 2001). I investigate how a state of liminality facilitates communion or *communitas,* characterised by mutuality where individual participants are acutely aware of and reciprocally affected by their co-presence in time and space (Turner, 1969). I go on to explore the notion of presence and investigate how the arrangement of the spatial environment acts directly on neural networks (Kaplan, 1968). I conclude by reviewing the neural manifestations of deep religious and intense aesthetic experience, discussing the mechanisms through which our cognitive and affective functions are simultaneously activated: all at once we feel-thinkingly and think-feelingly (D'Aquili and Laughlin, 1975; Lex, 1979; Nelson, et al. 2006). It is my contention that the deeply moving experience provoked by the most profound of theatrical events is akin to the ineffable transcendence of ritual liminality; both are facilitated by distinctly material states rooted in our neurobiology.

Beyond the proscenium: redefining the frame

At the time that Artaud was becoming known beyond the enclave of French intelligentsia, Polish theatrical innovator Jerzy Grotowski was coming to prominence mainly through the work of British director Peter Brook (Benedetti, 2007). Grotowski confesses to having encountered Artaud's writings for the first time only in 1964, leading Robert Gordon (2006) to conclude that many of his own views on theatre were likely to have been independently formed. Nevertheless he acknowledges a debt to his antecedent: in an essay '*He wasn't entirely Himself*' (1984), Grotowski praises Artaud for his courage in exploring the possibility of a theatre that transcends logical discourse. In the same breath, however, he

laments Artaud's use of ephemeral language and fleeting metaphors to articulate his prophetic vision; "the paradox of Artaud lies in the fact that it is impossible to carry out his proposals … whatever is imperceptible demands precision" (ibid.:86). Grotowski advocated a more rigorous approach, akin to a scientist's use of a microscope to examine elusive bacteria, going so far as to underline the analogy by calling his theatre a 'laboratory'.

I contend that, like Stanislavsky before him, Grotowski's world view was shaped by the prevailing intellectual climate of his time. But science and philosophy had moved on in the intervening generation; Descartes' mechanistic understanding of nature had been challenged by the advent of quantum mechanics and a world view that is necessarily more tolerant of paradox (Baggot, 2011). The classical physics of Sir Isaac Newton had, up until then, provided a satisfactory explanation of the physical world. It did this by assuming a direct relationship between cause and effect while observing and predicting the behaviour of objects in motion under the action of a system of forces. Jim Baggot recounts how by the late 1920s a bunch of upstarts, including Albert Einstein and Niels Bohr, had come to upset Newton's apple-cart: they were intent on peering into the inner workings of the atom while contemplating break-neck velocities approaching the speed of light. Under these circumstances a number of phenomena became apparent which were irreconcilable with the classical physical models. In response, theories of quantum mechanics emerged that relied on unprecedented degrees of mathematical abstraction in order to reconcile contradictions inherent in the wave/particle duality of atoms and molecules (Greiner, 2000).

Einstein had postulated that energy and matter are two aspects of the same thing and essentially interchangeable, representing the notion in his most famous equation $e=mc^2$. Classical physics draws a distinction between the two states where energy is defined by its waveform properties while matter is distinctly particulate in character. Walter Greiner explains that on a subatomic level this distinction becomes fuzzy with entities exhibiting the properties of both wave and particle, neither of which can be observed simultaneously although both aspects are necessary to fully describe their behaviour. The limits of common sense are stretched by the preponderance of such qualifiers as 'and', 'but', 'or' and 'except' in contemplating the proposition that something is neither the one thing nor the other, but essentially both; alternately it is either one or other but never both simultaneously. Nobel prize-winning physicist Richard Feynman reassures us that anyone who professes to

understand quantum physics is either a fool or is lying. To this I would mischievously add that they are undoubtedly both, but not necessarily at the same time.

> The theory of quantum electrodynamics describes Nature as absurd from the point of view of common sense. And it agrees fully with experiment. So I hope you can accept Nature as She is – absurd (Feynman, 1988:10).

Given this intellectual climate, I maintain it is little wonder that Grotowski himself became increasingly enigmatic: after an all too brief stint creating performances he left the confines of his laboratory to conduct field work for the greater part of his career, the results of his research becoming more inscrutable with each successive phase (Osiński, 1991).

Out of the lab and into the field

Peter Brook emphasises Grotowski's scientific approach, in which his Laboratory Theatre represented a centre of research where, for the first time since Stanislavsky, "…the nature of acting, its phenomenon, its meaning, the nature and science of its mental-physical-emotional processes [is investigated]" (2009:9). Grotowski's focus was on a methodology through which, by means of practical experimentation, he hoped to solve questions as to the precise nature of theatre and what it is that makes theatre unique, particularly when compared to those other media of dramatic presentation that were becoming ubiquitous: film and television. His quest led him to define two key conceptual propositions: the 'poor theatre' and performance as an 'act of transgression' (Grotowski et al.,1967).

The act of transgression is what leads to the 'encounter' that Grotowski believed to be at the core of theatre. Through the deliberate violation of cultural and religious taboos, the social mask is ripped off, and spectators and performers alike are challenged to confront their essential selves. Artaud had earlier described the body of the actor working directly on the nervous system of the audience (Ward, 1999). Now Grotowski's practical explorations were leading him to a perception of the encounter as "… more jarring because it is imaged in the human organism's breath, body, and inner impulses" (1984:22).

The concept of the 'poor theatre' presents the other side of this coin: just as the actor is relieved of the social carapace, the presentation of the performance itself is stripped to its bare essentials, leaving the actor nowhere to hide. Grotowski considered the technical trappings of the theatre to be a hindrance to his mission and chose to eliminate all those elements that were not organic, that did not arise directly out of the actor's body. What was

left after all the paring down were the two ingredients essential to theatre: the actor and the spectator.

"A man walks across this empty space whilst someone else is watching him, and this is all that is needed for an act of theatre to be engaged" (Brook, 1968:11). Here, Brook echoes Grotowski's conclusion, but elsewhere he bemoans the fact that the man's contribution to the theatre is limited to a handful of productions early in his career. "Then he abandoned that, and for other reasons went into work which today is nontheatrical and is not linked to presenting performances in public to other people" (Moffitt, 1999:36-37). I suggest that the 'other reasons' motivating him were not quite as unconnected from those impulses that gave rise to Grotowski's theatrical presentations as Brook appears to assume. I contend furthermore that Grotowski's later work is indeed linked to performance in much the same way as the laboratory work of a physicist, examining the tensile properties of materials, contributes to the construction of skyscrapers.

Others were similarly disappointed and openly hostile towards Grotowski's decision to turn his back on conventional theatre: director and critic Charles Marowitz was particularly contemptuous, "What is the relationship between your ideas and the living theatre as we know it in our daily practice? …None!" (Gordon, 2006:306-307). Yet I argue that Grotowski's later work was never entirely divorced from the broad ambit of theatre practice with the two spheres retaining some measure of osmotic reciprocity. Lisa Wolford (2001) describes how Grotowski and his collaborators made the results of their research accessible to a wide circle of theatre scholars and practitioners, while young actors and directors would return to continue their careers after completing their contracted period of residence.

Despite the controversial reception to his later work, I maintain that there was a consistency to be found with Grotowski's earlier contribution. Giving expression to aesthetic notions inherent in Artuad's Theatre of Cruelty (1958), he explored the multi-faceted relationship between the actor and the spectator; Grotowski's stated quest was to remove all impediments to the direct communion of two organisms that are co-present in space and time (Grotowski et al., 1967). I assert that he remained true to this cause: while his earlier experiments had focussed on stripping away barriers and investigating the dynamics of spatial relationships between the actors and the audience, in his later work he was compelled to confront the fundamental distinction between actor and spectator, with the two ultimately merging as

participants in a shared ritual. Relocating his activities to the area of anthropology, where performance and ritual intersect, Grotowski was able to continue to explore the elusive boundaries of performance phenomena. This shift of focus, I argue, affords valuable insights into the mechanisms through which theatre interacts with its social context. For Grotowski, theatre steadily became a means of exploration rather than an end in itself.

> In appearance, and for some people in a scandalous or incomprehensible manner, I passed through very contradictory periods … but I have more the impression of a thread I have followed, like Ariadne's thread in the labyrinth, one sole thread. And I am still catching clusters of interests that I had also before doing theatre, as if everything must rejoin. (Wolford, 1997:6)

A quantum leap

Grotowski's 'contradictory' periods are testimony to his proclivity for borrowing from seemingly incongruous philosophical systems: from the Hindu concept of *sunyata* to the Jewish religious existentialism of Martin Buber, from the interpretive anthropology of Victor Turner to the quantum physics of Niels Bohr (Lavy, 2005). His evident determination to examine ideas by reconciling contradictions led to Grotowski's fundamental notion of *conjunctio oppositorum*, which holds that seemingly irreconcilable points of view are not necessarily contradictory, nor are they mutually exclusive (Slowiak and Cuesta, 2007). On the face of it, I maintain that Grotowski's dialectical approach of confronting paradoxical notions can be traced to the revolutionary field of quantum physics. Of particular significance, I suggest, is Niels Bohr's Principle of Complementarity, which seeks to accommodate the paradox of wave-particle duality:

> The wave and particle properties of electrons and photons, matter and radiation, [are] mutually exclusive yet complementary aspects of the same phenomenon … evidence obtained under different conditions cannot be comprehended in a single picture but must be regarded as *complementary* [emphasis in original] in the sense that only the totality of the phenomena exhausts the possible information about the objects (Kumar, 2008:242).

Grotowski (1984) himself credits his methodological approach to an abiding admiration for the activities of the Bohr institute. While acknowledging that theatre itself might not be described as a scientific discipline, he adopted logical procedures to identify those objective elements of the actor's craft that could be honed in order to minimise the influence of such ephemeral notions as 'inspiration' and 'talent'.

Grotowski's scientific approach led him to refine his method of actor training, aiming to achieve maximum expressiveness through an organic psychophysical process rooted in body-mind integration (Gordon, 2006). In this pursuit I suggest he was intent on exploring that ground common to Myerhold's 'biomechanics' and Stanislavsky's 'method of physical actions'. But above all, I argue, Grotowski found himself within a revolutionary intellectual climate that enabled him to take up the challenge of Diderot's paradox in earnest; to contemplate a transcendence of the mind-body continuum where the distinction between subject and object becomes infinitely nuanced, where the self and the creation of the self coexist, where music is the fusion of the harpsichord and the harpsichordist.

Interestingly, science writer Barbara Cline (1987) offers an anecdote that illustrates Bohr's foreshadowing of Grotowski's concept of *via negativa*, a process whereby unconscious inhibitions are removed so that the time-lapse between impulse and action is eradicated. "Impulse and action are concurrent: the body vanishes, burns and the spectator sees only a series of visible impulses" (Grotowski, 1984:16). Cline recounts how Bohr, as an avid watcher of 'Westerns', had noticed that in a gunfight the man who drew first typically lost, presumably landing up in an unmarked grave on 'Boot Hill'. The physicist speculated that the *intentional* act of drawing and shooting was slower to execute than the action in *response*: the man in the black hat invariably sacrifices the moral high-ground and so claims his just desert. "Because the hero had not planned to kill he would feel no guilt and therefore … his reactions would be faster than the villain's" (Cline, 1987:129).

Bohr's intuition, recently confirmed in a series of laboratory simulations, points to a fundamental interplay characteristic of human conduct, an oscillation between stimulus-driven behaviour and intentional, planned actions (Welchman et al., 2010). As discussed previously, the distinction between different classes of action goes beyond a semantic exercise: neurophysiological evidence reveals distinct neural bases for *intentional* actions on the one hand and *reactive* movements on the other. As touched on in the previous chapter, Joseph Le Doux's (2000) studies, mapping the limbic system, proved that there are two routes of transmission for sensory perception: while a conscious action ropes-in the neocortex, to mull the information through several layers of brain circuitry before initiating the action, the emotionally responsive amygdala is simply quicker on the draw.

The spiritual dimension: a social conscience

Bohr's gunslingers introduce the notion of morality into the decision-making process, another prescient intuition. I argue that moral behaviour is an adaptive function of human socio-biology embedded in the same neural mechanisms that underpin religious thought, counterintuitive belief in supernatural entities and mystical experience. I propose that Grotowski left the conventional theatre and ventured into the wilderness on what was a sacred quest: in striving to achieve the *total act*, one in which the actor makes no distinction between character and self in offering himself up as a 'gift', Grotowski (1984) was in search of a divine sacrificial gesture.

Introducing Grotowski at a conference Peter Brook once remarked that "… in another epoch, this work would have been like the natural evolution of a great spiritual tradition" (1991:94). Without suggesting that spiritual experience is simply reducible to a series of biological impulses, I note that a number of scholars in the fields of comparative religion, social and cultural anthropology, as well as the medical sciences, have observed that distinctive mystical experiences frequently transcend socio-cultural boundaries (Lex, 1978; Azari et al. 2001; Alcorta and Sosis, 2005; Alper, 2008; Nelson 2011). I argue that such experiences are common to all of humanity because they are essentially embodied phenomena, arising from identical physiological structures in the brain and viscera.

American research psychiatrist and anthropologist Eugene D'Aquili (1975;1978;1998; 2001;2003) observes that despite the advent of the Age of Reason three hundred years ago, belief in the supernatural has continued to proliferate within Western societies.

> … belief in supernatural powers, gods, or demons, like all other universal human behaviours embedded within a cultural context, derives its source from the functioning of neural structures, which evolved and became progressively elaborated because of the adaptive advantage they conferred on their bearers (D'Aquili, 1978:258).

What possible advantage is afforded by a belief in the supernatural? The evolutionary adaptation is perhaps best understood in terms of 'group selection', which recognises the emergence of mechanisms favourable to social cooperation (Alcorta and Sosis, 2005). The commonly held view, as espoused by 19th century German sociologist and political economist Max Weber (1993), is that religion serves as a system through which a society regulates and transforms itself in order to survive changing circumstances. Weber's contemporary, the

French sociologist and moral philosopher Émile Durkheim (2008) held a similar view: that religion and sacred practices help to maintain and foster social stability and cohesion.

A more current perspective is offered by Canadian neurophilosopher Patricia Smith Churchland, who believes that cooperative behaviour is a crucial aspect of our evolutionary heritage: she argues that concern for how our actions may impact on other members of the group is essential to the survival of an individual within a community. In her argument she describes how oxytocin, together with other neurochemicals primarily responsible for cementing the bond between mother and infant, spills over to promote empathy between more distant kin and members of one's in-group (Shea, 2011). Churchland suggests that the inner voice of moral conscience sounds from a neurological platform, compelling us to grapple with difficult social issues, to strive to listen to all sides and to accommodate differences, to negotiate with understanding and wisdom and to consider the consequences of our choices. "Perhaps life would be a whole lot simpler if there were a divine being who could reliably be appealed to for a straight answer on moral issues, an answer made clear to all" (Churchland, 2011:199). A metaphysical conception of a supernatural deity appears to offer such a solution: whether it's a conviction that the ancestors are looking over us, or a belief in the omniscience of Santa Claus. Developmental psychologist Jesse Bering endorses such a view:

> … humans intuitively view culturally prevailing supernatural agents as knowing 'what we're up to' despite the fact that we might pull off proscribed behaviours without members of our social group being any the wiser (2005:420).

Yale professor of psychology and linguistics Paul Bloom (2005) disagrees, insisting that any apparent advantage afforded by the conception of a deity is no more than an illusion. Bloom maintains that the human predisposition to believe in supernatural phenomena is an unfortunate spin-off of biological adaptations that serves no useful purpose. In debunking the evolutionary hypothesis however, Bloom succeeds in unmasking the neural mechanisms likely to be at play. He argues that our brains are hard-wired for a duality of experience: the world of objects is perceived as separate from the world of minds. This, he says, inadvertently allows for counter-intuitive notions such as a concept of deity to take root.

Working with children as young as six-months old, Bloom has been able to demonstrate that they have an innate capacity to perceive the physical world as distinct from the psychological dimension of experience (Hamlin et al. 2007). While direct observation and an intuitive grasp

of cause-and-effect are sufficient to navigate the physical environment, the social landscape requires us to grasp the minds of others through attending to their emotions: through feeling rather than thinking (Goleman, 2007). Bloom suggests that the apparent Cartesian split in human neural architecture allows us to conceive of the disembodied soul and notions of an afterlife and even to infer goals and desires where none exist. A proclivity for such inference and a hypersensitivity to signs of agency, Bloom believes, finds intention where only artifice or coincidence exists, rendering us vulnerable to the peddlers of conspiracy theories and religious teachings alike.

> Nobody is born with the idea that the birthplace of humanity was the Garden of Eden, or that the soul enters the body at the moment of conception, or that martyrs will be rewarded with sexual access to scores of virgins. These ideas are learned. But the universal themes of religion are not learned. They emerge as accidental by-products of our mental systems. They are part of human nature (Bloom, 2005:112).

In his eagerness to denounce religion, Bloom mistakenly conflates mystical experience and doctrinal practice, a trap that Grotowski was careful to avoid in his conception of an 'objective spirituality'. Half a century before Grotowski, William James provided a conceptual framework that referred to the two faces of religion: the institutional and the personal. The former he described as the art of managing the relationship with the deity, cultivating a flair for pleasing the gods, while in the case of the latter, it is "…the inner dispositions of man himself which form the centre of interest, his conscience, his deserts, his helplessness, his incompleteness" (James, 2002:28). Although Grotowski made use of religious symbolism in his productions, he recognised the distinction between institutional religion and deeply personal spirituality. "Don't get me wrong. I speak about 'holiness' as an unbeliever. I mean 'secular holiness' (1984:34). Grotowski uses metaphysical terminology to describe the dialogical encounter with the spectator, but he firmly holds that religion does not have exclusive claim to notions of spirituality and discourse of the sacred. "Even when he borrowed from theological philosophies … Grotowski's new application of the theory did not also borrow the religion" (Lavy, 2005:180).

Casting off religious dogma, Grotowski granted himself the freedom to explore the breadth and depth of a range of religious and philosophical thinking, much of which, I argue, was directly expressed in his work. Jewish philosopher Martin Buber's (2002) influence can be detected in Grotowski's description of the *total act*: "One must give oneself totally, in one's

deepest intimacy, with confidence, as when one gives oneself in love" (1984:38). Buber's *Ich-Du* or I-You encounter is successfully achieved only when a human being is 'concentrated into a unity' and the boundaries of individuality are transcended (Buber 2002). The fundamental concept of *via negativa* is similarly infused with eastern ideas of transcendence: Grotowski's most basic philosophy for actor training, the eradication of obstacles rather than the acquisition of skills, mirrors ancient Indian meditation practices said to eliminate impurities caused by a process of conditioning to achieve 'oneness' with your essential nature: "They help us minimise obstacles and attain *samadhi*" (Satchidananda, 1990:83). 'I' merges with 'you' to form part of a greater whole where there is no distinction between objects; there is only a mutually inclusive subjective experience and an awareness of the 'interconnectedness of all things'. "When 'I' and 'mine' have stopped, then also there is not [sic] an outside nor an inner self" (Streng, 1978:12).

It is tempting to assume that, in embracing the esoteric, Grotowski had abandoned his earlier commitment to the sustained and methodical research epitomised by the Bohr Institute. But that would be misguided: an element common to all phases of his work, both in its theatrical incarnation and the later paratheatrical manifestations, is a dedication to achieving exalted states of subjective experience through the pursuit of an objective methodology.

> …certain songs and sounds are constant, universal, objective. They will take you to the intended plane, they will evoke or connect you with proper emotions or states of being. They will lead to "seeing" or true consciousness (Quoted in Winterbottom, 1991:143).

Looking back on the totality of Grotowski's life-work, I detect that it is characterised by the desire to strip away all that is superfluous, to dissect and scrutinise the essence of humanity; I argue that in this endeavour he was determined to isolate the biological organism within a pure, untainted consciousness. Performance served purely as a means to this end, a method of research. "Drama or performing arts … is a vehicle for my work" (Quoted in Amankulor, 1991:156). Having become increasingly averse to the Western conception of theatre - which sees performance as a product to be bought and sold rather than an experience to be shared - and having discarded its unnecessary trappings, Grotowski travelled widely in search of elements of traditional cultural ritual that might induce distinct and predictable states in participants (Grimes, 1981). Then he began to strip ritual practices of their particular religious or cultural belief structures to reveal objective techniques, which he believed could be used for their specific psychophysiological impact (Amankulor, 1991). His life's journey

culminated with the notion of performance-as-presentation being made redundant to the conception of performance-as-ritual. Collaborator Thomas Richards explains that Grotowski was no longer concerned with a mimetic enactment of ritual performance, but in ritual itself: "It's finding its value in the act of doing, and that act of doing exists in a structure which accepts the fact that there is someone there watching, and also that there is not someone watching" (Quoted in Wolford, 2001:128).

Neural correlates of transcendence

Clearly intent on poking his head through the clouds, I maintain that Grotowski was determined to keep his feet firmly planted in the material world as he continued to encourage observation and scepticism and to reject arbitrary subjectivity (Winterbottom, 1991). Scientists continue to peel back the layers to probe beneath surface appearances just as he did, and we are now able to draw on a wealth of supporting evidence to conclude that the mystical experience Grotowski sought has distinctly material roots. It is my argument that theatre is able to evoke a transcendent consciousness, simultaneously engaging the cognitive and emotional systems by exploiting innate biological mechanisms. In an increasingly secular world, I argue that the value of the numinous dimension of experience should not be discounted: it enables the transmission of a class of knowledge that is otherwise elusive due to its ineffable quality.

Theatre practice is a material craft that seeks to embody abstract philosophical questions, to manipulate physical reality in order to reveal intangible truths. Current neuroscientific perspectives are able to give empirical substance to metaphysical musings, in which light Theatre should welcome the intervention of anthropologist Eugene D'Aquili who collaborated in a number of studies with American neuroscientist Andrew Newberg (Bowker and Bowker, 1998; Newberg et al., 2001; 2003). Using a variety of imaging techniques, the two measured the blood flow in the brains of Tibetan monks to determine which regions are responsible for their subjective feelings in deep meditation. In one such technique, single-photon-emission computed tomography (SPECT), researchers injected the subjects with a radioactive isotope as they reached their self-reported meditation peak, a state in which they lose their sense of existence as separate individuals (Biello, 2007). The isotope is carried by the blood to active brain areas where, with a specialised camera, investigators were able to photograph its patterns of distribution.

The researchers found that the frontal lobe and limbic system became gradually more active as the monks descended deeper into meditation. This observation, I note, was not unexpected as the frontal lobe is known to be associated with concentration and attention, while the limbic system is responsible for processing powerful feelings, including ecstasy and bliss (Nelson, 2011). However, an unanticipated finding was that the parietal lobe at the back of the brain became increasingly inactive as the meditation progressed. Since this is the region that orients an individual in time and space, the observation could explain the frequently reported feeling of being 'at-one-with-the-universe' as the boundaries of the self fall away (Kluger, et al. 2004).

Further testimony comes from Ramachandran, who points to the frequency of temporal lobe epilepsy manifesting as an experienced union with God and a heightened empathy for others. "I sometimes wonder whether such patients … have access to another dimension of reality, a wormhole of sorts into a parallel universe. But I don't usually say this to my colleagues, lest they doubt my sanity" (Ramachandran, 2011:280). Interestingly, the 19th century Russian writer Fyodor Dostoevsky suffered from epileptic seizures which he meticulously documented during the last two decades of his life (Jeeves and Brown, 2009). Through the character of Prince Myshkin in *The Idiot*, the author provides a subjective insight into the experience:

> His mind and heart were bathed in an extraordinary illumination. All his agitation, all his doubts and anxieties, seemed to be instantly reconciled and resolved into a lofty serenity, filled with pure, harmonious gladness and hope, filled too with the consciousness of the ultimate cause of all things (Dostoevsky, 2008:237).

It has been the legacy of theatre practitioners to seek objective insights into subjective states and there is perhaps no more elusive experience than that of disembodied 'astral-travel'. Fortunately, neurologist Kevin Nelson has done extensive research into such apparently supernatural phenomena as 'out-of-body' and 'near-death' experiences (Nelson et al. 2006; 2007). He notes that such events, characterised by a sense of floating above one's body, have found expression in folklore, mythology, literature, art and religion and are frequently cited as 'proof' of an immaterial spirit. However, Nelson convincingly argues that these states are produced within the brain, sharing many of the neurobiological characteristics believed to be at the nexus of the meditative Void of Nagarjuna (O'Grady, 2005). He describes the frequently reported sense of rapture associated with such events as an 'experiential' state in which there is "…a simultaneous fusion of *knowledge* and *feeling* [emphasis in original]"

(Nelson, 2011:224). This is the transcendent consciousness which I argue lies at the root of profound aesthetic experience associated with theatre.

Giving further credence to my argument as to their material roots, altered states of mind typical of mystical practice are even able to be reproduced under scientifically valid laboratory conditions. Lysergic acid diethylamide, more commonly known as 'acid' or LSD, was a popular recreational drug of the 1960's counterculture, while psilocybin is the psychoactive component of various hallucinogenic mushroom species known to have been used in religious ritual for centuries (Harris, 2010). Controlled research into the effects of these and other psychaedelic drugs has yielded subjective reports of transformed states of consciousness analogous to the mystical nirvana (Griffiths et al. 2008). But drug-induced transcendental states are not limited to brushes with illicit narcotics favoured by hippies or the sacramental herbs of exotic rites: they are more common than one might expect, being frequently encountered in everyday clinical circumstances. Professor Andrew Bowdle at the University of Washington notes that patients emerging from anaesthesia have routinely reported a variety of hallucinatory experiences, often characterised by a detachment from the physical body. In a study that Bowdle and his colleagues conducted on the psychaedelic effects of ketamine, a commonly administered anaesthetic, one volunteer subject reported:

> "The experience seems to be a mystical experience, an incomprehensible comprehension of the universe. There seemed to be no past, present or future, no time, just existence. Life and death at the same time" (Bowdle et al. 1998:85)

It is important to note that both LSD and psilocybin strongly mimic the naturally occurring brain chemical serotonin; the molecules of both compounds "… bind tightly to serotonin-2 receptors and cause nearly identical neurochemical actions and mystical experiences" (Nelson, 2011:243). Although the mystical state is able to be replicated through the introduction into the body of chemical compounds, I submit that these molecules merely exploit an *innate* neurobiological capacity for transcendent consciousness. At the same time, as I will argue, this innate capacity is often invoked through ritual practices in traditional societies, and is accessible to spectators of a performance event through the involvement of mirror-neurons together with the chemistry and physical structures of the empathic brain.

Betwixt and between: liminality and communitas

Cultural anthropologist Victor Turner has observed that the various activities and behaviours exhibited by the youth-subculture during the psychaedelic age were an attempt to reclaim the traditional ritual space:

> These are the "cool" members of the of the adolescent and young adult categories – which do not have the advantages of national *rites de passage* [emphasis in original] – who "opt out" of the status-bound social order and acquire the stigmata of the lowly, dressing like "bums", itinerant in their habits, "folk" in their musical tastes, and menial in the casual employment they undertake. They stress personal relationships rather than social obligations, and regard sexuality as a polymorphic instrument of immediate communitas rather than as a basis for an enduring structured social tie (Turner, 1969:112-113).

American performance theorist and theatre-maker Richard Schechner (1965;1968;1973;1985; 1986;1988;1993;1997;1997b;1999), a long-time ally of Turner's, agrees that the diverse manifestations of the counterculture - later to find expression in the New Age movement - were "… in part an attempt to recuperate the force and unity of traditional liminality" (Schechner, 1997:62). The term 'liminality' is derived from the Latin *limen*, denoting 'threshold', and had been coined by French ethnographer Arnold van Gennep to describe the second phase of three in transitional rites-of-passage marking the progression from one culturally recognised state to another, as in puberty, marriage and even death (Turner, 2001).

However Turner maintained that Van Gennep's model - comprising *separation* from ordinary life; the *margin* or seclusion from the everyday scene; and *aggregation* or a return to the mundane - should not be confined to rites-of-passage alone; he argues that this paradigm applies equally to all types of ritual activity (Olaveson, 2001). Turner described the threshold phase as a 'betwixt-and-between' condition, flanked on one side by a structured past, and on the other by an anticipated future that is once again structured by the society's need for a normative influence over biological developments:

> …ritual processes contain within themselves a liminal phase which provides a stage (and I use this term advisedly) for unique structures of experience … in milieus detached from mundane life and characterised by the presence of ambiguous ideas, monstrous images, sacred symbols, ordeals, humiliations, esoteric and paradoxical instructions, the emergence of symbolic types represented by maskers and clowns, gender reversals, anonymity and many other phenomena and processes which I have elsewhere described as "liminal" (Turner, 2001:41).

It was on the betwixt-and-between phase that Turner focussed much of his research, providing insights which, I argue, are of significant relevance to theatre practice. Turner

explored how the structural limits and boundaries of the social group are re-defined in terms of its current needs; structure is replaced by anti-structure, and a state of *communitas* is reached. "Communitas is of the now; structure is rooted in the past and extends into the future through language, law and custom" (Turner, 1969:113). Outside of normal social hierarchies, roles and distinctions, communitas is a state characterised by equality and comradeship; an appreciation for common humanity, "… a direct unmediated, and total confrontation of human identities, often ephemeral in duration, akin to Buber's *I-Thou* or 'Essential We' relation [emphasis in original]" (Turner, 1986b:44).

Of particular relevance to theatre and performance, I argue that a relationship in the liminal realm is rooted in the *present* moment, arising in an instant *mutuality* where each person is affected by the other's *presence* and so fully experiences the being of the other. Importantly, the encounter of communitas "… is also usually a 'deep' or intense one, and belongs in the intuitive or emotional realm, as opposed to the rational one" (Olaveson, 2001:104).

I argue that Turner's *communitas* describes the encounter that lies at the heart of Grotowski's theatre; it is also central to Artaud's vision of infection, as the passions transmit themselves like a plague from the bodies of the actors to those of the spectators, penetrating the flesh of performers and audience members alike (Artaud, 1959). While it is reasonable to infer that communitas lies at the nexus of biology and culture, the current neuroscience is beginning to afford significant insights into the *mechanisms* through which it operates: the 'objective means' that Grotowski was striving to isolate and through which he believed access to subjective states could be gained.

Liminal lite: the liminoid option

For his part, Turner was somewhat critical of Grotowski, suggesting that a favoured status with the Polish Communist party spurred his intention to create role-stripped self through a secularised rite-of-passage "…which is to replace older forms, especially those carried in the great religious traditions" (Turner, 1982:117). The anthropologist warned of the 'grave dangers' that lurk within initiation processes, emphasising that in traditional societies initiates are stripped of one set of status-roles, only to have them permanently supplanted by another; novices are initiated *into* something as part of a normative cultural practice, their re-emergence "…by instruction, partly in practical skills, partly in tribal esoterica, [which] proceeds by both verbal and non-verbal symbolic means" (Turner, 1992:50).

Grotowski was evidently preoccupied with the journey to the 'inner sanctum', while neglecting the re-exposure to the mundane that must follow. I contend that Turner'scepticism was not unwarranted: at a 2002 symposium a number of participants in paratheatrical events reported depression and feelings of helplessness as they returned to their everyday lives, citing the lack of a reintegration process (Slowiak and Cuesta, 2007).

Most importantly though, Turner insists that theatre is necessarily distinct from ritual, stressing that traditional rites are *obligatory,* while participants in theatre and other forms of post-industrial social-ritual are granted some degree of *choice* as to the extent of their involvement.

> Even as audience people can be 'moved' by plays; they need not be 'carried away' by them – into another person's utopia or 'secular sacrum', to use Grotowski's phrase. Liminoid theatre should limit itself to presenting alternatives: it should not be a brainwashing technique (Turner, 1982:118).

Turner proposes that in complex and large-scale modern societies, the 'liminoid' phenomenon supersedes liminality, "… where individuality and optation in art have in theory supplanted collective and obligatory ritual performances" (Turner, 1986b:29). In tribal and early agrarian societies, Turner stresses, liminality is integrated into the *entire* social process where 'work' and 'life' coalesce, governed by seasonal and ecological rhythms (Turner, 1982). In later societies, he goes on to note, a wedge has been driven between the *obligations* of the work world and the *options* of the world of leisure, where the diversions of most liminoid activities such as sports, games and other entertainments are to be found.

I suggest that today's corporate world recognises this schism and attempts to straddle it through the introduction of so-called 'team-building' activities, an effort to induce a voluntary submission to the bureaucratic imperatives of the work environment. It is surely no co-incidence that ritual activities such as *karaoke*-singing and *djembe*-drumming are a staple element of many team-building events, while I submit that corporate 'adventure training' is a liminoid exercise designed to foster mutual cooperation by shifting participants beyond their comfort zones. "The acquisition and maintenance of trust is critical to the success of a team and goes hand in hand with cooperation and communication" (Priest, 1998:31).

His reservations concerning Grotowski aside, Turner (1982) was nevertheless keen explore the interface between ritual and theatre, encouraged by a collaboration between fellow

anthropologist Colin Turnbull and theatre-maker Peter Brook, in which the degradation of Uganda's nomadic *Icáám* people was dramatised. Turnbull's (1987) published research recounted the alienation of the tribe from their traditional landscape and sacred hunting grounds, chronicling the subsequent decay of the social fabric of the community. Brooke's production of *The Ik* was able, by means of performance, to transform Turnbull's ethnographic data into an immersive experience that allowed the spectators to engage intimately with the events of the narrative: "… we became implicated in the disappearance of the Ik" (Todd and Lecat, 2003:58).

Turner dreamed of liberating anthropology from the ingrained prejudices inherited from the natural sciences that required "…a systematic dehumanizing of the human subjects of study, regarding them as bearers of an impersonal 'culture' or wax to be imprinted with 'cultural patterns' …" (Turner, 1986b:72). He was distressed by the accepted notion of turning fellow beings into objects for investigation, neglecting the subjective dimension of their person-hood, and so negating their humanity. The American social psychologist George Herbert Mead had argued that a conception of the "Self" in relation to a social group is dependent on the ability to reflect one's actions and experience through the perspective of another person, the 'Generalised Other': "This requires the appearance of the other in the self, the identification of the other with the self, the reaching of self-consciousness through the other" (Mead, 1967:253). Turner speculated that performance could afford an opportunity for anthropologists to transcend the limitations of the ethnographic literature in rendering the complexity of the total 'lived experience' of the investigator in the field:

> One possibility may be to turn the more interesting portions of ethnographies into playscripts, then to act them out in class, and finally to turn back to ethnographies armed with the understanding that comes from "getting under the skin" of members of other cultures, rather than merely "taking the role of the other" in one's own culture (Turner,1982:90).

The anthropologist became aware that the noted theatre practitioner and performance theorist Richard Schechner shared his view that social processes are essentially performative. He therefore welcomed the opportunity to explore these ideas practically when Schechner invited him to participate in an interdisciplinary workshop involving the performing arts and the social sciences. "I had often thought about the relationship between processual forms of social conflict in many societies, described by anthropologists and genres of cultural performance" (ibid.:91).

Defining the space, framing relationships

I argue that the relationship that had been instigated between the fields of performance and anthropology was necessarily a reciprocal one with a cross-pollination of ideas to the mutual benefit of the two intellectual territories. As theatre had begun to liberate itself from the strictures of the proscenium arch, ultimately to escape the confines of four walls altogether, I contend that it lacked appropriate devices through which the performance event is framed: the established field of anthropology had access to the essential tools for framing ritual and cultural experience. Grotowski (1984), Brook (1968) and Schechner (1968) had begun, individually to interrogate the dynamics of the performance space; each acknowledged that the framing of the performance defines the *relationships* that are expressed between the various objects inhabiting the volume, including actors, audience and environmental elements.

The dynamics of these relationships are necessarily fluid and the elements configured in a manner specific to each production or, more accurately, to each unique performance. The architecture of a traditional theatre building tends to cast in stone a number of these variables, limiting the range of options available for any particular theatrical event. Schechner points out that the proscenium theatre was originally designed not only to separate performers and spectators, but also to segregate audiences according to wealth and class. "It was meant to have very good seats, medium seats, poor seats, and very bad seats" (1973:31). With their numbered ticket-stubs representing a temporary title deed to their piece of turf, audience members remain self-consciously detached from one another as they settle in for what they expect will be a stimulating evening's entertainment. Unfortunately, in many instances this expectation is sabotaged by the environment and the audience is effectively anaesthetised, their sensory responses dulled rather than excited.

Avante-garde musician and artist John Cage believed sight and sound to be 'public senses' while he considered those of taste, touch, and smell to be reserved for private, more intimate occasions (Kirby and Schechner, 1965). It can be argued that a proscenium arch theatre caters primarily to the public senses, although relatively few seats in the house are optimally positioned for both seeing and hearing the performance satisfactorily. Through an easing of the regimented space, I suggest that the more intimate senses are able to be engaged and so contribute to an immersive experience. I furthermore propose that among these senses are those less frequently acknowledged modalities discussed in an earlier chapter, which

constitute a network of interacting sensory data; a matrix which is ultimately consolidated on a neural level into an environmental gestalt (Paillard, 1991; Berthoz, 2000; Burgess, 2006).

American Psychoanalyst Donald M. Kaplan (1968;1994) asserts that the arrangement of space induces distinct body states in an observer by operating directly on the somatosensory mechanisms:

> Architecture is able to evoke moods, affects and emotions because perceived forms vitalize an observer's kinesthetic sense, a sense exemplified by a bowler's listing empathetically to one side or another as he follows a bowling ball visually down an alley toward the pins at the far end. Like the bowling ball, but with far more subtlety and variety, architectural forms are capable of arousing and organizing our neuromuscular inclinations and playing upon them with rhythms of tension and release. The appeal to our kinesthetic system accords with idealizations of body attitudes, which are experienced as psychological epiphenomena. (Kaplan, 1968:105-106)

Scenographer Jean-Guy Lecat worked alongside Peter Brook for 25 years as technical director and space-designer, and I was fortunate to have participated in a series of workshops he conducted in Cape Town (2003). As we physically explored a variety of existing theatres and found environments, Lecat exposed us to his and Brook's guiding principles; we were encouraged to experience the dynamics of volume and proportion, of spatial harmony and discord and to question assumptions about physical proximity and intimacy. One memorable morning as participants sat in the auditorium of the Artscape Opera-House, Lecat asked us to yell 'stop' when we felt our personal, intimate connection with him to be broken. Then, in silence, he began to take determined steps backwards from the lip of the thrust. I'm sure I was not the only one who expected to 'feel' the alienating effect of the proscenium-arch. But it was only when he was four or five paces *behind* that threshold when, as if with one voice, we all shouted "STOP!"

Then, as he calmly took a few steps forward I felt Monsieur Lecat return, his presence re-established. "You see?" he said. "I have just stepped out of the circle". He went on to explain how each one of us, unknowingly, carried with us a mental conception of the circle as defined by the lateral dimensions of the volume in which we sat. A well-designed space maximises the dynamic possibilities presented by this phenomenon, while a poor space would unnecessarily exclude sections of the audience from the full experience, keeping them 'on the outside looking in'. Lecat outlined his belief that much of our psychological relationship with the space we inhabit is predicated on our Pleistocene heritage and innate notions of danger

and safety; how the glow of a campfire had defined the circle of social nourishment and had distinguished it from the sinister world beyond, where danger lurked and to which those out-of-favour were banished or left 'out in the cold'.

As the workshop progressed we discovered how the early humanoid conception of a deity was likely stimulated by the great vertical dimensions of a forest with dappled light piercing the overhead canopy, akin to the sense of awe frequently experienced at the sight of light-shafts streaking out from behind the silver-rimmed or fire-tinged clouds above. We were asked to consider an architectural analogue in the structure of the great cathedrals with their vast overhead volumes, strong vertical lines, concealed sources of natural light and the unearthly glow of stained-glass. Irrespective of religious convictions, many are deeply moved in such a setting; an experience that accords with Kaplan's notion of 'architectural kinesthesis'.

Peter Brook (1968) notes that all the great temples, cathedrals and mosques were shaped by the sacred ceremonies and rituals for which they were built. Victor Turner suggests that the building of a temple is a ritual in itself; Indian temples are built in the image of the human body with a ritual "that begins with digging in the earth and planting a pot of seed … the temple is said to rise from the implanted seed, like a human" (1974:281). Turner points out that the different parts of the temple are accordingly named after parts of the body: the *śikhara* is the head; the wings on either side are *hasta* or hands; and the innermost shrine is the womb or *garbhagṛha.* The English architectural historian Geoffrey Scott would no doubt agree, contending as he did that mankind has a need to engineer his environment to reflect his inner experience: "The tendency to project the image of our functions into concrete forms is the basis, for architecture, of creative design" (1999:159).

This view informs Kaplan's notion of architectural kinesthesis, where the arrangement of space evokes the memory of body states; he believes the configuration of a theatre space is able to facilitate a visceral, non-verbal meta-dialogue, akin to Turner's 'communitas': "a theatre, then, structures an opportunity for a primal dialogue between the audience and the actors" (Kaplan, 1968:109). However, as with the sacred spaces of antiquity, I suggest that the outer form can only assume the powers Kaplan describes in proportion to the authority commanded by the ceremony itself. Brook maintains that while theatre has its genesis in rituals that made the 'invisible incarnate', the connection with these origins has largely been

lost; a 'deadly sentimentality' now compels us to create hollow imitations of the ceremonies and the spaces within which they thrived: "It is not the fault of the holy that it has become a middle-class weapon to keep the children good" (Brook, 1968:51). He suggests that the performance space should be rediscovered even as the contemporary rituals emerge, and reminds us that "the focus of the audience's attention in any theatre space is the human body" (Todd and Lecat, 2003:116)

While the words 'human body' conjure an image of inert matter and lifeless substance, no more than the flesh and bones of a corpse, Artaud is adamant: "one cannot separate body and mind, the senses and intellect …" (1958:76-77). In what I consider is a direct swipe at Descartes, Artaud distinguishes the vital flesh of the human body from a lump of dead meat not by 'consciousness', but by an awareness of bodily presence:

> The flesh is autonomous, is able, at the level of brute bodily awareness and bodily presence, to be the perfect mirror of itself … it is identical to itself. The 'esprit dans le chair' is as quick as lightening, so prompt and rapid there is no moment in which a gap may open up between the flesh and the intellectual apprehension of the flesh … there is nothing that can insinuate itself between the flesh as sensor and the flesh as sensed (Morfee, 2005:46).

It is in full bodily awareness that Artaud suggests the distinction between subject and object disappears as the body becomes the sovereign site of essential knowledge, informed from within and dependent on nothing but itself. I maintain that Peter Brook's favoured configuration of the performance space facilitates communitas by promoting a mutual awareness of bodily presence. Whether the event takes place in a modern theatre building or an African village square, the space is defined by Lecat's circle, comprising a central acting area with a three-quarter wrap-around embrace of spectators: "the audience forms a *circle of community* [emphasis in original], a society in microcosm momentarily assembled around the action, in full awareness of itself and the space it occupies" (Todd and Lecat, 2003:VII).

Maintaining presence in the present

I first encountered the disconcerting notion of 'presence' when I entered drama school as an undergraduate in the 1980s: certain individuals were singled out as having 'it', while others were dismissed as not being possessed of any presence whatsoever. At the time I was frustrated that no-one could put forward an adequate definition of this elusive quality, much less offer any practical guidance as to how it may be acquired. On the contrary, we were implicitly encouraged to accept that it was the flip-side of that other mysterious attribute,

'talent', with which some are fortunate enough to have been born while the rest of us are relegated to the ranks of the envious unanointed. Of course I was relieved some years later when the British voice coach and theatre director Patsy Rodenburg (2007) announced that, in fact, everyone is born with a sense of presence; she explained that it is often diminished through the pressures of modern urban living, but that it is possible to reconnect with this faculty in later life. For her, presence is a function of attentiveness and responsiveness, an explanation which rang a distant bell; I recalled from high school biology classes that 'irritability' distinguishes living protoplasm from inert matter: it is the property of cellular material and of living organisms that permits them to react to stimuli.

> Irritability and autonomous activities are smaller waves of processes superimposed on the continuous flux of the system, irritability consisting in reversible disturbances, after which the system comes back to its steady state, and autonomic activities in periodic fluctuations (Von Bertalanffy, 1950:27)

Rodenburg describes the exchange of 'energy' between an individual and their environment and defines three circles of presence: in first circle the focus is inward and withdrawn, minimising the impact one makes on the world; third circle is at the opposite end of the spectrum with the focus directed outward in a general and non-specific manner; while second circle presence facilitates 'connection' with the environment as energy "…moves out toward the object of your attention, touches it and then receives energy back from it" (2007:21). Rodenburg suggests that any one of these states of 'being in the world' may becomes habitual to a particular personality, but she argues that individuals tend to move between these modes, depending on the prevailing circumstances. In biological terms then, true 'second circle' presence is a *dynamic homeostasis* where all sensory modalities are engaged and the organism is optimally receptive and *responsive* to even the most subtle of stimuli. In the course of a truly engaging theatrical event, I assert that mirror-neurons in the brain are likely to be activated as both performers and spectators enter a communal tempero-spatial presence.

With ritual in mind: neurobiology of cultural practice

It is notable that towards the end of his life, Victor Turner had himself begun to probe the connections between the body, brain and ritual behaviour; "For him, the human brain is a liminal organ operating somewhere between the genetically fixed and the radically free" (Schechner, 1986:12). Turner was concerned however, that by venturing into the realm of the biology of human behaviour he would be entering treacherous waters:

> I am having to submit to question some of the axioms anthropologists of my generation – and several subsequent generations – were taught to hallow. These axioms express the belief that all human behaviour is the result of social conditioning. Clearly a great deal of it is, but gradually it has been borne home to me that there are inherent resistances to conditioning ... exciting new findings were coming from genetics, ethology, and neurology, particularly the neurobiology of the brain (Turner, 1986b:156-159).

Turner's caution was not misplaced: the prevailing sentiment among anthropologists was one of hostility towards claims of a genetic predisposition in humans for particular behavioural traits. The influential British social anthropologist Edmund Leach (1966) warned that such notions tend to form the basis for racial prejudice wherever it is encountered. "It cannot be too strongly emphasized that ritual, in the anthropologist's sense, is in no way whatsoever a genetic endowment of the species" (Leach, 1966:403). However, Turner was encouraged by the speculations of the English evolutionary biologist Julian Huxley (1966), a pioneer in what was at the time an emerging field of ethology, or animal behaviour.

Huxley had done extensive research into the ritualised activities of many species and noted similarities with such behaviour among the higher mammals, suggesting that aspects of human conduct exhibit traces of adaptive function consistent with natural selection (Turner, 1986b). Treading warily lest he offend the sensibilities of anthropologists, Huxley (1966) was at pains to acknowledge an interplay between innate and cognitive behaviour; while biological evolution in all animals is based on genetic transmission, human *cultural* evolution is premised on non-genetic cultural transmission, an aspect he was content to leave for those more qualified than he to explore in detail.

Huxley did go on to note though, that man's capacity for language could itself be regarded as ritualised behaviour, while his unique learning faculty promotes a greater variety and complexity in ritual activity than that found in any other type of animal. The two fields of study came to be defined by the relative emphasis on 'nature or nurture' in their competing conceptions of ritualisation: the anthropologists insisted that ritual is a culturally transmitted, learned behaviour with strong links to the development of language, while the ethologists insisted that ritual is a manifestation of genetic programming that contains significant non-verbal components. This tendency for mutual exclusivity is a manifestation of the binary logic of Cartesian dualism, which advances in the sphere of the neurosciences at the time were beginning to challenge.

As an anthropologist Turner was resigned for some time to fall in with the status quo, but continued to keep abreast of developments in the fields of ethology, genetics and neurology. He became especially interested in the neurobiology of the brain and began to ask questions regarding this unique organ's role in the appropriate mixing of genetic and cultural information in producing organic behaviour (Turner, 1986b). He was particularly drawn to the work of American neuroscientist Paul MacLean (1949;1976;1982;1985) who, decades earlier with technology no more sophisticated than electroencephalography, had begun to probe the brain mechanisms associated with emotion and psychosomatic illness.

MacLean went on to conceive of the brain as a three-in-one structure: the 'triune brain', where each distinct but interconnected component has its own evolutionary heritage or 'phylogenetic' history. As the human forebrain evolved and expanded, MacLean explains, it maintained cohesion between "three neural assemblies that reflect an ancestral relationship to reptiles, early mammals, and late mammals" (1985:219). I suggest that the triune brain is analogous to a computer with a three-core processor or, perhaps more accurately, a network of separate computers working in parallel but running on a variety of operating systems ranging from an early IBM-701 to the latest generation Mac-OS X (Brinch Hansen, 2000). "It is inferred that each cerebrotype has its own special kind of intelligence, its own special memory, its own sense of time and space and its own motor and other functions" (MacLean, 1976:180).

In the *proto-reptilian* brain there is no emotion and no cognitive appreciation of past or future events, however the basal ganglia are vital in maintaining life by controlling the cardiovascular and respiratory systems (Stevens and Price, 1999). The midbrain or *paleo-mammalian* brain of the earliest mammals comprises subcortical structures of the limbic system which coordinate the homeostatic mechanisms that maintain internal stability in response to environmental changes (Turner, 1986b). The forebrain or *neo-mammalian* brain of MacLean's model is the neocortex, a brain like yours and mine, responsible for cognition and more sophisticated perceptual processes, as opposed to the emotionally-driven behaviour of the limbic system or the purely instinctive processes controlled by the basal ganglia (Stevens and Price, 1999). A limited sense of control and partial awareness is typical of emotional behaviour arising from the limbic system, whereas there is a relative lack of control over, and a purely retrospective awareness of, instinctive behaviour rooted in the

basal ganglia. By contrast, there is a high degree of awareness and a sense of personal control over the conscious, voluntary or rational behaviour arising in the neocortex.

MacLean flags three types of emotional behaviour that most clearly signify the evolutionary transition from reptile to mammal: maternal care and nursing; 'audiovocal' communication, which initially helps to maintain mother-to-infant proximity, but which later evolved to maintain contact between members of a group; and play activity, which he suggests "… serves originally to promote harmony in the nest and then, later in life, group affiliation" (1985:220).

It is worth noting that Turner considers playfulness to be an interstitial mode of behaviour, which is akin to the liminal phase of ritual and which cultural institutions often seek to contain within games, sports and competitions and "…in modes of simulation such as theatre, and in controlled disorientation, from roller coasters to dervish dancing …" (1986b:168)

Our language and culture reflect a tacit awareness of the triune arrangement: throughout the ages the functions of reason, emotion and instinct have variously been attributed to the head, the heart and the viscera. I suggest that the phylogenetically distinct aspects of the triune body/mind would exhibit the differing processes under different circumstances: 'showing guts' or 'wearing the heart on a sleeve' when it comes to either displaying bravery on the battlefield or wooing a potential mate in courtship. This understanding has carried through to the clinical environment: a conception of phylogenetic inheritance played an important role for both Freud and Jung, in their respective theoretical formulations (Hoffer, 1992). The two giants of analytical psychology independently observed that the mind appears to possess separate functional mechanisms that compete with each other for the overall control of behaviour. The triune brain provides a neurobiological basis for Freud's model of the id, ego and super ego, while at the same time it is highly compatible with Jung's collective unconscious and archetypes, which he had speculated reside in phylogenetically older parts of the brain: "They are, in a sense, the deposits of all our ancestral experiences, but they are not the experiences themselves" (Turner, 1993:99)

Theatre shares with pre-industrial ritual a fascination for narrative and mythology, a framing of experience through story, using both culturally-specific and archetypical imagery as currency. Turner observes that archetypes manifest themselves both subjectively and objectively: dreams, fantasies and artistic expressions contain personal representations, while

collective depictions occur in myth and ritual (Turner, 1986b). D'Aquili and his colleague, biogenetic structuralist Charles Laughlin, argue convincingly that the human ability to create myth is driven by a 'cognitive imperative', an instinctive need to "… look for the causes of the phenomena which were occurring around him and to attempt to control or adapt to them" (1975:45). They explain that man is driven to understand the world around him and has no choice but to order sensory data within an analytic framework or cognitive matrix. This he does with the help of the higher cortical functions which include conceptualisation and abstract causal thinking. Significantly though, D'Aquili suggests that higher cortical functions afford man the ability to contemplate paradox, to which I will add that these brain structures afford audiences the faculty for appreciating cognitive dissonance which provides the dramatic tension sitting at the heart of much theatre.

The ability to arrange abstract concepts in linear sequences is a function of the inferior parietal lobule and its reciprocal interconnections with the frontal lobes, a nexus which provides the capacity for abstract causal thinking: the 'causal operator'. D'Aquili describes how the causal operator is able to organise a strip of reality into what are perceived as causal sequences going back to the primary initiator; where such root cause is not provided by the senses, the causal operator is compelled to provide one, "… in the same way that a mathematical operator functions … if the initial terminus is not given by sense data then the causal operator grinds out an initial terminus automatically" (1978:266-267). Since untoward phenomena cry out for a cause, "… gods, powers, spirits, personified forces or any other kind of causative ingredients are automatically generated by the causal operator" (Turner, 1986b:165). It's no wonder that in communities denied ready access to information, conspiracy theories are readily propagated.

American neuro-anthropologist Barbara Lex (1979) provides an insight into neural characteristics of ritual trance, which others have built upon to investigate why we are able to be deeply 'moved' during an intense aesthetic or religious experience (Nelson, et al. 2006). D'Aquili explains how a relentless combination of visual, audio and tactile 'driving stimuli' disrupts the mutually inhibitive relationship between the sympathetic and parasympathetic neural networks resulting in a simultaneous discharge of both subsystems and intense arousal of both cognitive and affective faculties. Victor Turner's 'as-is' indicative state coexists with the 'as-if' subjunctive state as "…logical paradoxes or the awareness of polar opposites as presented in a myth appear simultaneously both as antinomies and as unified wholes"

(D'Aquili and Laughlin, 1975:52). An unsophisticated, though immediate analogy is to be found in the ineffable experience of an orgasm and the sense of one-ness that ensues.

From the sacred to the mundane, I assert that in both religious and secular rituals, performative activities promote the *embodiment* of either the prevailing *mythology* or indeed, a *speculative* cognitive matrix. Whether it is achieved through evoking the manifestation of a supernatural deity, to healing a social breach in a court of law or celebrating a rite-of-passage at a 'hen-party', the structural order through which a community makes sense of itself is either reinforced, maintained, restored, or – particularly in the case of theatre – re-imagined. Social rituals therefore range in function from the conservative to the generative and function at the nexus of culture and biology. Victor Turner identifies many of the contemporary social rituals through which we are able to feel/think our experience within a shared cognitive matrix: from the sports-field to the dance-floor, from the houses of parliament to the law courts, social dramas play out as "a sequence of social interactions of a conflictive, competitive, or agonistic type" (1986b:30). Social dramas and ritual activities are embodied processes through which humanity both defines and imagines itself. As I have argued, theatre and performance emerge from this milieu; through an integrated understanding of the cultural, social, psychological and biological dimensions of the environment we share, theatre-makers are best positioned to contribute to the dynamic and healthy functioning of our communities.

Reflecting on reflexes: making sense of sensations.

> The struggle of man against power is the struggle of memory against forgetting.
> *Milan Kundera (1999:4)*

> The liveliest, the most important memorial is not out there; it is in our heads, conveyed through words and images, songs and gestures.
> *Albie Sachs (Jaffer, 2006)*

The concept of 'Transitional Justice' can be traced back to Europe after the Second World War and the 'Nuremberg Trials', which sought to hold accountable the perpetrators of gross violations of human rights (Méndez, 1997). Since that infamous example there has been a growing awareness of the rights of the victim and a concomitant shift from 'retributive' justice towards 'restorative' justice. More latterly, an acknowledgement of the needs of the community at large has prompted the creation of measures aimed at transitional stability and reconstruction.

South Africa's Truth and Reconciliation Commission (TRC) was initiated in 1995 and has a diverse pedigree descending from both European and Latin American forebears. There were sixteen incarnations of such mechanisms around the world prior to the TRC, and even on our continent South Africa's experience is not unique; on the contrary, there are a number of examples, both before and since, that have operated with varying degrees of success (Amnesty International, 2010). *The Commission of Inquiry into the Disappearance of people in Uganda* was set up by Idi Amin Dada in 1974, ostensibly to examine the disappearances of 308 individuals during the preceding three years. One of the few commissions to be called outside a time of transition, the report was not published and its recommendations were never enacted. More recently, Burundi resolved in 2007 to set up a *Truth and Reconciliation Commission* in the wake of twelve years of civil war. To date it has yet to be implemented (Puddington, 2011). There have been commissions staged in Chad, Nigeria, Sierra Leone, Ghana, Morocco, and the DRC (Amnesty International, 2010). At the time of writing, Archbishop Emeritus Desmond Tutu - who chaired the South African TRC - has agreed to support Ivory Coast in setting up a commission there, after four months of internecine violence following disputed elections in November 2010 (Malterre, 2011).

> In all these processes, the essential problem is how to balance peace and justice, forgetting and forgiving, healing and punishment, truth and reconciliation. Of all the

> attempts to balance these competing claims, pride of place always goes to South Africa. It remains the template, the most ambitious and far-reaching of the attempts at catharsis and justice (Edelstein, 2001:15).

In this chapter, I examine the South African Truth and Reconciliation Commission as an example of social ritual: how its performative aspects transcend its legal framework in its mission to promote social healing. I explore a number of psycho-social perspectives on the *performative* nature of apologies and their restorative value. I investigate the limitations of language in conveying the varied dimensions of experience and adopt Diana Taylor's (2003) notion of the performed *repertoire* as a viable repository of knowledge to supplement the archive. I then recall briefly a number of theatrical manifestations of the TRC repertoire before examining in some detail *Truth in Translation*, a project that was initiated with the overt intention to foster dialogue and promote healing among communities burdened with the legacy of conflict.

Truth and Reconciliation

It was Tuesday 16 April 1996, the second day of hearings in the East London Town Hall, and the Committee for Human Rights Violations was hearing the testimony of Nomonde Calata, the widow of an assassinated activist, in case number EC0028/96. The transcript reflects the facts that emerged:

> MRS CALATA (continued): … I looked at the headlines and one of the children said that he could see that his father's car was shown in the paper as being burned. At that moment I was trembling because I was afraid of what might have happened to my husband, because I wondered, if his car was burned like this, what might have happened to him? I started distributing the papers as usual, but I was very unhappy. After a few hours some friends came in and took me and said I must go to Nyami, who was always supportive. I was still twenty at the time and couldn't handle this. When I got to Nyami's place, Nyami was crying terribly and this affected me also. (sobbing)
> MR SMITH: Mr Chairman may I request the Commission to adjourn maybe for a minute? I don't think the witness is in a condition to continue at the present moment.
> CHAIRPERSON: Can we adjourn for ten minutes please? (TRC, 1996a:10)

'Sobbing'? That's what the record reflects. Well, the official record in this case; it has been pointed out that the original Xhosa transcription of the testimony is more nuanced, bearing certain markers that more accurately convey her state of shock (Bock and Mpolweni-Zantsi, 2006; Mpolweni, 2008). But neither account can do justice to the scene I witnessed. Nomonde Calata had flung her body in a backward arch that nearly toppled her chair, as she clutched a white handkerchief to her face, wailing inconsolably as if from the very depths of

her being. An attendant placed a comforting arm around her shoulders and tenderly patted her chest, while mouthing soothing sounds. I was now required to speak but my diaphragm had begun to quiver as a wave of emotion washed over me and my mouth turned dry. At this point the observers began a plaintive rendition of *Senzeni Na?* "What have we done? Our sin is that we are black …" As they sang, I was able to breathe deeply, momentarily disengaging from the experience as I gathered my wits.

The radio audience, listening in real-time, relied on my voice to describe the action each time there was a lull in proceedings. In an effort to transport them to the scene, I would earlier have described Mrs. Calata and how the vivid red of her sweater stood out against the drab surroundings of the old town hall, while on the makeshift stage a semicircle of commissioners flanked the purple-clad Archbishop and his deputy, the silver-haired Dr. Boraine. I would have tried to convey the image of a spectator, an old black woman with the walking-stick, shoulders hunched under a knitted patchwork-blanket: someone's mother, someone's grandmother, being helped into a chair and looking bewildered as she tried to fit the headphones through which she'd be able to follow the proceedings in translation. For those who had just tuned-in for the live coverage on the SABC's *Radio 2000*, I would bring them up-to-speed with some background to the case being heard and provide a précis of the testimony so far. Fort Calata had been abducted along with his colleagues, Matthew Goniwe, Sparrow Mkhonto and Sicelo Mhlawuli, as the so-called 'Cradock four' returned from a meeting in Port Elizabeth (TRC, 1998b). It is alleged they were taken via Olifantshoek Pass to Port Elizabeth where they were assaulted, killed and their bodies burned, along with the vehicle in which they were travelling. When Mrs Calata had regained her composure, the hearing resumed. I slid open the fader on the audio-feed, turned off my microphone and, once again, simply sat and witnessed, together with many thousands of others.

I was playing one of the diverse backstage roles in the massive media deployment that brought the public hearings into the lives of many who would not otherwise have had access to the ritual. The TRC hearings were initially to have been heard *in camera,* shielded from the public eye, but a number of non-governmental organisations intervened and, through a court action, succeeded in opening the proceedings to the broadcast media (Cole, 2010). Mark Sanders, professor of comparative literature at New York University, suggests that the TRC made itself a proxy for the perpetrator in relation to the victims whose testimony it solicited. "By extending this substitution to … those tuned in to the radio and television broadcasts, a

phantasmatic perpetratorship became available, in principle, to anyone" (Sanders, 2007:9). The commission faced the reality that perpetrators were unlikely to come forward en masse to take responsibility for their deeds, and so the TRC assumed a surrogacy role, demonstrating its readiness to restore the dignity of the victims. At the same time, through the simultaneous translations and the involvement of the broadcast media, the fantasy and impulse to make-good was generalised across the entire social body and made available to all.

Deputy chair Alex Boraine acknowledged the role of the media, and radio in particular, in bringing the hearings to the poor, the illiterate and those living in far-flung rural areas; it created a truly national experience out of what might otherwise have been restricted to a select handful of commissioners (Cole, 2010). Boraine recalls being deeply moved by Nomonde Calata's display of anguish: "It was like a howl in the darkness, an expression of all the horror of the apartheid years that transformed the hearing from a litany of suffering and pain to an even deeper level" (Boraine, 2008:187). It was a cry that came to define the commission as it played over and over on radio and television, resonating in the recesses of the South African psyche and echoing around the world.

Its international prominence notwithstanding, South Africa's TRC has been criticised for its limited success, specifically with regard to unfinished business concerning both the victims and perpetrators of human rights atrocities. Despite its optimistic promises to victims, the commission's powers were restricted to making recommendations only, which the government largely chose to disregard. "Reparation payments came too little and too late" (Cole, 2010:123). On the other hand, the TRC had controversially been given full powers to grant amnesty, which it did for hundreds of applicants. But once again the administration has failed to follow through, with the majority of unrepentant perpetrators of atrocities unlikely ever to be brought to book, "...and those who cocked a snook at the TRC have continued to do so with mounting confidence" (Carter, 2006:158). However, despite this ambivalence towards its success, the TRC received unprecedented exposure with its public hearings for both victims and perpetrators, and it featured unique amnesty provisions: 'carrot-and-stick' mechanisms that induced scores of offenders to confess their crimes in the full glare of the media spotlight.

Dimensions of accountability

Priscilla Hayner heads the International Policymakers Unit at the International Centre for Transitional Justice in New York. She is somewhat dismissive of a Truth Commission's capacity to facilitate emotional healing, suggesting that such remedy is more likely due to the passage of time than to any therapeutic effect of the ritual itself:

> As well, it is often asserted that digging into the truth and giving victims a chance to speak offers a healing or 'cathartic' experience. Again, this turns out to be a questionable assumption, at least in some cases. Though little scientific evidence is yet available on this question, it is clear that this notion of healing is a bit overstated, at least (Hayner, 2001:6).

It is against this sceptical view of emotion that I argue. I submit that Hayner's position arises from a dualistic Cartesian paradigm which can and must be challenged in light of the emerging scientific evidence regarding emotional function, both within the individual organism and within communities. The legal perspective, which is overwhelmingly rational, seeks to put a price on human suffering, reducing liability into readily quantifiable units of monetary reparation and numbers of successful prosecutions. I argue that a neuroscientific perspective is increasingly likely to offer Hayner the evidence she lacks.

The notion of accountability is multi-faceted, with political, legal, ethical and emotional constituents, and South Africa's TRC set a precedent by acknowledging the spectrum: with the eventual aim of facilitating reconciliation, it blended elements of storytelling with aspects of inquisitorial prosecution tempered by offers of clemency. The concept of reconciliation itself has implications of penance and absolution, notions reflected in the pervasive religious undertones of the commission: from the moral authority of the chair, Archbishop Desmond Tutu, and his deputy, former cleric Dr. Alex Boraine, to the involvement of a number of theologians as counsellors (Kotzé, 2001).

Political scientist Dirk Kotzé attributes the absence of widespread calls for retribution to religious considerations, although others ascribe this to the dominance of a specific doctrine at the expense of others. The Muslim scholar, Dr. Farid Esack, in his submission to the Faith Communities hearing, expressed his concern that the TRC courted the risk of elevating the Christian values of atonement and forgiveness above respect for the suffering of victims and the need for justice (Jaffer, 2000). Without intending to negate the importance of this theological distinction, I have argued that religion is the institutionalised face of spirituality

and mysticism: from a neurological perspective, divine experience is essentially emotional in nature and a function of the limbic system (Bowker and Bowker, 1998; Newberg et al., 2001, 2003). However, in raising his concerns Esack articulates the polarised imperatives at the core of Transitional Justice: the hunger for vengeance predicated on rational certainty on the one hand, and the facilitation of emotional healing and the promotion of social cohesion on the other. Ambiguity flourishes in the liminal territory where reason and emotion converge; the TRC's enduring achievement lies in its readiness to embrace the paradox.

In effect the TRC sought to spearhead a process for the rehabilitation of the collective psyche; the extent to which it ultimately achieved this aim resists evaluation through the application of logic alone. I argue that the depths of human suffering and our converse capacity for depravity are distinctly emotional in character and so cannot easily be quantified; instead they must be embodied and subjectively 'felt', while being processed with the help of the body/mind's emotional brain structures, including the hippocampus, amygdala, anterior thalamic nuclei, septum and limbic cortex, together with the endocrine and autonomic nervous systems (De Kloet et al. 2005). Moreover, I contend that the resultant body of knowledge is able to be further disseminated via a heuristic process involving the mirror-neuron system.

The TRC published its report in five initial volumes, with a codicil in two further tomes detailing its findings and recommendations (TRC, 1998a;2002;2003). In addition, transcripts of all the hearings are catalogued and available on the internet, while all evidence gathered has been deposited in the state archive. Nevertheless TRC investigator Piers Pigou laments: "The vast majority of South Africans, including those who directly engaged the commission, have … never seen what the commission actually found and why" (Cole, 2010:7). Most of the documentary residue in the state archive has been placed out-of-bounds, requiring intervention through the Promotion of Access to Information Act before access can be secured (Harris, 2002). I propose that an under-explored factor inhibiting the flow of knowledge is the nature of the record itself.

The archive and the repertoire

The French critical theorist and philosopher Roland Barthes suggested that other sources of meaning or significance are lost in the process of 'embalming' the text as written word (Denzin, 1995). As with most performance phenomena, significant elements of the oral

testimony presented to the commission are of an ethereal quality and thus unable to be entombed alongside the other mummified remnants. In a series of lectures in 1955, British analytic philosopher J.L. Austin identified a type of statement which he called the 'performative', its truth value "…a function of the fact and condition of its utterance rather than its conceptual content alone" (Walker, 2003:10). In other words, non-verbal and paralinguistic modes of communication, including gesture, facial expression, pitch, volume and intonation of speech, are able to moderate the purely verbal signifiers to produce a layer of meaning that is affective and experiential in nature, rather than purely conceptual.

Tony Sitembiso Yengeni, an activist who had been violently assaulted in detention, took full advantage of the performative dimensions of the Truth Commission while cross-examining his tormentor; "the roles were reversed and the torturer . . . was confronted by the tortured" (Sanders, 2002:588). In a departure from the legalistic protocols that shaped the amnesty committee hearings, a number of victims had been granted an opportunity to confront their Security Branch interrogator Jeffrey Benzien. Yengeni demanded that the policeman re-enact one of his torture methods: the infamous 'wet-bag' technique, in which a blindfolded victim is suffocated with a water-soaked bag that is placed over his head.

> MR_YENGENI: Now, is it possible for you to do a demonstration of how, I as a victim I would want to see what happened to me.
> CHAIRPERSON: When you say demonstration, I mean, has he not described it satisfactorily to you?
> MR YENGENI: I also want to see it with my own eyes what he did to me …
> CHAIRPERSON: Mr Yengeni, could it be done here in front of you ... [to a volunteer] Will you lie down on your stomach please and Mr Benzien, will you show us the position you occupied.
> MR YENGENI: Yes, a little bit further, there in the middle, so that I can see.
> CHAIRPERSON: Yes.
> MS KHAMPEPE: We can't see Mr Benzien.
> CHAIRPERSON: We will just have to stand and have a look. Bring that bag. Mr Yengeni, can you see?
> MR YENGENI: Yes, but what I want to ask just as he is in that position, at what point does he release the bag for more air? How does he know that now I am about to loose, to die, then he releases the bag? (TRC, 1997:59-60)

Poet and author Antjie Krog describes this incident as one that "will remain one of the most loaded and disturbing images in the life of the truth commission" (Krog, 1998:73). By eliciting such embodied testimony rather than a purely verbal recollection, Yengeni prompted a dramatic departure from the 'storytelling' mode of the victims hearings and shattered the quasi-juridical tone of the amnesty committee hearings. While the naked transcript hints at a

certain degree of action, I contend that the official record of the event has been stripped of much of its meaning.

Diana Taylor is the founding director of the Hemispheric Institute of Performance and Politics at New York University. She postulates an alternative repository of memory and knowledge, to be found in the embodied 'repertoire' rather than in the archive. "The transitive notion of embodied memory … entails a relational nonindividualistic understanding of subjectivity" (Taylor, 2003:191). I argue that the underlying value of the TRC resides, not in its legalistic framework, but rather in its ritualistic and performative dimensions. From this perspective it is not surprising that when the commission solicited applications for assistance from the victims, many asked for no more than an opportunity to further ritualise their experience. There were numerous requests for the return of the bodies or body-parts of relatives, for information on the location of burial sites and pleas for exhumation and suitable re-interment. "Sometimes the claims for funeral rites were made in the name of 'tradition' and 'custom'; although this mourning could take highly specific local forms - such as the Zulu *ukubuyisa*, or bringing back the spirit [italics in original]" (Sanders, 2007:10).

One ritualised gesture, arising out of the TRC and arguably forming part of its repertoire, drew a range of reaction: the widely reported ceremonial foot-washing performed by former police minister Adriaan Vlok on his erstwhile victim, anti-apartheid cleric Rev. Frank Chikane (Berger, 2007; Swart, 2008). Vlok had appeared before the TRC in connection with a number of apartheid-era crimes, but had never sought amnesty for authorising the attempted assassination of the then secretary-general of the South African Council of Churches (Associated Press, 2007). In 1989 Chikane had fallen gravely ill after his clothing had been laced with an organophosphate – Paraoxon - a deadly neurotoxin favoured as an instrument of assassination due to its easy absorption through the skin (Gould and Folb, 2002). The identities of the perpetrators had remained a mystery until, 18 years later and some time after his appearance at the TRC, Vlok arrived by appointment at Chikane's office, tendered a personal apology and, in a re-enactment of a biblical ritual, washed and dried his victim's feet (Swart, 2008). He later pleaded guilty in court and was handed a ten-year suspended sentence; at the trial, Vlok and Chikane were seen to exchange smiles and handshakes (Venter, 2007).

Chikane had initially resisted the overture, but then gave in, “having understood that my refusal would deprive him of his liberation and his release from psychological torture” (Day, 2009). The cleric had hoped that Vlok’s gesture might inspire others and provide a beacon for reconciliation, but many were understandably sceptical. Among those was activist Shirley Gunn, who had been detained together with her 16-month old son after Vlok had framed her for the 1988 bombing of Khotso House, the Johannesburg headquarters of the South African Council of Churches (TRC. 1996b). “He can’t just wash Frank Chikane’s feet and think that that is the end of it ... he needs to apologise to his victims directly” (Maughan, 2006). Of course, the TRC never required an apology or expressions of remorse in exchange for amnesty: “All that was required was full disclosure of wrongdoing and acceptance of responsibility for that wrongdoing” (Murphy, 2007:440).

Promoting restorative justice over retributive justice was undoubtedly a delicate balancing act for the TRC; the notion of repentance appeals primarily to emotion and sits more comfortably within a paradigm of religious morality than within an adversarial legal culture. Nevertheless the commission did hear many apologies, including a reluctant statement of regret famously coaxed out of Winnie Madikizela-Mandela (Klopper, 2001); the commission found she was implicated “in a range of incidents – including assaults and abduction, and the murder and attempted murder of at least a dozen individuals” (TRC, 1998c:556). However, I maintain that a formal requirement of apology in exchange for amnesty might have proved counterproductive: it may well have elicited a rash of self-serving fake displays of contrition, which would have undermined the reconciliatory intentions of the commission. “And to the degree that we hand out rewards to those who fake repentance and remorse, then to that same degree do we cheapen the currency of repentance and remorse - making us less likely to treat the real article with the respect it deserves” (Murphy, 2007:440). While in civil and tort litigation, monetary compensation for injuries suffered may be calculated rationally and duly recorded, the psychological, emotional and spiritual healing facilitated by apology is more rightly ‘felt’ and passed into the repertoire.

The primacy of remorse

The restorative effects of repentance and remorse are not confined to those who share religious convictions, though: I assert that the notion of apology has significant secular relevance, and further submit that it has deep-rooted socio-biological implications. Dutch primatologist and ethologist Frans de Waal gathered exhaustive data on chimpanzees which

reflect that, following agonistic interactions, the animals repeatedly chose to make contact with former opponents rather than with third parties; the range of distinctive reconciliatory behaviour was frequently characterised by 'mouth-to-mouth kissing' (De Waal and Van Roosmalen, 1979). Subsequent detailed studies with Rhesus monkeys included a series of controls, and yielded more detailed results that replicated the earlier data, but which included a distinctive array of conciliatory activities observed in contacts with third parties: most notably 'embracing' behaviour (De Waal and Yoshihara, 1983). That this type of conduct appears to be shared across the primate order, suggests it is encoded in the phylogenetically earlier parts of the brain. While anthropomorphic correlations are generally considered taboo in science, De Waal contends that observing such post-conflict behaviour may assist our understanding of conflict resolution, the reduction of tension and the promotion of social cohesion among human primates (De Waal, 1988).

American sociologist Nicholas Tavuchis is frequently cited for his detailed work on the cultural implications of apology. He maintains that the primary function of an act of contrition is to resolve conflict and to restore a prior moral order by eliminating the damaging effects of past actions - a paradoxical proposition: "an apology, no matter how sincere or effective, does not and cannot *undo* what has been done. And yet, in a mysterious way and according to its own logic, this is precisely what it manages to do [emphasis in original]" (Tavuchis, 1991:5). As I have shown elsewhere, apparent paradoxes are to be expected where emotional function is concerned, where effects appear to be disconnected from their causes but for the intervention of a peculiar 'affective logic'. South African legal scholar Mia Swart, a specialist in Public International Law and Global Justice at Leiden University, worked on the International Criminal Tribunal for the former Yugoslavia. She introduces yet another paradox when she argues that even incomplete or insincere apologies have restorative value due to their essentially *performative* nature: she notes that such apologies are particularly effective "if the apologist exhibits shame or if the apology involves public humiliation" (Swart, 2008:51).

Drawing a distinction between 'guilt' and 'shame', a group of researchers in the social aspects of moral emotions note that offers of reparation often cause further insult, while a sincere emotional act of contrition mitigates the slight: "… expressing shame can have a beneficial effect on others, in a situation where intergroup boundaries, and some level of pre-existing blame, have to be overcome" (Giner-Sorolla et al. 2010:91). Albie Sachs, a former

justice on the Constitutional Court of South Africa, lost an arm and an eye when targeted by agents for the *apartheid* regime in a bomb-blast while exiled in Mozambique (Sachs, 1990). Commenting on whether apologies should be isolated from civil liability through protective legislation, Sachs insisted that his suffering would be alleviated, not by monetary compensation, but through the experience of witnessing his enemy's humiliation, "that he would rather have his enemy 'on bended knee' than not at all" (Taft, 2006:603). It is my contention that such restorative healing is available by proxy through appropriate exposure to the affective repertoire.

In its final report, the TRC acknowledges four conceptions of truth: "factual or forensic truth; personal or narrative truth; social or 'dialogue' truth and healing and restorative truth" (TRC. 1998a: 110). Accordingly, the Commission had a fourfold mission: to diminish the *lies* that are circulated *unchallenged* in public discourse; to give individuals the opportunity to *speak* their personal truth while embracing the inherent paradoxes of *subjective* experience; to establish the truth of *lived experience* by promoting transparency, discussion, debate and *interaction*; and to place revealed truths within a living context of human *relationships* while restoring *dignity*. The first two categories of truth were served by the amnesty and victims' hearings respectively, while the third was facilitated by the various Special Hearings that included those for faith communities, business groupings and the media. As long as the emerging society continues to respect transparency and open access to information, the social or 'dialogue' truth will continue to be serviced through the archive and the involvement of academia. But I assert that the benefits of the fourth notion of truth, that of restoration and healing - the most central aspect of the Commission's work - are best dispensed by the ongoing repertoire.

Telling tales

One of the first performed theatrical manifestations of the TRC repertoire was Duma Kumalo's anecdotal *The Story I am About to Tell,* created in collaboration with human rights activist Bobby Rodwell and poet Lesego Rampolokeng (Graham, 2003; Urbsaitis, 2009). The play featured real-life recollections by survivors of gross human rights violations (TRC, 2003). Kumalo himself had spent four years on death row as one of the "Sharpeville Six": convicted under the 'common purpose' doctrine for the 1984 mob-killing of Lekoa town councillor and deputy mayor Kuzwayo Jacob Dlamini (Hamber 2006; Coetzer, 1988). Just hours before he was scheduled to die, Kumalo received a stay of execution; his testimony

before the TRC detailed the miscarriage of justice that had seen him convicted on perjured testimony (TRC. 1996c). Making specific reference to a presentation of Kumalo's drama, the final report of the TRC acknowledged the healing power of performance: "After the play, an elderly white South African man approached one of the players … embraced her, sobbing, and then left without saying a word. For the actors, no words were necessary: such was the power of this intimate encounter" (TRC, 2003:157).

On the other hand, after seeing a performance of *The Story I am about to Tell* at Johannesburg's Market Theatre, American literary scholar Shane Graham expressed disappointment that the piece seemed to be impaled on Diderot's paradox: "Ironically, the *literalness* of the play's contrived reenactments detracts from the 'realness' of the experiences that the play tries so hard to convey [emphasis in original]" (Graham, 2003:15). I argue here that the actual survivors' re-presentation of their original TRC testimony served the *embalmed record* at the expense of the *embodied repertoire*. By the time Graham experienced the performance, the witnesses had repeated their testimony several dozen times and it had evidently become devoid of emotional immediacy. Holocaust scholar Lawrence Langer distinguishes between layers of memory and suggests that while 'surface memory' is calcified in the text, 'deep memory' makes itself available through the immediate "unencumbered flow of the oral testimony" (Langer, 1991:18). The surface meaning is socially constructed, skipping across the exterior façade of words as it engages the intellect, while the deeply experienced meaning "... is not known in words, but in the body" (Culbertson, 1995:170). Embodied performance of the repertoire transcends the spoken text; meaning is constructed not literally through words, but is evoked metaphorically and experienced heuristically through the body.

Distinguished literary figure and academic Njabulo Ndebele welcomed the Truth Commission as an opportunity to restore our individual and collective narratives, but highlighted the need to embrace a metaphorical reality:

> Only now has South Africa succeeded in becoming metaphor, in becoming a true subject of philosophy. That is why the real challenge is not in maintaining competitive levels of capability in science and technology. That is a relatively easy task. The real challenge is in grounding science and technology in lived life, in the capacity for our society to stimulate the imaginations of its peoples through voices that can go beyond the giving of testimony, towards creating new thoughts and new worlds (Ndebele, 1998:27-28)

Ndebele speaks here about re-imagining ourselves as we reconstitute our individual narratives which, in turn, inform the over-arching meta-narrative: the guiding mythology that defines our communal efforts. But these narratives resist objective construction: they are ideally assembled through subjectively felt experience and grounded in 'lived life'. And, like the mythologies that have defined civilisations throughout history, including those that have shaped the great religions, the narrative serves the community to the extent that it is underpinned by a commonly accepted Truth. In our secular world however, such Truth is increasingly elusive; it exists as fragments to be accumulated or discarded in the service of the latest faddish cult, the next marketing-drive or the tightening grip of the incumbent despot. If a society is to re-imagine itself, I suggest that linear narrative contiguity – the text – might be revisited, with fragments of paradoxical truths being presented through metaphor to be re-assimilated into a cohesive whole. This view is echoed by Truth Commissioner Mary Burton: "The pieces of the jigsaw puzzle have been taken out of the box and shaken up. Now they need to be put together to create a picture in which all will be able to see themselves reflected" (Burton, 1998:24).

Two subsequent theatrical presentations were able to forego the literal and embrace the lateral, and each did so through the audacious deployment of aesthetic devices designed to re-contextualise actual testimony, allowing it to resonate simultaneously in several registers: emotion, reason and experience. *Ubu and the Truth Commission*, created by Jane Taylor, William Kentridge and the Handspring Puppet Company, is a multi-media presentation that blends the TRC testimony with Alfred Jarry's hundred-year old surrealist play *Ubu Roi* (Taylor, J. 1998). Live actors represent Pa and Ma Ubu, while Pa's minions and witnesses are portrayed by puppets, with photographic images and Kentridge's animations punctuating the action. The use of puppets, to represent both perpetrators and victims as they confront their flesh-and-blood tormentor, serves as a powerful two-pronged metaphor: perpetrators are seen to have been doing their master's bidding, while their victims are stripped of agency, able to find a voice only through the mediation of a presence outside of themselves (Graham, 2003).

Johannesburg Composer Philip Miller's *REwind: A Cantata for Voice, Tape and Testimony* gives centre-stage to the voice itself: it provides a musical metaphor for the restoration of the ability to speak-up and speak-out; fragments of recorded testimony are blended with a string-ensemble, choir and soloists to provide a re-imagined context within an orchestrated aural tapestry. In selecting clips from recordings of actual TRC testimonies, Miller declares he was

guided less by the content than by the acoustic qualities and character of the sounds, vocal inflections and nuances offering musical cues for his composition; "To describe *REwind* as weaving spoken word with music ... does not do it justice, for the music actually *originates* with the recorded voices and their timbre and emotional intensity [emphasis in original]" (Cole, 2008:88). Tapping into the aural dimensions of the TRC, Miller succeeds in evoking the experience of the majority of the population in following proceedings exclusively through radio broadcasts. What's more though, in foregrounding the human voice the composer amplifies an underexplored dimension of the embodied repertoire; "Unlike verbal signification, vocal signification can create, augment and/or reverse the presumed meaning of words by using pronunciation, tone coloration, and inflectional variation to speak to an emotional as well as conceptual register of 'meaning'" (Walker, 2003:160)

The damage done

Presenting shards of TRC testimony juxtaposed with striking images and disjointed sounds, both these presentations are able to evoke the experience of the 'shattered' self that is commonly associated with trauma (Herman, 1994; Shay, 1994, 2002; Field, 2006). American anthropologist Roberta Culbertson is a first-hand survivor of trauma: the daughter of a humanitarian aid official in Lebanon, she was kidnapped as a five-year-old girl by a violent fringe group and exposed to unspeakable cruelty (Sorenson, 2007). Fifty-six years later, she directs the Institute on Violence and Community in Virginia, and has worked with survivors of atrocities in Burundi, Rwanda, Guatemala, Cambodia, India and Pakistan. Culbertson makes a crucial distinction between violence, and *violation*: whereas the former may involve a contestation of power by various antagonists, the latter entails a target being stripped of agency and left with an existential dilemma characterised by dissolution of the self (Culbertson, 1995;2006).

While violence has no specific locus of action, the site of violation is the physical body of the targeted victim. Traumatic experiences are all painful, but it does not follow that all painful experience is traumatic: "...'trauma' refers to the rupturing of an individual's sense of internal and external worlds which leaves post-traumatic legacies such as dissociation, depression and hypersensitivity" (Field, 2006:31). Psychic lesions are associated with particular neurological responses in the body that retain the memories of traumatic events as they were experienced and how they were responded to, whether they were understood at the time or not. Culbertson explains that such memories generally consist of fleeting images, recollected sounds and

sensations of movement within the body, accompanied by an energising suffusion of adrenaline into the cells, or the numbing effects of cells awash with noradrenaline. These 'flashback' episodes are a physiological echo of the body's evolutionary 'capitulate-fight-or-flight' response at the time of the traumatic event: the hormonal neurotransmitters ensure the survival of the physical body above all else; instincts take control of the action while the senses of panic and fear are redirected to parts of the brain where they are less likely to interfere in the execution of the primal survival strategy. "Thus events and feelings are simply not registered, but this does not mean they are forgotten; they are located in other parts of the mind and the parts of the body affected as well, though separated from the continuing integrated story of the self" (Culbertson, 1995:174).

Jonathan Shay is an American psychiatrist who has focussed his career on healing the scars of trauma in war veterans: for fourteen years he was involved in a specialised intensive outpatient treatment programme for Vietnam combat veterans with Post Traumatic Stress Disorder, PTSD (Shay, 2002). Shay asserts that human memory exists, simultaneously, in a number of manifestations: physically in the brain and body/mind, psychologically, socially and culturally. A fragmentation of the personal narrative, as described by Culbertson, would leave a deep-seated physical legacy that has a reciprocal disruptive effect on the social and cultural dimensions of the wider narrative. It is understandable then why trauma is able to destroy the bonds between the individual and society: the traumatic event represents a betrayal of the social and cultural norms and ideals that sustain community. A lingering mistrust of others and erratic antisocial behaviour - triggered by uninvited flashbacks – accompany a loss of self-respect and deepening sense of alienation. Significantly, Shay highlights the destruction of the capacity for democratic participation as one of the lasting effects of unhealed PTSD: passionate debate within the rules of fairness, and the notions of persuasion and compromise, imply the trustworthiness of words; the betrayal of trauma obliterates the capacity for trust altogether. Unhealed trauma "... destroys the unnoticed substructure of democracy, the cognitive and social capacities that enable a group of people to freely construct a cohesive narrative of their own future" (Shay 1994:181). The individual and the community clearly share the burden of trauma, with their prospects for recovery mutually intertwined. I submit that a holistic approach to healing should seek to rekindle the affective bonds of the commune. "Those who have survived learn that their sense of self, of worth, of humanity, depends on a feeling of connection to others" (Herman, 1994:214).

Translating truth

As with *Ubu* and *REwind*, the staging of *Truth in Translation* reflects a range of choices that incorporates the various ideological strands of the early twentieth-century *avant-garde.* However, rather than a post-modern blend of self-perpetuating inter-textuality, each work is constructed in such a way as to bring about an integrated, aesthetically mediated experience of transcendence. The German-American Slavonic scholar Raoul Eshelman argues that a successor to post-modernism is to be found in *performatism*; so called after J.L. Austin's speech-act theory in which a statement derives meaning through the fact and condition of its utterance. "In general, performatism encourages self-therapy, it suggests we can transcend the force of rampant, oppressive contexts by repeatedly asserting our own selfhood" (Eshelman, 2000:5). Accordingly, I argue that *Truth in Translation* presents aesthetic choices which encourage the audience to engage actively with the presentation, to enter the subjunctive 'what-if' mood of Victor Turner's liminal state, to re-imagine and to construct meaning from the metaphorical mosaic.

A backdrop of shirts hanging on washing-lines serves as a screen onto which images are projected; a collage of visual memories punctuates the characters' introspective journeys, while the multi-coloured mix of empty shirts evokes the missing bodies that haunt our history. Rugged flight-cases are moved about the stage to serve as items of furniture, from a bed or bar-counter to a juke-box or telephone-booth; the cases suggest a journey over treacherous terrain with freight-loads of personal baggage. All the while the evocative musical score performed by three on-stage musicians sets the tone and "… reinforces the play's emotional arc. At first it keeps its distance, as the translators are supposed to. As they give in to their feelings, so do the songs" (Taitte, 2007).

Music and song were woven into the culture of resistance in South Africa, they "... helped people of diverse tribal and racial identities transcend differences that remained salient in other contexts" (Macky, 2007:1). Whether at political gatherings or funerals, spontaneous outbursts of song provided expression for emotions that were too complicated or painful for spoken words. The TRC hearings were no exception, with chairman Archbishop Desmond Tutu notably leading spectators in song on the first day of hearings after Nomonde Calata's emotional breakdown (TRC, 1996a). In this context Hugh Masakela's original score blends with traditional struggle songs to create an organic but vital dimension to the presentation: "It is laced with exquisite music and lyrics, but this is no song-and-dance show: the music acts

like a requiem for truth itself" (Gardner, 2007). The lyrics to the original songs are largely constructed from TRC testimony, and so conjure images of crushing brutality:

> Mayi-ba-bo-o-o-o
> The hair of your husband was pulled out.
> I-i-yoh! Hey!
> His tongue was pulled and stretched. His fingers were cut off.
> Achoo-wee-iyoh!
> Forty-three wounds in his body. They poured acid in his face.
> Mayi-ba-bo-ho-ho-ho
> Chopped off his right hand. Then he was blown up.
> His pieces were... scattered... all over the floor...
> His pieces were... splattered... all over the wall...
> His pieces were... plastered... on the ceiling.
> Splattered... (Lessac et al., 2008:9-10).

"The 'beautiful but chilling' lyrics and music" (Jaruzel, 2007) form a jarring counterpoint to the action on stage, enforcing a critical distancing in the Brechtian tradition. But I argue that the musical element - which, in addition to accompanying songs, underscores much of the action – activates in the spectator the liminal state of ritual. The harmonics and rhythm of music conspire with other aesthetic components to create a 'driving stimulus', initiating the neural spill-over or rebound effect of religious and aesthetic experience as described by D'Aquili and others (Lex, 1979; Newberg and D'Aquili, 2000); the mutually inhibitive neural systems, associated with cognition and affect respectively, are stimulated beyond a threshold and their functions 'spill over'; ideas and emotions are at once both 'felt' and 'thought'. Victor Turner's 'as-is' indicative state coexists with the 'as-if' subjunctive state. "It is almost as though the limbic system were itself endowed with higher intelligence, in a kind of carnivalesque reversal of the indicative system" (Turner, 1986:33)

Within this aesthetic environment, which both mediates and frames the liminal experience, the audience members individually and collectively become part of the live, real-time, human social interaction that constitutes the dramatic action. Fragments of narrative are interwoven with poetic imagery, sustaining an ever-evolving re-imagined milieu: a landscape in which characters interrelate – each imbued with autonomous agency – as they negotiate a transcendence of their historical context in a quest to claim their individual authorial power.

Lights down, listen and speak

> Ladies and gentlemen – your attention, please. Please take a moment to locate your cell phone and to ensure that it is completely switched off. In what we are about to be engaged, you must not, under any circumstances, become involved. You must not make judgments or take sides. You are just the pipe through which the information flows. You must not be seduced by passions nor overcome by emotions. They sneak up on you, catch you by surprise, and render you compromised. Personal sympathies and matters of the heart have no place here. That is your mandate. That is your code. You are a witness. That is all (Lessac et al., 2008:1).

I was among the opening night crowd at Cape Town's Baxter Theatre one evening in February 2007 as these words of caution filled the darkened auditorium: the performance of *Truth in Translation* was about to begin. Audiences are accustomed to the routine reminder to deactivate their phones but, as it became immediately clear, this was a more portentous admonition: we were privy to a briefing being given to a group of translators that had been recruited to travel around the country with the TRC. Just as *Ubu* and *REwind* had done, *Truth in Translation* presents a kaleidoscopic version of the TRC hearings and the events it had been mandated to investigate. However, *Truth in Translation* goes further in examining the rift between language and experience, "…at a moment of confession by a victim, words literally fail to articulate an experience" (Radithlalo, 2009:92). The play sets out to explore the inadequacy of language in the face of 'unspeakable' truths; it reveals language's inability to transmit the kind of knowledge which defies comprehension but for the simultaneous engagement of the cognitive and affective faculties. This notion is vividly depicted as the testimony of Mrs. Nombuyiselo Mhlawuli, is translated in the play:

> This inside me … fights my tongue … It is … unshareable. It destroys words. Before he was blown up, they cut off his hands … How do I speak this? – terrible … I want his hands back (Lessac et al., 2008:8).

Auschwitz survivor Charlotte Delbo insists that language only scratches the surface of memory, "… only sense memory, which preserves and tries to transmit the *physical* impact of the ordeal, enables us to approach the unthinkable [emphasis in original]" (Delbo, 1995: xiv). The theatre-makers endeavor to embody this paradox by weaving together, in performance, the individual narratives of a diverse group of TRC translators, a vital cog in the TRC machinery that sought to provide equal access to the eleven official language groupings in South Africa.

The terms 'translate' and 'interpret' are often used interchangeably. However there is a critical distinction, as articulated in the opening briefing that frames the play: the translators

are reminded that they are mere conduits for information, and should remain detached from the stories they are being called upon to help convey. The essential difference between the two tasks is summed up by a participant in a post-TRC workshop for interpreters: "…'exactness of language' is important in translation, while 'emotion and intention, not necessarily accuracy' is important in interpreting" (Anthonissen, 2008:171). Back in the play, and as the briefing comes to an end, the characters make it clear that they are expected to be translators rather than interpreters, to serve the record and not its embodiment: flippantly, and with some irony, they toss around the catch-phrase "…do not become involved!" And so a central theme of the play is clearly flagged: the crucial role of emotion in human discourse.

Director, Michael Lessac, states that he decided not to focus on any of the prominent figures associated with the commission, but rather on "the young and nearly invisible interpreters" (Jaruzel, 2007), a choice which discards the single protagonist of the Aristotelian model, adopting instead the ensemble approach favoured by Brazillian director Augusto Boal (Homann, 2009). The principle had long been associated with South African struggle theatre and it serves Lessac's keen interest in "… how we shape our identities as 'us' and 'them' … [giving] actors and audiences the space to investigate how we perceive 'the other'" (Bombard, 2011). The complement of translators is drawn from diverse racial and cultural backgrounds, each representing a particular 'other' to the rest: a synecdochic amalgamation of South Africa's multi-textured society.

Canadian sociologist Erving Goffman noted the capacity for spontaneous engagement in humans, the tendency to become emotionally absorbed rather than purely rationally engrossed in an activity: "… the individual becomes an integral part of the situation, lodged in it and exposed to it, infusing himself into the encounter" (Ostrow, 1996:344). For an insight into the mechanisms at play though, I don the white coat once more, briefly to assume a clinical role: the biologist sees the on-stage interaction between the mix of 'others' engaging audience attention and stimulating their neural networks of social cognition, including mirror-neurons, spindle cells, the amygdala and other brain regions "… consistently recruited in understanding of social action - superior temporal sulcus and medial prefrontal cortex" (Todorov et al. 2006:80). Spontaneous social inferences occur below the level of awareness as individual audience members develop an affinity for those characters that are least 'not-like-me'.

Lessac's interpreters rapidly shed their anonymity: within the first few minutes each emerges as a rounded character, exhibiting distinct human frailties and hinting at internal contradictions, personal secrets and emotional baggage. By way of example, Peter has already revealed himself to be something of a provocateur, but we are introduced to his tender side as he sings a ditty over the telephone for his young daughters. Alia, a coloured girl concerned for the health of her grandmother, exposes her knee-jerk prejudice by dismissing Peter as "…this white guy who thinks he owns the place" (Lessac et al., 2008:4). As each of the characters reveals contradictory aspects to their personalities, individual audience members may begin to feel a realignment of their own empathic tendencies: simulations of the inner states of the 'other' are assisted by mirror-neurons, making adjustments to the Theory of Mind and accommodating for new traits as they are exhibited.

Webs of meaning

The hearings get underway and through a laminate of language over language, personal narratives become interwoven with the sordid meta-narrative of a history that all must share. The translators channel intimate first-hand stories of senseless brutality, of loss, of anguish and ceaseless torment and they begin themselves to exhibit signs of emotional stress. The phenomenon of emotional contagion is made clear in a scene depicting testimony from the amnesty hearing of Victor Mthembu, in connection with the infamous Boipotong massacre of 1992 - in which migrant Zulu-speaking hostel-dwellers slaughtered dozens of men, women and children on a rampage through the township (TRC, 1998d; Simpson, 2011). As the scene comes to a climax, Alia displays anger while translating for the cross-examining Advocate Daniel Berger, before confiding in her colleagues that she had lost control.

> ALIA - MR BERGER (CONT'D): ... because, as you put it, "a snake gives birth to another snake"? Mr Mthembu, are we talking about killing every child who isn't Zulu?
>
> [Gavel pounds. Transition into new seating arrangement for De Kock testimony.]
>
> ALIA: Fuck! (hurls chair into flightcase) I was so angry I totally lost it!
> NOMAWETHU: Alia, he was the one who was angry. You interpreted.
> ALIA: No, that was my anger! And now I'm going to be fired.
> NOMAWETHU: We were all angry.
> CLAIRE: You won't be fired. They don't even notice us.
> JAKE: Hey. Do you know that everyone gets free massages except for us? (Lessac et al., 2008:25-26).

Vicarious traumatisation is a recognised condition brought on by prolonged and intense exposure to the trauma of others (De Ridder, 1997). Each of the characters begins to reflect a personalised combination of the variety of symptoms, which includes recurring nightmares and disturbed sleep, physical and emotional fatigue and somatic complaints like headaches and stomach pains. Significantly though, behaviour is affected: personal relationships suffer; there is fear and distrust of others, while irritability and increased levels of aggression are displayed. As the characters become more immersed in this simmering emotional climate, the relationships between them begin to fray and each one's innate prejudice and bias is brought to the fore: the focus of empathy regularly swings from one character to another and the audience is encouraged to experience multiple shifting subjectivities.

The spectators are given an opportunity not only to feel, but to contemplate the notion of empathy, the blurring of the distinction between *'I'* and *'you',* and the transitive nature of embodied knowledge. Lessac maintains that the practice of simultaneous translation is akin to the actor's process: "For what are the translators if not actors … what happens when someone truly interprets is that you have to walk in their shoes, see through their eyes and that is basic acting" (Thamm, 2007). The second act of *Truth in Translation* begins with two of the translators on stage; young Jake is an aspiring actor and he coaches Peter in the fundamentals of his craft.

> PETER: So, are you you, or are you somebody else? When you act? Or is somebody else... you?
> JAKE: Alright, Peter, you are Hamlet, right? Your uncle has killed your father, and now he's fucking your mother. (beat) How do you feel?
> PETER: Fine.
> JAKE: Come on, man, not Peter, Hamlet. How does Hamlet feel?
> PETER: Oh, right. Ah, I... Who's my mother fucking?
> JAKE: Your uncle.
> PETER: What, for real...? Oh. …
>
> JAKE: Think of your kids. Fiona and...
> PETER: Alice. …
>
> JAKE: Alice and Fiona are kidnapped by a child molester...
> PETER: Hey, shut up, man! That's sick! What's wrong with you?!
> JAKE: There you go! See what just happened to you!
> PETER: You don't go to my kids... Not my kids! What? What happened? (Lessac et al., 2008:42-43).

This scene introduces the re-enactment of the TRC amnesty hearing in which former victims Tony Yengeni and Ashley Forbes confront their erstwhile torturer Jeffrey Benzien (TRC,

1997). Interwoven with the Benzien testimony, Peter's acting lesson becomes a parallel role-play game where he is the interrogator and Jake is a suspect with his shirt pulled over his head being strangled with a belt: an echo of the infamous wet-bag torture demonstration. As the testimony begins to reveal Benzien's technique of deliberately blurring the line between friend and foe – characterising his relationship with Ashley Forbes as one of friendship – it seems the 'acting lesson' is now a children's game turned nasty:

> [inter-woven text edited for clarity]
>
> CLAIRE – BENZIEN: After that we went for a steak dinner. We drank many beers together. Then we took a trip to the Eastern Cape. Where you had the most Kentucky Fried chicken you had ever eaten. Remember? … Remember? …We drank Stellenbosch wine. … Pinotage. … You saw snow for the first time. Remember the family? They laughed, they took photos of you playing in the snow ...
> ALIA – FORBES: Another time I was wrapped, naked and wet, in a carpet... You stuck both your thumbs in my nose, until blood poured from my nostrils!
> CLAIRE – BENZIEN: A harmless smack, a little nose bleed. … I brought you fresh fruit every Sunday...
>
> PETER: Gun running, you little kaffir shit. That's the charge.
> JAKE: Don't... don't hurt me...
> PETER: Not such a smart little shit now, huh?
> JAKE: That's enough. Stop!
> PETER: The truth! Tell daddy the truth...
> JAKE: Stop... ahhh, stop... You're hurting me!
> PETER: (mimicking him) "You're hurting me. You're hurting me!"
> JAKE: Ahhhhhh!
> PETER: Ahhhhhh! Alright! Wow. Woooah!... You were amazing. Next time I want to... what I want to do, is switch it around...
> JAKE: Come on, man, untie my hands. (There is a long pause as PETER just looks at him). Come on, untie my hands. (Pause. JAKE looks around uneasily) Hey, untie my hands. (Pause) What are you doing?
> PETER: (After a few beats in which he stares at JAKE, and JAKE becomes very nervous.) Acting. (Both laugh, Peter frees Jake) Next time, I want to be the victim. (Lessac et al., 2008:46-48)

The theatre-makers continue to juxtapose the grotesque and the mundane, inducing Brecht's *verfremdungseffekt* and ensuring the audience's critical faculties are not suspended despite the strong emotions being evoked. The action moves freely between a depiction of an objective 'external' social reality and a subjective 'internal' psychological reality, until the dividing line between these aspects of experience dissolves; "for, as in physics so in the observation of ordinary life, the presence of an observer is itself part of the reality the observer wants to observe and cannot, therefore, be validly excluded" (Esslin, 1963:46-47).

Brecht himself, I have no doubt, would have endorsed the insertion of songs and commentary as the action progresses, as he would certainly have approved the use of comedy and clowning. In addition to providing convenient contextual signposts for the audience, the elusive nature of objectivity is underscored throughout by introducing a journalist character, Marcel; the audience experiences his frustration as he tries to construct suitably factual links for his television reports:

> MARCEL: The hand... the hand in a jar. The hand in a jam jar. The hand in a Consol jam jar... um... okay. The severed hand of Sicelo Mhlawuli... (tries again) ANC activist Sicelo Mhlawuli... No, kak. (and again) The missing hand of ANC activist Sicelo Mhlawuli... (to himself) Fuck! (Lessac et al., 2008:10).

It emerges that Marcel is carrying his share of personal pain which he dulls through self-medication with alcohol. His emotionally numbed cynicism is frequently expressed in a dark humour which, according to TRC chronicler Max du Preez, was quite typical. "The jokes became crueller and cruder. Mostly about torture, murder and suffering. Really tasteless stuff. It was our way of coping with week after week of emotionally draining hearings" (Du Preez, 1997:9).

But Marcel's cynicism is no mere expression of a negative world view seen through jaded and scornful eyes; in the play it is deployed rather in the manner of the court-jester or in the vein of the classical Stoic philosopher. Thus tilting at expectations and challenging the presumptions of social norms, Marcel sets out to expose the veracity of Diogenes' assertion: "Most men are so nearly mad that a finger's breadth would make the difference" (Dudley, 1937:21). As they share a drink at the bar, Marcel frequently assumes a role in one or the other translator's private nightmare, encouraging them into a ritual of performing dreaded and repressed scenarios, to utter their fears, to embody their shame. Marcel becomes the Sergeant, alternately goading and ordering Peter, the army sniper, to shoot a defenceless child from a helicopter, coaxing a confession of cowardice from the cover of bluster; then he is a Vaudeville crier beseeching a reprisal of Thabo's 'role' as the *askari* turncoat and apartheid hit-man Joe Mamasela, after the translator had become too involved in the assassin's testimony providing a glimpse into his own possible complicity; affecting the guise of a prosecutor, Marcel then cross-examines a witness while Gideon translates for his own father and in so doing confronts his twin sources of personal shame: his conservative Afrikaans roots and his homosexuality.

As the translators speak the memories, they are forced to adopt multiple subjectivities as they vocally appropriate the varieties of truth through the sustained use of the personal pronoun 'I': each becomes the simultaneous embodiment of observer and participant, victim and perpetrator.

> CLAIRE: You know what I hated
> PETER: What?
> CLAIRE: It was always I. I did this…and I did that…I was raped…I slit his throat…I, I, I …
> NHLANHLA: That WAS the job! (Lessac et al., 2008:72-73).

Claire's frustration at having to envision the reality and breathe into existence acts of brutality echoes that expressed by many real-life translators:

> You had to identify with that person and say I did this or I did that. Some of the incidents we knew to be true through media reports or families or comrades. But they came there and completely denied it …You felt so angry you felt like punching them in the face while they were speaking, especially as that lie had to come through me through my voice (Ross, 2006).

On the road

According to its creators, *Truth in Translation* was devised to "provide a thought-provoking, compelling theatrical experience of high artistic value … bridging social and cultural barriers to foster dialogue and active participation in a democratic society" (Colonnades Theatre Lab, 2009:2). The extent to which it achieves its first objective is perhaps reflected in the overwhelmingly positive critical reviews the play has harvested wherever it has been performed. One of the few dissenting voice belongs to Cape Town theatre commentator Megan Choritz, who acknowledges she's likely to be seen as a 'party-pooper', but that the standing ovation at the final curtain had surprised her (Choritz, 2007). However she raises points worthy of discussion, chief among which is that, as far as she is concerned, the play introduces nothing new.

South African literary figure Zakes Mda points out that the TRC repertoire provides little novelty for those who had experienced apartheid first-hand. "How can a writer surpass the Kafkaesque nightmares that unfolded in these hearings? But soon enough I remembered that for black people in South Africa there was nothing new in these stories" (Mda, 2009:124). I suggest that Mda's observation may likewise be true for a number of non-black South Africans who were connected to the anti-apartheid struggle and for whom the relentless media coverage served to confirm the identities of some of the perpetrators, but little else.

Many plays of the struggle *ouvre* of the 1980s, were packaged for export rather than be doomed to a single season 'preaching to the converted' at the Market Theatre. I maintain that *Truth in Translation* is no different: Lessac says the project was conceived specifically to export the lessons of the TRC to "conflict and healing zones around the world … where people still might not be able to let go of thoughts of victimhood, entitlement, vengeance and denial" (Perry, 2007).

I suspect that a source of further frustration for the reviewer can similarly be attributed to Lessac's stated aim of fostering inter-cultural dialogue on an international scale. "We were fed bits and pieces of each of the interpreters – where they came from and their personal stories – but not enough to care about them. Perhaps focusing on one or two of them might have helped" (Choritz, 2007). The theatre-makers have clearly tried to provide points of entry for the widest possible audience by choosing to highlight diversity among the mix of characters. It is true that local audiences may be more familiar with the types represented on stage and so would perhaps feel a need for more specific character detail. However, the universal relevance embodied in the spread of characters has successfully engaged audiences in more than ten countries including Rwanda, Zimbabwe, Northern Ireland, Bosnia-Herzegovina, Croatia and Serbia: dozens of testimonials attest to the value of the encounter, "The performance initiated strong emotions, connected this group with people with similar experiences and strengthened them in understanding that they are not alone (Colonnades Theatre Lab, 2009:13).

The tour of the Western Balkans in September and October of 2008 demonstrates the potential for theatre to foster dialogue and catalyse emotional and social healing in communities scarred by the trauma of civil war. Deployed as a piece of 'applied theatre' (Ackroyd, 2000), the production formed the lynchpin of an intervention, coordinated together with dozens of local NGOs on the ground, involving talk-backs and workshops facilitated by the actors (Brownell, 2008). The opening performance was held on the banks of the river Neretva in the shadow of the 16th century Ottoman bridge connecting two sides of the divided town of Mostar. In the outdoor setting the theatre presentation was imbued with ritualistic elements of carnival: "Festival, ceremonial form and the transgression of social boundaries are animated with the strongest possible feeling of solidarity and community affiliation" (Schechner, 1993:47). The region was ripe for the intervention as, in the aftermath of the

ethnically-fuelled war of the 1990s, members of the various Balkan communities remain deeply suspicious of and hostile to 'the other' in their midst.

> … very little progress has been made to bring the ethnic groupings together. Most schools are rigidly divided along ethnic lines, often with a high wall through the middle of the property. In Mostar I witnessed Croat children being taught a completely different history of their country than that taught to Muslim children at the same school. (Du Preez, 2008:14)

In a region where few will venture beyond their ethnic comfort-zones (Felleissen, 1997; Lippman, 2000), predominantly Catholic Croats watched from one side of the river, while the largely Muslim Bosniaks watched from the other bank; those without a direct view of the stage could follow the action on giant projections on the side of the bridge (Jaruzel, 2008). The iconic Stari Most had stood for 427 years before the bridge was destroyed by heavy shelling at the hight of the war in 1993; it was rebuilt between 2001 and 2003 and stands today as "a symbol of both the divisions of the past and also of the process of post-war rebuilding" (Colonnades Theatre Lab, 2009:7). The physical environment scarred by history was thus co-opted to infuse the event with cultural specificity and so to invade the imagination of the audience (Schechner, 1968).

The central theme of the fallibility of language in adequately conveying experience was given an added level of expression through the use of projected sur-titles, with the English text translated into the local dialects of the region (Jaruzel, 2008). In addition to ensuring the plot could be followed by all, the projections provided a neat commentary on how language can be equally deployed to unite or divide communities: in many instances the translations would be seen to be almost identical. "Each dialect is marked only by a couple of words, and here and there slight changes in pronunciation" (Du Preez, 2008:14). This reality has not deterred nationalists on respective sides of the divide from rejecting the lingua-franca and insisting that Bosnian, Croatian and Serbian are vastly different languages. However, by acknowledging the specific sensitivities around language, the theatre-makers ensured that "audiences were reminded subliminally of the other culture and the other frame of reference, creating a unifying effect" (Colonnades Theatre Lab, 2009:7).

The practice of 'theatre pedagogy' seeks to use metaphor to make explicit the performance of identity in such charged environments, "to put the 'once removed' frame around these 'data' *but also* to keep alive the immediacy of the discourse and the tensions and theatrical turns of everyday life [emphasis in original]"(Gallagher, 2007:2). The South African Producer of

Truth in Translation, Yvette Hardie, explains that "the play is a non-threatening way to tell the truth and also to inoculate people with the values of tolerance and democracy, especially young people, so this doesn't ever happen again" (Jaruzel, 2007). Workshops were devised to support the theatre piece; through interactive exercises participants investigated notions of individual and group identity and examined how assumtions and prejudices influence their interactions with others. "They were invited to see the many kinds of truth that co-exist within their community, and to empathise with points of views that were not necessarily their own" (Colonnades Theatre Lab, 2009:8). The local NGOs ensured that the workshops were attended by people from either side of the divide, many of whom hadn't interacted with 'the demonised other' for close on two decades since hostilities had officially ended. Hardie observes that initially they had been reticent, "… people sat divided; at the end of some workshops people started crossing the room to meet those from the other side. We saw human-to-human interactions" (Jaruzel, 2008).

Augusto Boal's pedagogy is evident in the methodological approach to both the play and the interactive workshops. His dialectical methods were initially harnessed to inspire revolutionary political action (Boal, 1993). But although theatre can be used as a weapon against oppressors, the influential Brazilian visionary came to believe that theatre could equally be used to empower individuals to tackle internal oppressions that separate them from society. Theatre provides the means through which humanity is able to observe itself in the mirror of the imagination. "Man can see himself in the act of seeing, in the act of acting, in the act of feeling, in the act of thinking. Feel himself feeling, think himself thinking" (Boal, 1995:13)

> People put it (the TRC) down, they say that ubuntu is a cliché. Well, to the rest of the world it isn't. 'I am because you are'. That is a highly sophisticated perceptual understanding of how the brain works, of how the heart works. Is that not truly how we form ourselves? Ubuntu is the bedrock of who we are' (Lessac, quoted in Thamm, 2007).

I assert that the body of documentary and anecdotal evidence presented here is testimony to the vitality of the repertoire. It demonstrates the power of theatre to provide a shared emotional experience and, in so doing, to prime estranged members of fractured communities to discard their masks and to engage in active listening with one another: to acknowledge their common humanity. Despite frequently voiced cynicism surrounding the legacy of the

TRC, Lessac is resolute in his belief that the repertoire, as embodied in *Truth in Translation*, is able to provide the international community with a 'moral touchstone'.

Conclusion

In drawing my argument to a close, it is important to address certain inferences this study may provoke. Foremost among possible misapprehensions is that the totality of human experience can be reduced to a series of biological processes: this is not my contention. I have chosen to adopt an evolutionary approach and to consider the central questions from a neurophysiological perspective purely in order to cast a fresh light on old assumptions that may previously have hindered rather than fostered understanding. A scientist may legitimately conduct investigations within a vacuum in order to arrive at valid conclusions; it would be misguided though to presume that human experience can be contained within such a vacuum. While I have argued for the therapeutic value of theatre, particularly within damaged communities, I should emphasise the need for a holistic approach; theatre cannot be administered in the manner of a miracle-pill: it must acknowledge the interconnectedness of the physical and the metaphysical, the biological and the socio-political dimensions of experience.

It is tempting to view *Truth in Translation* as just such an elixir: it was conceived with the express purpose of exporting the values of *ubuntu* to other countries across the globe where the legacy of conflict has left deep scars (Colonnades Theatre Lab, 2009). Although the play was rehearsed in South Africa with an entirely local cast, its first airing was far from home, in Rwanda. At the time that small East African country was emerging from a brutal genocide that happened to coincide with the birth of democracy in South Africa; in just a hundred days of 1994 as many as eight-hundred-thousand people were slaughtered, most of them minority ethnic Tutsis (Straus, 2004). *Truth in Translation* and its associated workshops were reportedly well received, despite the sensitive subject matter and the rawness of the wounds. "According to some of the organisers, the participating Rwandans had never been so open and frank in their conversations" (Du Preez, 2006). I suggest the favourable reception the play enjoyed was largely due to its presentation being at-one-remove from the lived reality of the audience. In the highly-charged environment, the performance could more fully inhabit a *metaphoric* dimension: there is no judgement, no finger-pointing. And *that*, I submit, is where the true power of performance lies: in the embodiment of metaphor.

The Rwandese people were not unfamiliar with such forms of theatre before the touring troupe from South Africa arrived; on the contrary, as early as 1998 just four years after the genocide, a number of groups were already using performance as a tool for nation-building (Breed, 2008). Where 'grassroots' theatre finds its most altruistic voice, Breed notes, it provides a space for survivors and perpetrators to fashion new relationships. But he points out that much of the theatre was being created under the auspices of the government to 'perform nationhood' and promote its particular conception of unity, the motives not altogether benevolent. As Victor Turner reminds us, "theatre should limit itself to presenting alternatives: it should not be a brainwashing technique" (1982:118). In staging nationalism, an attempt is made to evoke a pre-colonial 'unified' past, whereas in truth there are two divergent narratives of that period: the Hutus' and the Tutsis' (Corey and Joireman, 2004). The updated mythology glorifies the reign of the Tutsi monarchy "… [and the] theatre productions inadvertently emphasise and perform ethnic differences" (Breed, 2008: 34). There is a clear distinction, I assert, between re-imagining the future and glibly rewriting the past.

In the realm of social ritual and in sharp contrast to the approach of the TRC, Rwanda opted to pursue a model of 'retributive justice'. The relative merits of the two methods of dealing with the past are beyond the scope of the present study, although Cape Town legal scholar Jeremy Sarkin sounds a warning that the choice of "…how a society deals with its past has a major determining influence on whether that society will achieve long-term peace and stability" (2001:143). By opting for retributive justice, Rwanda has chosen to emphasise the desire for vengeance, which it is feared may contribute towards a risk of further cycles of ethnic violence in future (Corey and Joireman, 2004). But more importantly, I venture to suggest, the Rwandan authorities have chosen to manipulate the past rather than to re-imagine the future. The state-sanctioned criminal tribunals are a perversion of the traditional *conciliatory* ritual from which they take their name, the *gacaca* (Le Mon, 2002). This traditional arbitration device is a community-based informal process submitted to by parties in a civil dispute; its legitimacy predicated on the willing participation of the entire community. The setting up of *gacaca* courts can be seen as a betrayal of the cultural heritage which, I propose, courts the risk of sabotaging the mission at the outset. Furthermore, on the question of implementation; it's not known how the available legal resources will be

stretched to accommodate the estimated one-hundred and twenty-thousand accused who are due to stand trial (Straus, 2004).

This overview should not be misconstrued as an attempted analysis of the Rwandan situation; it is intended to illustrate some of the pitfalls associated with the transitional justice and reconciliation. While I believe I have demonstrated the value of theatrical intervention in promoting and facilitating dialogue, I am compelled to stress that cultural forms are inherently politicised; cultural forms carry baggage that must be recognised for what it is and stripped away to whatever extent is practical. *Truth in Translation* is not immune to this hazard: it inevitably carries with it an embarrassment of riches, which attracts either more or less significance depending on the context into which it is being transplanted. It is for this reason that the younger Grotowski advocated a Poor Theatre; he desired a theatre stripped down to its bare essentials in order that the Truth be revealed (Grotowski, 1984).

Artaud went even further to envision a theatre in which the body of the actor communicates directly with the nervous system of the audience (Ward, 1999); he had envisioned a theatre where the bodies of performers and spectators are stripped of their cultural carapace and their social masks while, in a metaphoric sense, they are flayed of their very skins. This would ensure that the confrontation with prevailing mythologies would be direct and the experience distinctly inter-subjective; in Turner's liminal realm of anti-structure class and culture, ethnicity, gender, and all manner of markers through which we are defined, cease to exist. A common humanity is acknowledged and the future is re-imagined.

Stanislavsky, his contemporaries and their forebears each contributed to the insights we are fortunate to have the opportunity to develop in our own epoch; reflecting on and contributing to the current intellectual climate, just as they had done in theirs. Surely we owe it to successive generations to exploit the knowledge emerging from the neuroscience laboratories, some of which I venture to suggest, was unknowingly recognised by individuals such as Stanislavsky, Brecht, Artaud and Grotowski.

It is thanks to those who have gone before that we are today able to question the wisdom of Descartes and to embrace the paradox that so perplexed Diderot. The earlier thinkers had scarcely dreamed of a quantum world where Schrödinger's cat would go missing, only to turn up both dead and alive. But today, thanks both to the speculative musings of artists and the empirical efforts of scientists, we are able with confidence to proclaim that it is so: that

emotions are a vital part of our subjective experience; that we must both think *and* feel if we are to truly engage with our world; that neural structures in our brain and viscera allow us to communicate directly with the nervous systems of others; and that we are able even to experience a sense of the Divine within our own bodies.

Yet, there remains so much more to explore.

Fortunately though, neuroscience - which began as a branch of biology dealing with the anatomy, physiology and biochemistry of nerves and nervous tissue - is increasingly being recognised as a truly interdisciplinary field of study (Choudhury and Slaby, 2011). The body of emerging knowledge is being seized upon and driven forward by scholars in such diverse spheres as chemistry, physics, mathematics, economics, computer science, engineering, linguistics, philosophy, psychology, and of course medicine with its allied disciplines. To this list I would selfishly argue for the inclusion of the dramatic arts, but it is important to acknowledge that the collective endeavour is for the ultimate benefit of humanity.

Buddhist spiritual leader, the Dalai Lama, and a number of scholars from other contemplative traditions are collaborating with teams of scientists conducting research into the neuroscience of altruism through Stanford University's Centre for Compassion and Altruism Research and Education (Haven, C. 2010). The links between emotion and the physical health of an individual have long been suspected, but researchers have recently confirmed links between "…chronic distressing emotions and lowered immune resistance" (Goleman, 2003:viii). Other recent research provides distressing evidence that the damaging effects of traumatic experience are transmitted to successive generations through epigenetic modifications (Yehuda, et al, 2009; Sarapas, et al, 2011). These findings have significant prognostic implications for communities being born and raised in regions of endemic conflict.

However, ongoing research into neuroplasticity and neurogenesis provides hope by revealing how the brain is able to reorganise itself, to change and to adapt under the influence of particular types of experience, both negative and positive (Draganski and May, 2008). I speculate that even the lasting damage associated with Post Traumatic Stress Disorder may be addressed through the ineffable experiences theatre is able to offer.

The Colonnades Theatre Laboratory that created *Truth in Translation*, has spawned the Global Arts Corps. Their stated mission is to:

> … bring together world class artists from opposite sides of civil, religious and racial conflict who, together, create theatrical productions that tour the world's conflict zones to advance the cause of reconciliation. (Global Arts Corps, 2011).

Under their auspices an ensemble piece created with actors in Belfast is scheduled to open later in 2012; in Cambodia a circus production is planned to explore inter-familial relationships within a community that was never afforded a post-conflict reconciliation process; and Albanian, Serbian and Roma actors are planning a collaboration to explore shared myths.

At the time of writing, local researchers have been granted ethical approval for a cross-disciplinary study that seeks to map brain empathic responses to expressions of forgiveness and remorse in post-apartheid South Africa (Morris and Gophe. 2012). The research was initiated by Professor Pumla Gobodo-Madikizela, a former commissioner on the TRC: "We believe that the historical experience of being white or black during apartheid may have lasting intergenerational consequences in the way people respond to racially charged situations" (ibid:5). I look forward to the empirical data that may emerge from this research, and urge local theatre practitioners to incorporate the findings into the embodied repertoire.

By means of performance I believe we might proceed feelingly, healing the wounds of the past as we re-imagine ourselves into a brighter future.

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