

*The energies that are released when we heal from trauma are the wellspring of our creative, artistic, and poetic sensibilities, and they can be summoned to propel us into the wholeness of our intelligence.*

- Levine 2005:80

## CHAPTER 3: TRAUMA

### 3.1 Defining trauma

The literature is saturated with definitions of trauma. For a long time healthcare professionals have been grappling with the question of what exactly trauma constitutes: consequently definitions have evolved a great deal over a number of years. For the purposes of this study, the focus will primarily be on more recent definitions. These also tend to emphasize the individual's own perception of the trauma and to make provisions for subtleties that were previously given less consideration.

Spiegel (2008) describes the essence of traumatic stress as helplessness, which he defines as “a loss of control over one's body”. He continues to clarify this in the following words (Spiegel 2008): “[t]he mental imprint of such frightening experiences sometimes takes the form of loss of control over parts of one's mind – identity, memory, and consciousness – just as physical control is regained”. Peichl (2007b:23) describes trauma as a toxic condition, a mixture of intense anxiety, absolute helplessness and a loss of control<sup>6</sup>. According to Levine (1997:128-9), the factor that determines whether an event could be classified as traumatic to the person is whether its impact remains unresolved. The importance of the perception of the real nature of an event by an individual is tantamount to ascertaining whether an experience was traumatic to a person. The term ‘perceived life-threatening experiences’ or ‘perceived overwhelming experiences’ features repeatedly in the literature (e.g. Levine 2005:7, Van der Kolk & McFarlane 1996:6). It is also the perception of the event that will determine the extent and nature of the impact it has on the person.

The term ‘trauma’ originates from the Greek *trauma* (“wound”). This term can be interpreted in the context of both physical and psychic wounding. In this chapter trauma leaving a

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<sup>6</sup> In Peichl's own words (2007b:23): “Trauma, so wissen wir, ist ein toxischer Zustand, eine Mischung aus Todesangst, absoluter Hilflosigkeit und Kontrollverlust.”

psychological impact is discussed, not physical trauma or injury as such. However, the boundaries between events and their effects often overlap, and physical trauma that leaves a lasting psychological impact also qualifies in the context dealt with.

To ensure clarity, it is important for the purposes of this study that a distinction be drawn between trauma and traumatic events. This is clear in Corsini's (2002:1019) description of trauma as the *result* of a painful event, while the 'traumatic event or experience' constitutes the injurious event itself. Corsini's definitions of the former are quoted below, followed by his definition of the latter (2002:1019):

1. The result of a painful event, physical or mental, causing immediate damage to the body or shock to the mind. Psychological traumas include emotional shocks that have an enduring effect on the personality, such as rejection, divorce, combat experiences, civilian catastrophes, and racial or religious discrimination.
2. Continuing result of such an event to the body or mind or both. Plural is traumata, traumas.

Physical or psychic injury stressful or shocking (*sic*), that may be the original cause of some emotional or mental disorder. Some such events early in life may be the foundations for adult neuroses or psychoses.

Scaer (2005:58) describes the effects of trauma on the brain as follows:

In the brain of the trauma victim, the synapses, neurons, and neurochemicals have been substantially and indefinitely altered by the effects of a unique life experience. Not surprisingly, the perceptual experience that constitutes the mind has been equally altered ... Trauma thus represents a time-based corruption of learning. The brain in trauma has lost its ability to distinguish past from present, and as a result it cannot adapt to the future. This confusion of time further immobilizes the trauma victim, who still remains immobilized by a thwarted freeze discharge. Procedural memory is bombarded by environmental and internal cues that represent old, unresolved threat.

From the above description it can be seen how the alteration of neurological processes can give rise to the manifestation of various physical and psychological symptoms. This illustrates how the barrier between physical and psychological trauma overlaps. Sutton (2002:25) confirms this when she explains that sensory overload occurring during a traumatic event can indeed result in lasting damage to brain processes. Struwig (2008:13) is of the opinion that the incident and symptoms cannot be separated when defining trauma. She writes that different aspects such as the event, culture, resilience, social support and trauma-related symptoms should be considered together. Van der Kolk and Saporta (1991:199) emphasize the fact that trauma is different from stress in that it causes lasting biological emergency responses while stress does not. It is

precisely the extent of the effects of these lasting responses on the musician that is being investigated in this study. Scaer (2005:206) considers both stress and trauma as lying on the same continuum, but makes the distinction that the sympathetic nervous system, responsible for the fight/flight response, plays a greater role in stress while the parasympathetic nervous system, responsible for initiating the freeze response, is often involved in trauma-related diseases.

All the above mentioned definitions hold truth. However, the definition by Peichl is perhaps the most appropriate for this study and best takes into account precisely those aspects that will be highlighted later as applicable to musicians. In addition, Scaer's (2005:71) description of trauma as "a disorder of the perception of time, of the body, and of the self" has significant implications for affected musicians. This will be illustrated later in this study.

### **3.2 Types and dynamics of trauma**

In a discussion on the various types of trauma it is important to distinguish between traumas experienced collectively by a whole group of people or segment of the population, and traumas experienced by an individual. In the former category belong victims of war, natural disasters such as hurricanes, tsunamis, volcanoes and earthquakes, groups of people present during an armed robbery, multiple passengers in a bus or automobile accident, etcetera. The latter category includes abuse, rape, incest, post-abortion trauma, etcetera. Where more than one person suffers through the same ordeal, there is a shared burden and the way of dealing with this during and after the event differs from trauma experienced by a solitary victim at a particular time.

The extent of the influence of a traumatic event on a particular individual depends on the dynamics, duration, and severity of the particular trauma, as well as the subjective experience of the individual victim. The past experience of the individual plays a role in shaping the persons' perception of the extent of the threat and the capacity to respond adequately and defend themselves. Factors that Sikorski (n.d.:2) identifies to be of subjective nature are the degree of intensity, the experience of the stress and helplessness, the cognitive, affective and behavioural reactions to both recollections of and external events that may serve as reminders of the traumatic experience.

In the most damaging cases of individual trauma, usually those caused by a human perpetrator, the effect can be injury to the self or self-concept of the victim. Freud (1965:14) observed that traumas and suffering inflicted upon us by other humans leave the most powerful and painful traumatic imprint. Luxenberg, Spinazzola and Van der Kolk (2001:374) identify the developmental level at which the trauma occurs and whether it occurs in the context of an important relationship in the victim's life as critical elements in determining psychopathology outcomes.

Scaer (2005:215) states that complex trauma is associated with PTSD (Post-traumatic Stress Disorder) victims who were subjected to many episodes of traumatic stress. He (2005:262) particularly states that multiple events and forms of trauma experienced in childhood lead to complex trauma and he specifies the associated syndromes to be conversion, somatisation, dissociation, borderline and narcissistic personality disorders. Van der Kolk (1996a:203) states that if the psychopathology of these patients is understood, it becomes possible to understand much of their symptomatology as caused by adaptations that were necessary at the developmental level at which the trauma occurred in order to survive the experiences.

Intergenerational trauma is the transmission of the consequences of trauma from one generation to the next (Maviglia 2006:1). Sources making mention of and attempting to explain intergenerational trauma include Levine (1997), Yehuda, Schmeidler, Elkin, Houshmand, Siever, Binder-Brynes, Wainberg, Aferiot, Lehman, Guo and Yang (1997), Heart (2005) and Maviglia (2006). Segments of the population affected to a large extent include Native Americans, Jews and Holocaust survivors, slaves and oppressed peoples, generations born after wars, and generations following Apartheid and other regimes of racial segregation and discrimination. Musicians are found in all these categories. It is important to acknowledge that trauma does not only affect people directly involved during the exact time of its occurrence, but that its remnants could be carried over into the following generations. A practical example for the music teacher is that awareness of the intergenerational nature of trauma implies that sensitivity to the background and psychic disposition of 'previously disadvantaged' music students in South Africa is advisable.

Two categories under which the manifestation of trauma symptoms is clinically classified are ASD (Acute Stress Disorder) and PTSD. These will be discussed at length in the following two sections since they feature prominently in discussions in this study. It is important to note that

various types of traumatic experience, including all those discussed above, can all lead to reactions that fit under these diagnostic categories. Educators should be familiar with all these types of trauma to enable them to understand whatever situations they might encounter.

### 3.3 Acute Stress Disorder

Those who have experienced a traumatic event or events can respond in a number of ways following the event(s). Factors obvious to others that will influence a person's response are the nature and severity of the event. Perhaps not equally obvious to others is the individual's own past history and experience. This in itself can influence the way in which the person responds, as well as contribute to the level of resilience or level of vulnerability of a person in any given circumstance. Vulnerability to trauma is discussed in section 4.5. Sadock and Sadock (2003:624) emphasize that the stressors that cause ASD as well as PTSD are severe enough to affect almost anyone. As was illustrated by the definitions of trauma as quoted in section 3.1, many sources have expanded on this view to include events that are traumatic to an individual as a consequence of the context in which they occur and would not necessarily affect everyone experiencing the same event.

When a person responds in ways that meet a number of different criteria as set out in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR)* (APA (American Psychiatric Association) 2000:469-72), ASD can be diagnosed. Another source frequently used as a diagnostic guideline is the ICD-10 (*International Statistical Classification of Diseases and Related Health Problems*) (World Health Organization 2007:F43.0). Therein the disorder is referred to as *Acute Stress Reaction*. The description of ASD in the *DSM-IV-TR* (2000:469) makes it clear that the condition is a reaction to a traumatic event or events and is recognized by characteristic anxiety, dissociative and other symptoms with its onset being during or after a traumatic event. For a diagnosis of ASD to be made according to the *DSM-IV-TR*, the disorder must last for a minimum of two days and resolve within four weeks after the event. For complete diagnostic criteria the abovementioned sources should be consulted. Sadock and Sadock (2003:595-99, 623-31) contain useful comparative information as significant differences exist between the various diagnostic guidelines available.

Important symptoms of ASD as identified by the *DSM-IV-TR* are listed below (APA 2000:469, 471-2):

Dissociative symptoms during or after the event such as a subjective sense of numbing; detachment or absence of emotional responsiveness; derealisation; depersonalization; or dissociative amnesia. These are also clarified as guilt feelings, concentration difficulties, feeling detached from their bodies, experiencing the world as unreal and inability to recall details of the event.

The event is persistently re-experienced or reminders of the trauma are avoided. Hyperarousal or anxiety is experienced, such as difficulty sleeping, exaggerated startle response, motor restlessness, flashback episodes, etcetera. Experiencing significant impairment in areas of daily functioning.

The most acute symptoms of ASD are experienced in the period of 48 hours following a traumatic event. Symptoms lasting up to one month after the event are still classified as such (Sutton 2002:23). Bremner (2002:180) even warns that the possibility of ASD in patients who have been retraumatized should be considered. The condition can be a predictor of PTSD (Post-traumatic Stress Disorder). In fact, according to *Psychology Today* (2007) the diagnosis was established in order to help identify individuals at risk for PTSD. *Psychology Today* also claims that Cognitive-Behavioural Therapy can diminish the chances of a person with ASD of developing PTSD from eighty percent to twenty percent. After careful consideration of additional sources (see sections 3.8 and 3.9), this researcher concluded that it may be safer to predict such high rates of recovery if a more integrative approach with therapies enhancing and complementing cognitive-behavioural intervention is adopted. Cognitive-behavioural and verbal therapies on their own cannot adequately address the completion of the immobility response, which Levine (1997:105) explains is necessary to prevent the accumulation of ‘frozen energy’.

According to Gibson (2007), there are a greater number of dissociative symptoms for ASD (Acute Stress Disorder) than for PTSD, although the symptoms of the two disorders overlap. She describes these additional symptoms to be the feeling of not knowing where one is or feeling as if one is outside one’s own body.

Levine classifies symptoms which he states constitute the ‘core of the traumatic reaction’. These are (Levine 1997:147):

- Hyperarousal
- Constriction
- Dissociation and denial
- Feelings of helplessness.

These symptoms will again feature prominently in the discussion on PTSD, dissociation and psychosomatic symptoms.

According to *Psychology Today* (2007), the most effective psychotherapeutic intervention strategy in cases of ASD is Cognitive-Behavioural Therapy. As can be seen in section 6.1, the respondents to the Research Questionnaire indicated that some treatments used in PTSD are also successful in treating ASD.

### **3.4 Post-traumatic Stress Disorder**

When the stress reaction to a traumatic event persists for a period of longer than one month, or emerges even years after the event, a diagnosis of PTSD should be considered after comparing symptoms to the criteria listed in the *DSM IV-TR* (APA 2000).

The diagnostic criteria of PTSD, as specified in the *DSM IV-TR* (APA 2000:467-468), are exposure to a traumatic event that involved either threatened death or serious injury to the individual, or threat to the physical integrity of the self or others. The person's response at the time of the traumatic event must have involved intense fear, helplessness, or horror. This event is persistently re-experienced: avoidance of the stimuli associated with the trauma, numbing of general responsiveness and symptoms of increased arousal exist. In order to diagnose PTSD the duration of the symptoms has to be more than one month and the symptoms must cause stress or impairment in social or occupational functioning. It must be noted here that in cases of delayed onset the symptoms can appear at least six months up to years after the traumatic event. Scaer (2001:8) points to the cyclical nature of the symptomatic criteria for PTSD which he says reflect “cyclical autonomic instability, with patterns of heightened sympathetic arousal alternating at times with clear and dramatic parasympathetic dominance”. Scaer (2005:2-6) cautions about the narrowness of conventional definitions of events that are classified as capable of causing PTSD. He argues that these do not take into account accumulation of multiple traumas.

A diagnostic classification closely related to PTSD is that of Disorders of Extreme Stress Not Otherwise Specified (DESNOS). Luxenberg *et al.* (2001:375) explain that DESNOS is associated with complex types of trauma such as interpersonal trauma and extended trauma or multiple traumas. The criteria for DESNOS or complex trauma have far-reaching implications for musicians. According to Luxenberg *et al.* (2001:375), disturbances in affect and impulse regulation, in attention or consciousness, in self-perception, in relations with others, in somatisation and in systems of meaning are required for diagnosis. If self-perception is altered,

this will also manifest in self-confidence which directly affects the way a student works as well as the way he or she performs on stage. Since music is a form of communication, any disturbance in relations with others also affects musical communication, while disturbances in attention were the most common concern for teachers working with traumatized music students (see chapter 6.2).

Broadly defined symptoms of PTSD include the re-experiencing of the event, a lack of affect or numbness, and active avoidance of any reminder of what took place (Sutton 2002:22). Bradshaw (1990:217) particularly lists symptoms of PTSD as anxiety attacks, over-control, memory lapses, depression, age regressions and hypervigilance. Noticeable is his use of the term ‘unresolved grief’ in close association with his definition of PTSD.

Definitions of PTSD by practitioners of traditional medicine such as Ayurvedic practitioner Das (n.d.:1) underline that trauma is an unintegrated or unresolved past experience that leaves an imprint which triggers emotional or physiological symptoms. This is very similar to, albeit slightly more inclusive than, the viewpoint held by the allopathic healthcare profession, as quoted in the *DSM IV-TR*. Writers like Levine, Nijenhuis *et al.* and Scaer frequently referred to in this chapter are concurrently moving very much in the same direction. Chinese medicine’s focus on meridians or energy channels (Hammer n.d.) and Levine’s method of ‘somatic experiencing’ have some aspects in common. It is clear that the definition some authors give is much broader than the concept defined in the *DSM IV-TR*. This also includes the concept of the impact of many consecutive small traumas potentially resulting in the manifestation of PTSD symptoms.

*Psychology Today* (2006) identifies a cause behind the symptom of blunting of the emotions as possibly that people with PTSD continue to produce high levels of natural opiates, hormones that are responsible for enabling a person to endure pain, even after the danger has passed. In addition, the same source states that studies have shown that cortisol levels tend to be low in people suffering from PTSD while epinephrine and norepinephrine levels tend to be high. The authors argue that high norepinephrine levels could be a reason why traumatic memories are often engraved more strongly than ordinary memories. Roth and Friedman (1998:12) agree with this statement but also point out that extreme levels of arousal could limit attention to the extent that little memory is retained.



Antelman, Caggiula, Gershon, Edwards, Austin, Kiss and Kocan (1997:297-9) refer to a very important aspect of PTSD symptoms, namely the oscillatory nature of the presentation of symptoms. They specify that systems affected could be the neurochemical, physiological or endocrine systems. According to their reasoning, oscillation is an attempt to restore homeostasis when highly sensitized systems reach their limits. When these systems are affected, changes in behaviour pronounced enough to be observable by others can occur. It is in this cyclic nature of the presentation of PTSD symptoms that the possibility exists for them to be more easily identified by teachers who see students regularly over a long period of time than general practitioners who may sometimes only have one short consultation in which to make a diagnosis. If teachers could be more aware that changes in students' behaviour from week to week could be indicative of trauma-related symptoms, particularly pertaining to emotional behaviour, avoidance and over-reacting, they could notice problems early on. Therefore, this study proposes that if music teachers are adequately trained in recognising the presentation of such oscillatory phenomena in their students, they could find themselves in an excellent position to make appropriate referrals.

Whilst acknowledging the importance of the PTSD diagnosis, Winkel (2007) draws attention to a neglected component of the trauma response, namely Post-traumatic Anger which he refers to as 'the other face of PTSD'. He criticizes the view that sufferers of PTSD, categorized as an anxiety disorder, are full of fear and anxiety and not full of anger and argues that PTSD could also qualify as an anger disorder. Winkel's research belongs to the field of Victimology and he (2007:37-44) also addresses the issue of PTSD as a precursor for repeated victimization. Therefore he proposes that PTSD treatment may have preventive potential (2007:44).

### **3.5 Vulnerability to PTSD**

Some people recover remarkably from the most harrowing experiences while others take much longer to 'bounce back' from extreme experiences, if they indeed ever recover fully. Regarding the roots of vulnerability, Chappell (2003:83) identifies them to be the family life history and parental conditioning. He also believes that vulnerability and causation each need the other to exist, but that no particular one precedes the other. In Chappell's words (2003:83): "Vulnerability and causation ... are the tools of the irritation and pain that create suffering, crisis, and the possibility of consciousness-raising, apparently the main purpose of life."

Researchers have singled out certain predictors and risk factors for the development of PTSD. According to various authors, including Van der Kolk, Van der Hart and Marmar (1996:311) and McFarlane and Yehuda (1996:175), dissociation at the time of the trauma increases an individual's chances of developing PTSD. Dissociation is such an important concept in the discussion of trauma that section 3.8 is devoted to a discussion thereof. If dissociation can be resolved, the probability for a positive outcome is greatly elevated. Levine (1997:99-100) is of the opinion that trauma (as a *result* of painful experience, see Corsini's definition quoted in section 3.1) will not occur, provided the person (or animal) can respond in a way such as fleeing or defending itself, discharging energy and resolving the threat. However, the authors quoted in this study all show that threats are often not resolved and that this causes the problems discussed. Scaer (2005:262) identifies prior childhood trauma as the most important predictor of dissociation when confronted with subsequent life trauma. Not only are these individuals' chances of developing problems elevated, but their prognosis may also be affected. Luxenberg *et al.* (2001:382) found low scores on early childhood measures of competence and/or safety and the presence of multiple forms of trauma during early childhood to be indicative of a poor prognosis. The researcher believes that Scaer's (2005:262) observation is of critical importance: "The very factors that tend to determine whether a person is likely to be traumatized by a specific event are those that also predispose the victim to tendencies to dissociate in the first place."

Levine (1997:18) states that people are vulnerable to the effects of trauma since they have genetic memory of being easy prey. Major trauma experienced in a previous generation could also increase the following generation's vulnerability to trauma. Yehuda *et al.* (1997) conclude that the children of Holocaust survivors may be psychologically and 'biologically' vulnerable to stress and trauma. Paul (1997) quotes Rachel Yehuda explaining that "[w]e don't walk into trauma equally, so we don't all come out of it equally." Other risk factors singled out in the same article are previous trauma, childhood abuse and a family history of alcoholism and depression.

Conclusions to the research by Liebschutz (2006:47) include that trauma and PTSD in primary care are associated with substance misuse and pain. Studies in progress by researchers at Kent State University Department of Psychology (2008) are based on previous pilot work that found a negative correlation between (elevated) levels of cortisol during motor vehicle accidents and the development of PTSD, and positive correlation between (elevated) levels of norepinephrine and

the development of PTSD. The cortisol connection had previously been researched by Yehuda, Southwick, Nussbaum, Wahby, Giller and Mason (1990). They found a correlation between low cortisol levels and the development of PTSD. It is predicted that there may come a time when a blood test can indicate who is at greater risk and needs specific treatment (Paul 1997). Although they concluded that low cortisol levels are associated with clinically significant PTSD symptoms, Yehuda *et al.* (1997) do not draw any links to its similar nature to Adrenal Fatigue Syndrome (AFS), as described by Wilson (2001). While one of the prime symptoms of AFS is lowered cortisol levels, the most important cause is chronic stress (Wilson 2001:48). Identifying a symptom of PTSD has merit, but it may be equally important to consider natural explanations for lowered levels of cortisol, such as Wilson's research on and conclusions about the functioning of the adrenal glands.

If the correct measures are taken immediately following trauma, including cognitive-behavioural intervention (*Psychology Today* 2006) and other therapeutic interventions, the chances of developing PTSD are reduced. However, according to Levine (2006), the longer the period that elapses between 'traumatic activation' and the resolution thereof, the longer the recovery period becomes. Levine's work (1997:101,103,105) places great importance on the resolution of the immobility response by discharge of the frozen energy accumulated during the traumatic response. He holds the opinion that a person will be traumatized when the neo-cortex overrides the instinctual completion of the immobility response, interrupting or preventing the trembling discharge from completing the cycle. In his view, if this cycle is properly facilitated and correct techniques for emotional and energetic support are offered in the immediate aftermath of trauma, as he describes (Levine 2005:83-90), PTSD will not develop. It follows that the indiscriminate use of medication to suppress reactions in the immediate aftermath of traumatic events may also interfere with the completion of the very response cycle that is so important to prevent development of long-term adverse symptoms.

Vulnerability can also include the possibility of subsequent future events triggering traumatic reactions. While Kandel (2006:342-3) points out that fear can easily become associated with neutral stimuli through learning, he explains that such learned fear, which he also associates with PTSD, can easily be reactivated by various stressful circumstances. With repeated exposure to even little traumas or the witnessing of apparently everyday forms of violence, resilience can be overpowered and people can manifest symptoms of PTSD. In her book *Common Shock: Witnessing Violence Every Day* Weingarten (2003) particularly highlights at length the influence

of such accumulated experience, including secondary traumatization caused by witnessing of even minor forms of violence.

From the above discussion it can be concluded that there are a variety of factors that should be considered and that could play a role in vulnerability to trauma. This is an important reason why individuals respond in many different ways to traumatic events that may seem similar. It is important that teachers are trained to develop an understanding of this fact.

### **3.6 Effects of trauma**

A discussion about trauma is not complete without mentioning Sigmund Freud's work. Although knowledge on the subject has expanded greatly since Freud's time, he played a key role in framing ideas in the first place. Freud (1939:76) observed that trauma and the reactions to trauma have a great psychical intensity, that the effects of trauma can result in an organization within the mind independent of other mental processes, and that the possibility of psychoses exists when psychical reality takes precedence over external reality. These are all possible effects of trauma that can present in cases of particularly severe trauma or in individuals with vulnerabilities. However, fortunately most individuals have adequate resilience, support structures and coping mechanisms protecting them from developing such devastating symptoms. It is still likely that traumatized individuals will be affected by symptoms, perhaps less severe than those mentioned above, but still warranting detection, explanation and treatment.

Regardless of possible pathological manifestations and effects that can be categorized as illnesses, the most direct and immediate effect of trauma is a drain on the energy the musician has available for other tasks. Watkins (2005:2-8) explains at length how great amounts of 'self energy' are needed by artists in their professional capacity. He also classifies 'self energy' as an expendable commodity. Therefore it can be deduced that the extent of the toll any particular trauma takes on the available energy of the musician is directly related to a decrease in creative output. In addition, Montello (2002:202) describes that in cases of severe childhood abuse, a child subpersonality becomes frozen at the age when the primary trauma occurred. She declares that the core self is still always present, but that a great amount of psychic energy is required to deal with the unfulfilled needs of so-called subpersonality(ies). Montello describes this drain of energy and identifies awareness as an essential component of the healing process (2002:203):

Ideally, this same energy could be used more productively in facilitating creative growth and change, but instead, the subpersonalities, which are typically fear based, resist change and keep you centered in survival mode ... The way to harmonize and integrate these fragments into a whole is to first become aware of who they are and when they are throwing you off balance; and second, to find a way for your core self to lovingly communicate with these subpersonalities and get them on the same page with respect to your mission in life.

It can be concluded from the explanations of Watkins (2005) and Montello (2002) that trauma drains our energy. As will be seen in the remainder of this section, other authors also refer to the effect trauma has on energy, described in different ways such as ‘frozen energy’ of the immobility response (Levine 1997:99-100), energy released in order to prepare for fight or flight, and the release of energy when we heal from trauma (see the quotation from Levine’s work at the beginning of this chapter, p 47).

Sutton (2002:24) explains the series of processes that trauma starts as follows: “Trauma does not occur due to the external factor of a single event. Trauma is enmeshed in an external process of an attempt to assimilate how the event has irrevocably affected the individual.” She also explains that what traumatizes the individual in such a situation is the loss of the ability to experience, act on and re-experience one’s own influence, since the person is controlled by an event happening to him or her (Sutton 2002:31). Unfortunately, according to Jensen (1998:58-9), these effects of loss of control can be so powerful as to rewire the brain and result in learned helplessness. He also states that if the victim was able to make choices and act upon those during a traumatic situation, regardless of its outcome, learned helplessness would not occur in the aftermath. Nancy Coles, the clinical director of the centre where pianist Linda Cutting received treatment for traumatic response to incest during her childhood, illustrated trauma by drawing a black hole. Cutting (1997:73) quotes Coles as having said in a lecture on trauma theory at the abovementioned treatment centre: “It’s intrusive, unpredictable, creates a state of helplessness, and disrupts homeostasis. Trauma affects everything – even one’s balance”.

Reactions during and in the immediate aftermath of trauma as described by Spiegel (2008) include:

- Being dazed
- Unawareness of serious injury
- Experiencing the trauma as if it were in a dream, floating over their own body

Seeking comfort from imaginary protectors, also referred to as ego-states (in cases of child abuse).

If traumatic events are not handled adequately and there is no or insufficient intervention, trauma remains unresolved. Levine (2005:3) states that unresolved trauma can potentially have some or all of the following effects:

- Alter people's habits and outlook on life
- Take its toll on family and interpersonal relationships
- Trigger physical symptoms and disease
- Cause problems with decision-making
- Lead to addictions
- Cause dissociation
- Precipitate self-destructive behaviours.

Conversely, the effects of trauma, when observed, can provide signs that trauma is a cause of problems.

The list of long-term signs of unresolved trauma is so extensive that care has to be taken not to identify these as caused by trauma where none might exist. Stein (2007:443-444) explains that the experience may go beyond the capacity of words to express it and the victims may become silent. Often, in these cases, the impulse to retell may manifest via somatic, kinaesthetic or aesthetic registers (Stein 2007:443-444). This can lead to the development of what Scaer (2005:209-251) describes as a large variety of hard-to-understand or undiagnosable diseases. He also acknowledges that many of the diseases referred to below would be considered as psychosomatic in nature by other researchers and medical practitioners. Scaer (2005:214-250) classifies these under five broad categories as listed here with examples for each category:

- Diseases of abnormal autonomic regulation such as fibromyalgia, migraine and irritable bowel syndrome;
- Syndromes of procedural memory such as myofascial pain and other forms of chronic pain;
- Diseases of somatic dissociation, such as reflex sympathetic dystrophy;
- Disorders of endocrine and immune system regulation such as hyperthyroidism and diabetes,
- Disorders of cognition and sleep, such as attention deficit/hyperactivity disorder, narcolepsy and sleep paralysis.

An important aspect of the symptoms traumatized people exhibit is the immediacy of their emotional reactivity. They tend to respond immediately to potentially threatening stimuli, almost as if survival depended on their response to ordinary situations, without making psychological

assessment about the cause of their arousal. This could cause them to overreact and intimidate others (Van der Kolk & Saporta 1991:202) and is connected to the observation that under stress these people may feel as if they were traumatized again (Van der Kolk 1996b:291).

There is another aspect of unresolved trauma that should be referred to and this is the issue of the absence of unconditional love. The emotional trauma inflicted upon a child who does not receive unconditional love can, according to Miller (1997) and Weeks (2000), result in such a child not developing an inner sense of self. It can possibly even lead to the development of narcissistic personality disorder. Weeks argues that children and even adults traumatized in such a manner are frequently encountered under high-achieving musicians. Miller (1997:1) writes that emotional discovery about the history of our childhood is the only enduring weapon to combat mental illness. This is perhaps a limiting viewpoint. Although the truth of the influence of early experience cannot be negated, in reality whilst going through life we are continually confronted with traumatic or challenging encounters. Apart from time concerns of this method of treatment, revisiting old memories may even attract more unwanted circumstances into our lives. Due to the laws of resonance, a phenomenon that is repeatedly albeit briefly referred to in this chapter, the probability of experiences attracted being similar to the original traumatic experience is high as a result of the focus of energy on the particular experience. By focusing the attention on the past, treatment strategies that overemphasize revisiting past events can perhaps diminish capacity of taking control over current circumstances, capacity for making choices and responding to challenges, as well as overlooking so-called serendipitous opportunities for healing on the path through life.

In recent developments in the field of neuropsychology, biological changes caused by trauma are increasingly acknowledged as a causative factor in the symptoms characterising the aftermath. Van der Kolk and Saporta (1991:199) use the term ‘physioneurosis’ to describe this phenomenon. While Scaer (2005:58) refers to the relationship between changes in the brain of the trauma victim and alteration of perceptual experience, Nijenhuis *et al.* (2004) link trauma-induced neurobiological changes to difficulties with integrative functions.

Cutting’s description of how trauma can affect memory of music performers was discussed in chapter 3.5 and should also be explicated here. Scientific writers also emphasize trauma’s influence on memory. Bremner (2002:104-5) states that hormones released during stress such as norepinephrine and epinephrine can strengthen the laying down of memories while cortisol can

inhibit it. He further explains that such and other trauma-related changes in the brain can lead to distortions and other changes in memory of traumatized individuals. Bremner also observed that PTSD patients remember events that happened long ago but often suffer from an inability to learn new things (Bremner 2002:113). He (2002:111) describes flashbacks as automatic and uncontrollable events, not unlike Cutting's description of intrusive memories during music performance.

Scaer (2005:62) reasons that the process of kindling or neurosensitization leads to a situation where internal cues can trigger arousal related to a traumatic event. In PTSD this is the case when memories cause symptoms without external events explaining the reaction. Goddard (2005:2) states that each episode of remembering triggers a response by adrenergic hormones, causing recollection of the memory to potentially grow more vivid. Bradshaw (1990:180) calls neurologically imprinted experience 'anchors' and also confirms that experiences resembling the original trauma can trigger old existing anchors. Unfortunately, traumatic memories can become latent and re-emerge, even spreading themselves. Goddard (2005:1) compares the behaviour of traumatic memories with that of viruses in that they are inanimate pieces of information operating in a feedback loop and seeking to replicate themselves. He suggests that doctors may treat previously traumatized patients as persons infected with latent memories which may break out and subsequently cause new damage. In a more positive vein, Goddard (2005:1) believes that adrenoreceptor antagonists present some hope of helping to block reinforcing of the feedback loop. Notwithstanding the fact that trauma damages the brain, Scaer (2005:76) states that replication of new neurons in the hippocampus has been demonstrated, offering hope for recovery.

Different individuals will react differently to trauma. One's attitudes and beliefs play an important role in determining the extent of traumatic effects. Robertson (1999:223) identifies one's attitude to death and the degree to which a person feels that the world has become unpredictable as important factors influencing one's response to trauma. Important to consider is also the cumulative effect of multiple traumas: there comes a time when these effects cross the tolerance threshold of a person who previously showed high levels of resilience. However, there is a spectrum of clearly observable signs which can potentially indicate to the teacher that a problem exists. In addition to the symptoms described in the section on PTSD, the symptoms gleaned from responses to the teacher's questionnaire are listed in chapter 6.2.



The destructive potential of a traumatic event is a reality, while trauma can also be a catalyst for transformation. At different stages in recovery, both scenarios could be the case. Levine (2005:79) writes that several Buddhist and Taoist traditions see trauma as one of the ‘great portals’ or catalysts for surrender and awakening. He elucidates that transformation happens when we face an uncertain world and give up the illusion of safety. This process enables us to ‘reconnect with life’ and live fully in the present. In a similar vein, Tolle (1999:139) refers to the potential of emotional pain to bring an individual closer to awakening by stating that, ‘if you are trapped in a nightmare you will probably be more strongly motivated to awaken than someone who is just caught in the ups and downs of an ordinary dream’. The potential for traumatic events to precipitate growth in those who have experienced such events is also investigated from a scientific point of view. For instance, Drs Mark Chesler, Carla Parry and Bradley Zebrack devote themselves to the study of what they call ‘Post-Traumatic Growth’ (PTG). In an interview with Steven Ungerleider (2004:2-4), Chesler defines PTG as “the experience or expression of positive life change as an outcome of a trauma or life crisis”, contrasting it with resilience which he states is a ‘bounce-back’ while PTG suggests something gained in terms of quality of life. His work on PTG focuses on the study of long-term survivors of childhood cancer, acknowledging that PTG also occurs for survivors of other types of traumatic experience. (See also Tedeschi, Park & Calhoun 1998).

### **3.7 Dissociation**

Neither the concept of dissociation as a consequence of trauma nor the thwarted freeze response is at all new to the literature; both have been discussed by Freud, Janet and others (Breuer and Freud 1974). More recently emphasis has increasingly been placed by researchers on these aspects of the trauma response, leading to a much more comprehensive understanding of dissociation. From data obtained, this researcher has come to the conclusion that these aspects of the trauma response can perhaps have the most profound impact on musicians.

Scaer (2005:177) defines dissociation as “a subjective experience, a continuum of abnormal perceptions and behaviours that occur in people subjected to a traumatic event or even to an intense period of stress”. He continues by explaining that it is a disruption of consciousness, memory identity and perception of the environment and it may alter any of these states and function. Watkins and Watkins (1997:38) describe dissociation as a ‘separating process’ that can

be a normal reaction which protects people from frightening reactions and lowers their fear. They state that in the moment of dissociation the self becomes an object and the individual is protected from the externally initiated pain or internal fright. Hartman (1993:43) clarifies the function of dissociation as initially enabling the individual to live without constantly experiencing emotional pain and fear associated with abuse. He draws attention to the fact that it can, however, eventually impede growth and become a destructive force within an affected individual. Hartman (1993:43) writes: “[W]hat started as a survival strategy – most of the time born out of fear, anger and pain – can become a desperate and often self-destructive life style.”

Dissociation exists on a continuum, ranging from adaptive differentiation to pathological dissociation. Hartman synthesised the models of Peichl (2007a:162), Nijenhuis *et al.* (2004) and Watkins and Watkins (1997:32) into a representation of the spectrum of dissociation.

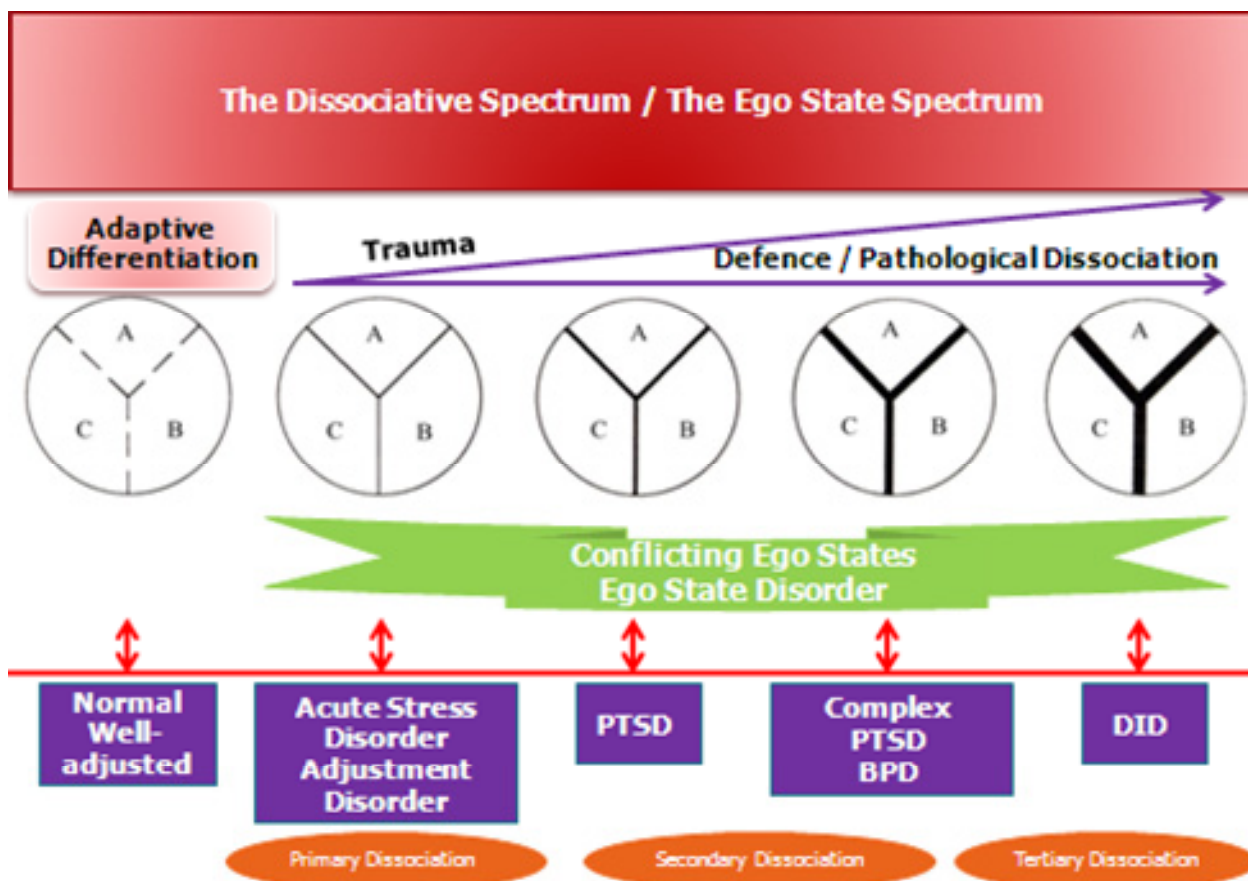


Figure 5: The Dissociative Spectrum as assimilated by Hartman (2009b) from the work of Peichl (2007a:162), Nijenhuis *et al.* (2004) and Watkins & Watkins (1997:32)

Nijenhuis *et al.* (2004) describe structural dissociation of the personality as ranging on a continuum from primary, through secondary to tertiary dissociation. This model holds that primary structural dissociation is characteristic of ASD and simple PTSD. At this level, the individual is unable to integrate the traumatic experience into his or her everyday experiences and parts of the traumatic experience are split off from the mainstream of consciousness. Symptoms such as flashbacks, nightmares, intrusive thoughts and partial amnesia may then occur. Secondary dissociation becomes evident in the manifestation of disorders such as PTSD and DESNOS. Hartman (2009b) notes that secondary dissociation is a manifestation of either a smaller or wider range of defensive subsystems (referred to as ego-states) that were not sufficiently integrated. Symptoms that can be experienced include out-of-body experiences, changed perception of time and pain, re-experiencing of traumatic memories or responding to cues that are salient reminders of recalled events. Secondary dissociation is often associated with childhood trauma. Tertiary structural dissociation is associated with Dissociative Identity Disorder (DID). The latter does not necessarily occur during a trauma but may emerge when inescapable aspects of daily life become associated with past complex trauma experiences (Hartman 2009b, Nijenhuis *et al.* 2004).

DID as depicted in the image on the far right of figure 5 is the most severe form of dissociation. Spiegel (2008) explains that the self of an individual suffering from this condition becomes fragmented and that different personalities may co-exist in one body. DID was previously known as Multiple Personality Disorder. A discussion thereof goes beyond the scope of this thesis. However, it should be noted that the abuser of one of the case study participants was diagnosed by healthcare professionals as suffering from this disorder. For more information on DID the reader is referred to the *DSM IV-TR* (APA 2000:526-529). Spiegel (2008) clarifies that DID can be regarded as a severe form of PTSD. He refers to the biological markers of DID as a smaller hippocampus and changes in certain neurotransmitters, as Scaer also points out for sufferers of PTSD, particularly for those with a history of childhood trauma (Scaer 2005:74).

Throughout his book, Scaer (2005) illustrates that the manifestation of dissociation can be multi-faceted, including physical and mental symptoms and ranging from normal adaptive dissociation to personality disorders and psychosomatic symptoms. Dissociation in its various forms is a common symptom in sufferers of PTSD. Fourie (2009:19) points out that according to Levine's model (1992:85-108), dissociation can be a "fragmentation of different dimensions of experience" as well as "over-association or over-coupling where experiences are joined together

in manners that cannot be integrated”. Fourie highlights that it is important that a distinction be made as to whether dissociation or over-association of traumatic responses occurred. Reaction to traumatic experience can cause dissociation, but what happens in the brain? Nijenhuis *et al.* (2004) explain that excessive release of stress hormones cause alterations in brain regions involved in major integrative functioning, leading to what he calls ‘threat-related integrative failure’ and the manifestation of dissociation.

Dissociation as such was discussed above. It can, however, play such an important role in the manifestation of various forms of attention deficit and concentration problems that can be observed by teachers in their students – and perhaps not always adequately understood - that some aspects specific to traumatized children deserve mention. Hartman (1993:42) has written the following about dissociation in abused children:

Children who have been emotionally neglected or physically, psychologically or sexually abused often dissociate from their feelings and from the memory of their abusive experiences to cope with the traumatic experiences. The abused child learns quickly that the expression of anger towards the abusers (frequently the parents) only results in more abuse. Accordingly, the child dissociates the anger and trauma, that means the ego splits in such a way that the feelings of pain, guilt, fear, confusion, powerlessness and so on are separated from the thinking self in order to survive the traumatic experiences.

It can therefore be deduced that the behaviour of children thus affected could appear very normal or, on the other hand, lack of integration may be evident when split-off parts of their experiences are expressed in various ways or lead to so-called ‘acting out’ behaviour. From the above it can also be seen that it may be a warning sign that trauma is affecting a child if he or she does not normally express his or her feelings.

Techniques to resolve dissociation include amongst others Nijenhuis’ action-oriented three-phase approach for the resolution of structural dissociation of the personality (Van der Hart *et al.* 2006) and Levine’s method of transformation and renegotiation by accessing memories through the felt sense which he calls Somatic Experiencing (SE) (Levine 2005 and 1997). What he means by that is the use of physical touch. Scaer (2005:265-7) recommends the use of touch (including acupressure and craniosacral techniques) and induced movement (including drawing, sculpting and dancing). In her work with five female adult survivors of childhood sexual abuse, Fourie found that hypnotherapy - in itself a dissociative phenomenon - can play a very important role in resolving dissociation (eg. Fourie 2009:100, 120-1, 372). This includes employing hypnosis to

access, re-associate, integrate and resolve traumatic material. On the other hand, music therapists very often work through means of controlled re-enactment of the traumatic encounter, providing the client with an opportunity to assert their own influence in the situation (eg. Sutton 2002:31). This aids the client in diminishing feelings of helplessness and can play a role in resolving the ‘freeze’ response so closely associated with dissociative symptoms.

### **3.8 Treatment of trauma symptoms**

In consulting the available literature on the handling of trauma sequelae, various treatment modalities emerged. A discussion of all these models is beyond the scope of this thesis. A selection of some of the timeless as well as the most current models was made. The models discussed below were decided upon based on the frequency with which they appeared in the literature survey as well as in the feedback from the questionnaires. (It is conceded that any literature review is only within the scope of any researcher’s limited knowledge, experience and exposure to literature materials.) These are discussed below. Some psychotherapeutic intervention strategies such as Cognitive-Behavioural Therapy, hypnosis, EMDR (Eye Movement Desensitization and Reprocessing), EMI (Eye Movement Integration) and the use of medication are mentioned. Therapies that incorporate movement and somatic aspects are also referred to. At the end of this section there is reference to how victims may experience growth and come to the point of integrating their experiences after asking the question ‘why’. Frankl’s method of logotherapy is cited in this regard. In acknowledgement of the diversity of cultures from which music students come, this is followed by a brief discussion of intervention models stemming from other traditions as well. Thereafter some principles behind vibrational medicine are linked to the healing properties of music, which is in itself sound vibration. Section 3.9 refers to alternative modalities while chapter 4.4 discusses the use of music and art in the recovery process.

At the moment of imminent death, “animals shake, sweat, and breathe it all out” (Scaer 2005:285). Scaer identifies the main cause of problems in how humans deal with trauma as the fact that they do not do so in the same way as animals, and problems develop because the emotional response to the trauma is not allowed to be completed. Levine (1997:100-1) blames this on the neo-cortex, overriding the instinctual responses, which has the original function of completing this cycle. Bradshaw (1990:217) points to the fact that during traumatic events all

resources are used to survive and no time exists for experiencing and expressing the actual feelings accompanying the event. Time to express feelings is necessary to integrate the actual trauma.

In all the stages of psychotherapeutic intervention, including the referral and diagnostic stages, care should be taken not to retraumatize an individual. Retraumatization can engrave deeper memory circuits, possibly leading to intensification of symptoms that can in turn require increased duration of treatment in order to be effective. Modern trauma-based psychotherapy works on the principle of synthesis and integration of traumatic material (Huopainen 2002:97-98). Bradshaw (1990:217) makes it clear that the goals of treating PTSD include helping people to live in the present. Van der Kolk (1994:12) maintains that this entails locating the traumatic experience in time, separating it from the reality of the present moment and perception of potential future events. Intrusive recollection and re-enactment is counterproductive to this process. A goal of all treatment should be to enable the affected person to return to an optimal level of functioning in his/her daily life and effect growth. Treating trauma-related anger could involve various methods of restorative justice, an example of which is face-to-face meetings among various parties connected to a particular crime (Winkel 2007:27). However, a discussion thereof is beyond the scope of this study and the reader is referred to Winkel (2007) for further information.

### **3.8.1 Pharmacological intervention**

The contribution of pharmacological intervention in the treatment of trauma can, if wisely administered under the supervision of a psychiatrist with the appropriate knowledge and experience, be of great value in treatment. While medication is used for the treatment of mood disturbances, Bremner (2002:249-50) states that there is hope for reversal of symptoms of trauma-related psychiatric disorders. He makes it clear that, in order to achieve this goal, medication such as selective serotonin reuptake inhibitors (SSRIs) and/or mood-stabilizing agents such as valproic acid or carbamazepine should be used in conjunction with psychotherapeutic intervention strategies.

Medication works by modulating the neural feedback system. It is Van der Kolk's (1994:12) conviction that a very effective pharmacological treatment at present is fluoxetine. He states that this is because, unlike the tricyclic antidepressants which are effective in reducing either the intrusive or the numbing symptoms in PTSD, fluoxetine has proved to be effective in the whole

spectrum of symptoms. The only negative factor is that the startle habituation becomes worse. Van der Kolk suggests that this could possibly be treated with the 5-HT<sub>1A</sub> antagonist buspirone. Bremner (2002:252-5) states that the drugs Paxil and Prozac may reverse the effects of traumatic stress on the brain. He is also conducting research on the potential beneficial effects of Dylantin (phenytoin) on PTSD, the hippocampus and memory. It can be concluded that pharmacological intervention has an important role to play in the treatment of trauma and can have additional benefits for the reversal of symptoms on the physical or neurological levels.

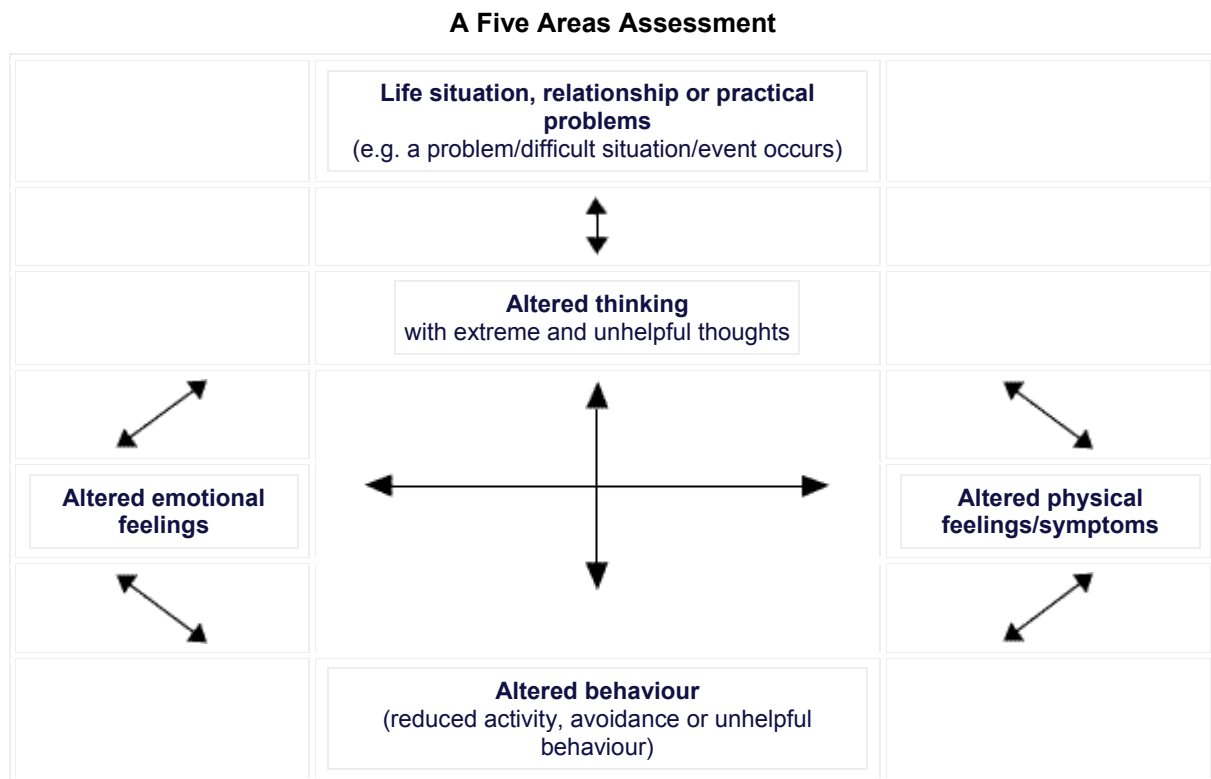
The possible beneficial effects of natural supplements that enhance optimal brain function should also be considered (also see Sahley 2009:1, Holford 2007, *Neurogenesis* n.d.). The benefits of natural supplementation are that they assist the body's own capacity for self-healing and restoring homeostasis, a principle that is strongly emphasized in section 3.9 about alternative viewpoints regarding treatment. Drug abuse in the population of musicians as well as the dangers of self-medication or reverting to substance abuse as a means of self-medication is a separate area that warrants further research. Phillips and Frederick (1995:39) refer to the danger that patients may abuse alcohol or drugs to self-medicate dissociative symptoms. The same could be the case when patients attempt to dull emotional pain with the use of non-prescription substances.

While pharmacological treatment places the emphasis on neurotransmitters and the balance and amounts thereof in different parts of the brain, Le Doux (2002:261-2, 280, 294) argues that perhaps neural circuitry plays a greater role in brain pathology, including PTSD and depression, than neurotransmitters *per se*. This again place more control within the domain of the so-called victim, since it enhances possibilities for changing pathology by increased control and command of the thinking processes. In the case of depression, Le Doux (2002:280) is of the opinion that any treatment that re-engages a person with the world can help a patient. Perhaps traumatized patients also need help to re-engage with the world in a way that is true to reality and not to their perception of an exaggeratedly dangerous world.

### **3.8.2 Cognitive-Behavioural Therapy (CBT)**

Blenkiron (2005) explains in short that Cognitive-Behavioural Therapy (CBT) deals with how people think about themselves, the world and other people and how what people do, affects their thoughts and feelings. He explains that CBT deals with problems in the present instead of focussing on the past, seeking ways to improve the client's current state of mind. There is strong

reliance on the way people think about problems as they directly affect how they feel physically, emotionally and how they behave. The following diagram, also incorporated by Blenkiron, shows how five areas representing individuals, their thoughts, feelings, emotions and behaviour and their interaction with their environment and others are mutually influential and how a change in any one area will lead to changes in others:



**Figure 6: Five areas of Cognitive-Behavioural assessment (Royal College of Psychiatrists 2007)**

The diagram above provides a condensed example of areas considered by therapists using Cognitive-Behavioural intervention when diagnosing and treating clients. Mulhauser (n.d.) explains that the therapist will help clients to explore whether their views really reflect reality. Blenkiron (2005) adds that together client and therapist will look at thoughts, emotions, bodily feelings and actions, work out how they affect the client and assist the client to change unhelpful thoughts and behaviours, a process that includes ‘homework’. With time, the client should become empowered to recognize when he or she is about to do something unhelpful and instead choose to do something more constructive.



Various sources note that CBT can be particularly effective in the treatment of PTSD and that its use with patients diagnosed with ASD can greatly reduce the chances that PTSD subsequently develops (e.g. see Kornør, Winje, Ekeberg, Weisæth, Kirkehei, Johansen & Steiro 2008).

### **3.8.3 Eye Movement Desensitization and Reprocessing (EMDR) and Eye Movement Integration (EMI)**

EMDR (Eye Movement Desensitization and Reprocessing) is a psychotherapeutic intervention strategy for the treatment of trauma symptoms that was originally developed by Francine Shapiro. The *EMDR Institute* (2004) explains that EMDR is an information processing therapy that uses an eight-phase approach. This technique uses fast lateral movements similar to those encountered in Rapid Eye Movements (REM) sleep. The *EMDR Institute* explains that for ‘dual stimulation’ therapists use bilateral eye movements as well as auditory stimulation such as tones or tactile stimulation such as tapping. This technique helps to eliminate emotional distress associated with traumatic memories and it can obtain comprehensive results in a brief period of time. The *EMDR Institute* states that clients report elimination or decrease of emotional distress associated with memories as well as an increase in cognitive insights. Through modifying eye movements, processing of past, current and future events requiring different responses is facilitated (*EMDR Institute*, 2004). The above mentioned source states that three studies have found an elimination of PTSD diagnosis in 77-90% of cases within three to seven sessions. The control this technique facilitates makes it a potentially very valuable tool for musicians of whom stage performance is expected.

Brenner (2004:253-4) writes that newer research on EMDR shows that inter-hemispheric stimulation is responsible for the integrative effect of the technique. Indeed, Amendolia (1998:1) states that EMDR transfers data from the cortical right hemisphere to the left hemisphere. Emotionally charged information from the right hemisphere can then be analyzed and integrated by the cognitive function of the left hemisphere. Other forms of sensory stimulation that work on the principle of alternation between the hemispheres such as lights, sounds in either ear, and tactile cues to each hand could also be effective. Winkel (2007:19) identifies EMDR as being a therapeutically efficient intervention strategy for reducing Post-traumatic anger. Its effectiveness is multi-faceted and applies to a range of PTSD symptoms.

While EMDR utilises Rapid Eye Movements, EMI uses Smooth Pursuit Eye Movements (SPEM) in multiple directions (Beaulieu n.d.:8), guided by slower hand movements. This

technique helps the client's brain to form linkages between traumatic memories and more adaptive information. In addition it facilitates access to emotional memories retained in implicit memory. Beaulieu (2003:69-113) explains how eye movements relate to brain function, cognition and memory and how guided eye movements facilitated by a therapist can lead to the integration of traumatic memories. She further asserts that smooth pursuit eye movements permit the client to access fragments of memory more directly than would normally occur during ordinary reflection. In Beaulieu's (2003:25) opinion, EMI is an effective mode of intervention for distressing and repetitive memories of any kind that impact adversely in any area of a person's life, regardless of how such memories manifests their influence.

### **3.8.4 Hypnosis**

Hypnosis is a technique that can be very effective in the treatment of trauma symptoms. Although no event can be voluntarily erased from a person's memory unless drastic new chemical means are resorted to (see research by Cao *et al.* 2008 and Carey 2009 referred to in section 2.8.3), hypnosis can be used to alter the meaning of a traumatic event by reducing the perception of threat and also possibly addressing somatic symptoms associated with the traumatic event. Amendolia (1998:1) describes hypnosis as structured dissociation and states that the goal of Ericksonian hypnotherapy is to recontextualize the memory, the effect of fear and physiological hyperarousal. O'Brien (2004) explains that Milton Erickson (1901-1980) used suggestion and post-hypnotic suggestion to tap into people's inner consciousness where they can access their own resources to improve the quality of their lives. O'Brien identifies techniques used by Erickson as hypnotic trance, metaphors and confusion techniques, to name only a few, and adds that followers of Erickson all have their own unique style. The Ericksonian perspective on trauma emphasizes the innate tendency of the organism to heal itself and views flashbacks and recurrent dreams as attempts to problem-solve that can be better facilitated by the use of hypnosis (Amendolia 1998:1).

In a personal interview with the researcher regarding this study, psychologist Gerda Fourie (2008) stated that trauma victims very often induce a state of auto-hypnosis in which negative self-talk prevails. The challenge lies in changing this negative state of mind, often accompanied by low self-confidence, and changing negative perceptions. She believes that hypnotherapy can be effective at this level. Van der Hart and Spiegel (1993:199) draw attention to the fact that for treatment with hypnosis to be successful, all aspects, including the physical sensations experienced during the trauma, must be integrated. They caution that without cognitive

integration of affective memories and enhanced control over memories, treatment can reinforce trauma instead of aiding symptoms to subside. Therefore the possibilities of hypnosis in treatment are numerous: namely the guided changing of the perception of helplessness and danger, changing negative auto-hypnosis, ego-strengthening, the integration of physical sensations experienced as well as verbal expression of events that took place.

An important and structured hypnotherapeutic intervention model for post-traumatic and dissociative conditions is Phillips and Frederick's (1995:36-45) four stages of treatment. They call their treatment approach the SARI model, an acronym representing the following stages of treatment (Phillips & Frederick 1995:36):

- Safety and stabilization;
- Accessing the trauma and related resources;
- Resolving traumatic experiences and restabilization; and
- Personality integration and the creation of a new identity.

This approach is a very controlled and gradual method of intervention, avoiding retraumatization at all costs. Phillips and Frederick (1995:35-36) are of the opinion that it is essential that a sense of external and internal safety is established for patients and that their daily lives are reasonably stable before therapeutic intervention is attempted. This is because when traumatic material is dealt with a patient can be overwhelmed if not yet equipped to handle this. Their model specifies that, if destabilization were to occur during the second or third stage, there should be a return to the first stage. A valuable aspect of this method is the use of 'hypnotic age progression' in order to help the patient create a hopeful future after successfully integrating traumatic experiences (Phillips & Frederick 1995:44).

### **3.8.5 Body therapies and the role of movement**

A high rate of success in the treatment of trauma is claimed by advocates of 'body therapies'. Levine's Somatic Experiencing (SE) is an intervention specifically developed for trauma victims. Levine (2009) describes SE, a naturalistic approach to the healing of trauma, as follows:

Therapeutically this "instinct to heal" and self-regulate is engaged through the awareness of body sensations that contradict those of paralysis and helplessness, and which restore resilience, equilibrium and wholeness.

His theory is based on the premise that healing is achieved by accessing trauma-induced feelings and thoughts through the felt sense and resolving them through letting them take their natural course (Levine 1997:128). There are other movement therapies that are not strictly associated

with the treatment of trauma, but that the researcher would also like to refer to, based on her perception of their potential benefits at multiple levels, including that of traumatic consequences.

A form of therapy that also works with kinaesthetic experience of the body is the Feldenkrais method. The official website for the *Feldenkrais Method* of Somatic Education (2009) pronounces that the method helps people reconnect with their natural abilities to move, think and feel by focussing on the relationship between movement and thought. They state that it teaches people through movement how to improve their capabilities to function in their daily lives. This method is used for a wider variety of interventions, but can also potentially be helpful to people suffering from unresolved residues of traumatic experience. More information on this method can be found at [http://www.feldenkrais.com/method/the\\_feldenkrais\\_method\\_of\\_somatic\\_education/](http://www.feldenkrais.com/method/the_feldenkrais_method_of_somatic_education/).

Gorrie (2009b:191-3) describes an important contribution of the Alexander Technique as the realization that tension in the body and tension in the mind are mutually influential and states that the technique itself can allow the body and mind to act unhindered. He describes this technique as one of postural alignment, developed by F. Matthias Alexander to cure his own vocal ailment. Alexander achieved this through experimentation with a complex system of mirrors, leading to the realization that his subconscious mind was creating anticipatory tensions in his body. It is evident that the physiological effects of trauma can be a contributing factor to such habitual tensions.

The *Rolf Institute of Structural Integration* (2009) reports that Rolfing was developed by Ida P. Rolf fifty years ago. They state that it is a form of bodywork on the connective tissue to release, realign and balance the whole body. According to this source, it enhances posture and balance and can resolve pain and discomfort from various causes. As such, it can be useful in the resolution of dissociation, like acupressure mentioned in 3.9.1 below, and treatment of ‘psychosomatic’ trauma symptoms.

Dalcroze Eurhythmics was developed by Emile Jaques-Dalcroze (1865-1950). *Dalcroze Australia* (2009) describes this method as based on the assumption that the human body is the source of all musical ideas and provides a concrete approach to abstract music. This source states that it is specifically for music students and incorporates Eurhythmics (‘Good rhythm’), Solfège (the study of pitch) and Improvisation (presenting musical ideas instantaneously). Spencer

(2009) writes that Dalcroze found that teaching did not succeed in giving students a living experience of music. He therefore set out to develop his system that coordinates music with bodily movements. Spencer adds that the Dalcroze method can be used by both adults and children, and that it aims to promote alertness, expressiveness and a sense of phrasing and musical structure. The technique helps musicians with rhythmic problems and to develop 'inner hearing' while Solfège develops recognition of pitch. Dalcroze developed his method aimed at cultivating musicianship skills and not with any therapeutic goals in mind. However, it is possible that additional benefits of incorporating music and movement may be those of integrating the 'whole person', of 'centering', reducing stress in trauma victims (referred to in section 6.2.6 by one of the respondents), or of reaching unconscious emotional responses (as referred to by Peters, 1987:129). This could perhaps best be supported by reference to Brice's work (2004:63) where she explains that music channels physical sensation, that a body should be well-balanced to express what is experienced within and that music helps to accelerate students' awareness by bypassing intellectual analysis. She states that changing any element in the improvisation for the students is all that is needed for them to become aware. Brice writes (2004:78):

Music is the ever present element which appeals to the emotions and feelings: it suggests, it leads, it inspires, it corrects and it improves. It is the bridge between the instinctive and the abstract. It leads from intuition to knowledge ... Undoubtedly, Eurhythmics privileges the body – as much as an instrument of learning, as the first and principle instrument of music.

For more information on the Alexander technique see <<http://www.alexandertechnique.com/>>, on Rolfing <<http://www.rolf.org/>>, or on Dalcroze <<http://www.dalcroze.org.au/>>. The researcher believes that it may be important that therapies incorporating movement were found to be effective in the treatment of trauma, while success in advancing and fine-tuning music skills, improving posture and others treating injuries is also claimed by similar complementary disciplines which musicians are encouraged to incorporate for their own growth and well-being. These include the Alexander Technique, Rolfing as well as Dalcroze Eurhythmics. It is concluded that adopting a more integrative approach to music education could have the added advantage that aspects which could otherwise have remained blockages for the instrumentalist and performer can be addressed and overcome.

### **3.8.6 Logotherapy**

The use of psychotherapy in the treatment of trauma victims is certainly important and essential. However, ultimately humans keep on asking the question ‘why?’ A survivor of the incredible atrocities of the concentration camps at Auschwitz and Dachau, the famous psychiatrist Victor Frankl, does not give much emphasis in his account of the war on importance of psychotherapy as such, but rather on the importance of finding a meaning in one’s life. Frankl (1959:115) indeed describes the ultimate meaning in life as finding meaning in suffering. His theory of *logotherapy* is a therapeutic philosophy dealing with the individual’s search for a meaning to life. This shifts the focus from the retrospective and introspective psychotherapy approaches to a focus on the future and the meanings to be fulfilled by patients in their lives (Frankl 1959:98). Frankl (1959:114) sees the deepest significance as lying in the meaning of suffering as actualized in the attitude with which the individuals take their suffering upon themselves. He often quotes Nietzsche’s famous phrase (Frankl 1959:vii): “He who has a *why* to live can bear with almost any *how*.” This should be a very important aspect in how the survivors of trauma face their fate and approach their futures, namely in finding some form of meaning in the experience. Finding meaning is a personal way of integrating one’s experience, not necessarily requiring any assistance from others. Neurobiological realities aside, the ability to find meaning in trauma may even be one of the strongest factors facilitating recovery, precisely because it assists the brain to integrate experience. The human being and artist are ultimately much more than a sum of biological processes.

## **3.9 Alternative viewpoints regarding treatment of trauma**

This section on alternative viewpoints about the treatment of trauma is included to expand the awareness of teachers and performers alike. Traditional and alternative systems that may play a role in the treatment of trauma include Chinese medicine, Ayurveda, homeopathy and energy medicine or vibrational medicine.

### **3.9.1 Chinese medicine**

Chinese medicine views the communication between different systems in the body as ‘meridians’ and ‘energy channels’. Smith (2008:25-6) explains that Traditional Chinese Medicine recognizes and treats disharmony among the various elements of the body, the fundamental textures which it terms as Qi, blood, essence, spirit and fluids. He explains that

these ‘textures’ are viewed in relation to organs. In addition, chakras are energy resonators associated with specific functions, each having a particular vibration (Smith 2008:27). Trauma can lead to disharmony; methods used by practitioners of Chinese Medicine to resolve these blockages include acupressure (also identified by Scaer, 2005:265-7, as useful in the resolution of dissociation) and, according to Yu (2009), acupuncture and the use of herbal medicines.

Chinese medicine is a holistic and integrated system and viewpoints expressed by its practitioners are often reconcilable with many of the viewpoints held by writers such as Levine who also focuses on the effects of energy, as referenced in section 4.4.4 (also briefly in sections 2.7.1, 3.3, 3.5, 3.6 and 8.4.7). Hammer (n.d.) states that an effect of ‘emotional shock’ is to deplete the Yin of the Heart meridian, and decrease the ability of Qi and blood to either enter or leave the Heart. This effect on Heart function leads to a decrease in peripheral circulation. Hammer (n.d.) adds that the consequent decrease in nutrients and increase in waste products ultimately affects every cell in the body. It should be mentioned here that ‘Qi’ in Chinese medicine refers to the life force, or described by Li (2000) as “the most basic substance of which the world is comprised” and, in connection to living beings, as ‘vital energy’. The researcher did not encounter such specific reference to the heart and circulation elsewhere in the literature on trauma. This is presumably since so much emphasis is placed on ‘psychological effects’. Consequently, immediate physical effects of emotional trauma could often be neglected, and failure to address these could possibly prolong duration of symptoms. Effects on the vibrational frequency of the body, another matter that fails to be addressed by traditional treatments, are discussed in section 3.9.4. As regards performance arousal, Gorrie (2009b:188) points out that according to Chinese Medicine theory, less than optimal levels of performance arousal would be viewed as a state of imbalance and treated as such.

### **3.9.2 Ayurveda**

Ayurveda is the five thousand year old traditional healing system of India. Frawley (1997:4) states that Ayurveda views the human soul as pure awareness and that the mind-body complex is its instrument of manifestation. He claims that Ayurveda regards the mind as the reflection of the body, a storehouse of impressions that were accessed through the senses. Frawley (1997:1) describes Ayurvedic Psychology as ‘Yogic Mind-Body Medicine’. Three different primal qualities are found in Nature, namely Sattva as associated with intelligence, imparting balance, Rajas as associated with energy and which causes imbalance and Tamas as associated with substance and creating inertia (Frawley 1997:30). Ayurveda regards these as affecting the mind

and treats imbalances accordingly with a variation of herbal remedies, ancient and modern Ayurvedia formulas, oils, aroma therapies and incense as well as spiritual remedial measures, gem therapy and mantra (Frawley 1997, Tiwari 1995).

Regarding trauma, Ayurveda would treat emotional imbalances and particularly employ Yoga which, according to Frawley (1997:259), means unification. This could be compared to the traditional methods of integration of the personality and perhaps be an alternative method of resolving dissociation. In addition, Ayurveda views re-enactment as an attempt to integrate (Das n.d.:1). The emphasis in this philosophy is on individuals' control over their own physiological and psychological functioning. Das (n.d:1.), an Ayurvedic practitioner, states that PTSS (Post-traumatic Stress Syndrome) is similar to purely physical trauma in the sense that if the 'victim' can counteract, minimize or avoid it, the lasting consequences are much less serious or debilitating than if the victim succumbs to or becomes totally immersed in the victimization process.

### **3.9.3 Homeopathy**

Samuel Hahnemann (1755-1843) is the founder of Homeopathy, a system of healing that is based on the principle that 'like cures like' (Chappell 2003:4). Remedies that resemble symptoms of the illness are given, usually in greatly diluted form, and stimulate the body's natural healing abilities. Homeopathic intervention in cases of trauma is described by Chappell (2003:86) as based on the concept of integrating traumatic fears and material. He writes that homeopathic remedies can bring traumatic material to the subconscious or semiconscious, precipitating an 'action replay' of the situation by re-experiencing the fears and feelings without the actual traumatic events. (He writes that the client need not be concerned about this being upsetting, since it mostly happens in dreams.) This resolves the trauma and unfreezes the person just like other modalities developed in various disciplines. He believes that people are frozen wholly or partially at the age at which overwhelming trauma happened and that after trauma is brought to the surface at a time when the person is capable of dealing with it, "[s]he can grow up naturally for the first time or grow up back to her old self if this was dented" (Chappell 2003:85-6).

### **3.9.4 Energy medicine or vibrational medicine**

Oschman (2000:139) explains that the rationale behind energy medicine or vibrational medicine is that diseases and organisms alter the electromagnetic properties of molecules, cells, tissues and



organs. He maintains that imbalances in the electromagnetic function of the body can be corrected by substances with electromagnetic signatures that stimulate the repair systems of the body to respond and regain homeostasis. Oschman (2000:145) further explains that ‘subtle energies’ and ‘dynamic energy systems’ go to the foundation of life. Energy medicine or vibrational medicine is gaining recognition although more controlled scientific studies are needed to strengthen its validity.

Various modalities of energy medicine exist. These include homeopathy, flower essences, aromatherapy, sound and light therapies (Oschman 2000:145). Royal Raymond Rife invented the quantum resonator to treat disease by means of sending specific frequencies of sound through the body. The principle behind quantum resonators is described by Haltiwanger (2009:7) as based on the fact that all molecules of living beings (and indeed dead matter as well) are vibrating at specific frequencies. He further explains that, through ‘resonance’, this enables the body to emit and absorb electromagnetic and sound energy.

As regards the effects of trauma, writers claim that it influences the vibrational field of the body and blocks natural flow of energy. Tooley (2007) defines the “ability to travel through the range of polar opposites” (of matter) as the “natural state of being”. She states that trauma results in states of either no movement or constant movement, disrupting homeostasis. She adds that when registered too deeply, the system is unable to self-correct to a state of balance. Davies (n.d.) explains that the impact of loud sound or ‘acoustic trauma’ has effects on the body’s vibrational frequency. It could therefore also be deduced that other forms of trauma could change the vibrational frequency of the body, caused by wave interference of its impact, whether emotional or physical. This can lead to imbalance. Gorrie (2009b:62) distinguishes between energy passing through a person and energy stored within a person. He identifies potential negative causes for the latter as emotional baggage and unresolved negative experiences taking on chronic physiological symptoms. He adds that this is thoroughly documented by both Western and Eastern science.

Vibrational medicine or energy medicine utilises resonance to assist the body to correct imbalance and alters and accesses imprinted patterns. Tooley (2007) states: “The different aspects of our physical, emotional, mental and spiritual being resonate to various frequencies of vibration.” Tooley (2007) advocates consciously engaging our senses in order to heal trauma. She also advises using vibrational therapies to help the system “back into its core resonance, into

its true nature”. According to her, energy therapy can both assist in getting ‘stuck energy’ to vibrate again and over-stimulated energy to ‘explore stillness’. The researcher deduces that, unless an unhealthy source is chosen, no risk of retraumatization lies in this method of intervention.

### **3.9.5 The EPFX/SCIO as vibrational medicine intervention device**

Two of the case study participants in this study used the EPFX/SCIO in their recovery process and both reported greatly positive results. Therefore it is necessary to give a brief explanation of how this biofeedback device, as developed by Prof. Bill Nelson, can be used in the treatment of trauma.

*Quantum Energy Wellness* (2008) states that SCIO stands for Scientific Consciousness Interface Operation System or Quantum Xrroid Consciousness Interface and SCIO is derived from the Latin ‘to know’. The newer EPFX/SCIO – that used by case study participants B and C – stands for Electrical Physical Feedback Xrroid. *Quantum Energy Wellness* calls this “a computerized system that both tests and balances the body at the subtle energy level”. This source explains that it incorporates electro-dermal screening, stress testing and biofeedback by integrating the sciences of mathematics, quantum physics, fractal dynamics, subspace theory, electronics and computer programming. These technologies enable the system to measure the body’s biological reactivity and resonance. This has great value for preventative intervention, because they explain that imbalances in the body’s subtle energies manifest long before physical disease develops. They state that it can indicate the body’s needs, dysfunction and vulnerabilities. They explain that the system communicates with the body since it is calibrated to measure the body’s reactions to a database of biological, psychological and medical items in electromagnetic form. This enables the device, mediated by the interpretations of a skilled practitioner, to determine what energy imbalances are affecting the client’s physical health as well as mental and emotional concerns. They state that the EPFX/SCIO stimulates conscious awareness of unconscious processes. It can be deduced that this could help clients to accept greater responsibility for their own well-being, made possible by increased awareness.

Coetzee (2009) describes the principle behind treating a patient with the EPFX/SCIO as that when the energy is changed by this device, the matter will subsequently also change as a result. *Quantum Energy Wellness* (2008) puts this in what can perhaps be considered ‘musical’ terms by stating that “[h]ealing can often be addressed by harmonising the subtle energies”. Nelson

(1996) explains that, at present, biology is an estimate science but predicts that as advances are made in applying quantum physics to biology, mathematical laws that apply exactly to biology will be found.

It was hypothesized in the first chapter that musicians may perhaps be especially vulnerable to trauma adversely affecting them. However, due to their sensitive understanding of the nature of sound and resonance, they may perhaps also find themselves in the best possible position to understand that healing could lie in choosing what to resonate with in order to restore balance. This applies to sound as well as to human interaction, as referred to in the quotation from Watkins at the beginning of the first chapter of this study (on p 1). This illustrates the strong links between vibrational medicine and the use of music in healing and forms a link between the use of music, art and movement therapies in the recovery process, the former discussed in section 4.4 and the latter in section 3.8.5. In the following chapter aspects pertaining to trauma and music as well as examples in the literature of how trauma influenced musicians are discussed first. An understanding thereof serves as foundation for section 4.4 which deals with the use of music and art in the recovery process. Like the intervention strategies discussed above in 3.8 and 3.9, music and art can also be used in a therapeutic sense.

*Although there are times when art can effectively represent experiences and affects otherwise too intense or overwhelming to express directly, it can also destroy the protective mechanisms upon which the trauma victim relies to cover or obscure extreme experience.*

- Stein 2007:451

## CHAPTER 4: TRAUMA AND MUSIC

### 4.1 Psychological aspects of music performance

An essential component of successful performance is achieving the optimal psychological state for achieving top performance. The following section describes how trauma can affect this.

#### 4.1.1 Mental focus, integration and musical identity

The mental focus required for top performance in music and the capacity for concentration and functioning fully in the present is similar to that required for top performance in sport. However, what distinguishes the performing arts from sport is the requirement of drawing on one's full field of past experience and acquired experience through learning, including intellectually and emotionally. This presents the unique possibility for single or repeated and perhaps more adverse experience to feature too strongly or out of balance during the performance situation. It can be argued that if a traumatic event or events are not integrated and worked through, it may remain difficult for the performer to achieve integration with his or her instrument. Cockey (2008:42) refers to the importance of this connection with the instrument as "that extraordinary interconnection of the body, mind and spirit that eventually becomes a paramount issue within musical artistry".

What was said in the previous paragraph can be understood by considering the extent to which the musical identity of the person and his or her self-identity mutually influence each other. Musical identity plays an integral role in the evolution and development of self-identity and vice versa. In her MMus dissertation "Influences of music education on the forming of musical identities in South Africa" Van Heerden (2007) shows that significant interaction and overlapping between musical identity and self-identity exist. Seen in the light that musical identity in many individuals forms an important part of self-identity, it follows that there is a great likelihood that trauma affecting individuals will also affect their music. Testimony to the influence of traumatic events on the works of specifically composers is evident in the dedications

of works to people or in memory of people, works written to celebrate or protest certain political events, and also in the correspondence and letters of composers where reference is made to their work and lives.

#### 4.1.2 Factors influencing level of performance

A very simple equation can be used to estimate the actual influence of trauma on musicians, whether they are performers, composers or teachers. In an article on stage anxiety, Lehrer (2002:125) uses this equation, originally described by Green and Galway (1986:23), to define performance results:

$$\text{Performance} = \text{potential} - \text{interference}$$

The potential application of the simple logic of this equation extends far beyond stage fright, and can include factors such as trauma as well as more mundane events that can interfere with the work of a musician. A deduction that can be made is that, as long as trauma is not dealt with and continues to cause any form of interference for the musician, it will continue to negatively influence performance quality. This researcher would also like to expand this argument to make provision for the emotional type of interference, postulating that interference of an emotional type has higher risk of also influencing music expression. Considering the multiplicative character of interference of an emotional nature, a more complex description of the interference is desirable in order to give an accurate estimation of the severity of its influence.

This multiplicative character of interference is perhaps more closely estimated by Gorrie's (2009b:25) 'Alterative Performance Equation' quoted here:

$$\text{RLP} = (\text{c} + \text{p} - \text{e}) + \text{a}$$

Gorrie (2009b:25-7) explains that this equation signifies that the 'resulting level of performance' is a result of the sum of the performer's cognitive abilities 'c', such as performance intelligence, plus physical attributes 'p', such as capacity at the given point in time to realize performance intelligence, minus external interference 'e'. The latter he specifies to be events beyond the performer's control, which in this context can also include traumatic circumstances. Important to note is that he states that external interference always lowers the value of the RLP. To this is added the appropriateness of the level of performance arousal, 'a', as before and during the performance. As has been seen, it can be argued that trauma can also affect levels of

performance arousal, particularly shifting it to the negative or ‘anxiety’ end of the spectrum (see section 2.9 and figure 4). In Gorrie’s description, any level of performance arousal that is inappropriate for a particular performing situation – i.e. that is not in the appropriate ‘Zone’ - will result in a negative value for ‘a’ in his equation, lowering the RLP. It is therefore a very complex pursuit to achieve or even approach an ‘ideal’ performing state. Energy needs to be channelled and sustained correctly to perform in the ‘Zone’. Gorrie (2009b:63) believes that it is important to understand that the energy required for top performance comes from within the person. He (2009b:62) calls performance arousal “energy in motion, taking on particular forms as a result of our interactions with the physical world and direction from our minds”.

Mayerovich (2002:82) describes an ‘ideal musical world’ as follows: “Performers respond to the intellectual and emotional demands with a refined vocabulary of physical gestures that guarantees that what *needs* to be expressed *will* be expressed.” Insight into why less than optimal results are attained requires investigating what causes changes in these movements. Bradbury (2008:61) writes: “Changes in mental focus, attention and memory recall are caused by, rather than the cause of, changes in our behaviour and physiology.” If so, entering a similar physiological state as experienced during trauma, e.g. a state of heightened awareness and arousal, can possibly trigger changes in memory recall and unconscious behaviour. It follows that a traumatized individual is likely to have more negative associations with the particular physiological state accompanying music performance. However, it is likely that the individual may not even realize this and therefore cannot begin to take steps to change his or her situation. In addition, Levine (1997:121) explains that traumatized individuals have difficulty differentiating excitement from anxiety. This could have ramifications for the performing musician to the extent that music performance could become an anxiety-evoking rather than a positive experience. The message communicated to the audience could be one of anxiety rather than positive energy, causing anxiety to interfere with whatever the intentions of the composer for the specific piece were.

The connection between life circumstances in the time preceding performance and performance quality is confirmed by pedagogues. Neuhaus (1993:208) writes:

I could very easily establish a connection between the quality of the concert and the mode of life that preceded it and the way I worked. It almost always appeared that for me the most important condition for a good concert was preliminary rest, good health and vitality, freshness of spirit and body.

If ordinary circumstances are reported to be the factors most affecting performance quality, it can be speculated how much greater the influence of extreme circumstances and experiences could be. This includes its impact on concert preparation and physical health.

#### **4.1.3 Concentration and memory breakdown**

A momentary lapse in concentration during music performance can have a more immediately observable impact than in most other professions. In order to understand the difference between normal variations in attentional focus and traumatic interference, the nature of human attention needs to be understood. Jensen (1998:45) explains that the short duration of continuous high-level attention has adaptive reasons such as enabling the person to react quickly to predators and prey as well as rechoosing the attentional object regularly in order to react to environmental demands. From the perspective of a performing musician it would therefore make sense that a musician plagued by recent or not-so-recent fear-inducing experiences could be prone to periodically measuring present environmental input against past experience to evaluate danger. This could be occurring at the unconscious or semi-conscious level during performance. The unconscious nature of the defence mechanisms could be a reason why traumatic causes underlying stage anxiety are not always identified as such.

Concentration and attention is intimately linked to memory skills, all being of the utmost importance to the performer. Bartlett (1996:178) refers to differences in the ability of individuals to remember, identifying stimuli that compete for attention as an important factor causing difficulties in sustaining attention. He further elaborates that during a stressful performance situation, competition exists between internally created stimuli by what he calls an ‘involuntary autonomic nervous system’ and the task of retrieving stored information. Bartlett (1996:178) states that researchers have now moved their attention to examining voluntary cognitive activity in their search for finding reasons why memory breaks down since interference caused by the involuntary nervous system is better understood and perhaps even obvious. The researcher would like to suggest that, although the influence of the role that the autonomic nervous system plays in memory breakdowns may seem obvious, it is still worthwhile to investigate the extent of alterations in the normal functioning of the autonomic nervous system due to unresolved trauma as a contributing factor in memory and concentration breakdown.

There is also the issue of the mysterious process that occurs from first learning a piece to performing an artistic rendition of the work. Jensen (1998:46) states that generating meaning does not happen externally, but that it is an internal process. The researcher would like to affirm that, from experience, there is no reason to doubt that the process of generating meaning is the same for music. This processing is done at an unconscious or semi-conscious level. Unwanted threatening memories may return during processing time, precisely because the brain is constantly on guard and re-orienting towards what it was conditioned to perceive as potential threats in the environment.

Revisiting memories is one of the brain's ways of working through and integrating traumatic experience. In the aftermath of trauma, this may be a higher priority for the brain than integrating newly learned material which is acquired under less threatening conditions than the threatening event that is higher up on its list of survival priorities. If the brain's priority is working through trauma, integrating, understanding or changing a traumatic situation, this could obviously hamper and interfere with the processing time for music and consolidation of learned information.

#### **4.1.4 Uniqueness of each human brain**

Altenmüller *et al.* (2000:105) conclude that every person has his or her unique individual brain networks for music processing. Altenmüller (2004:28) writes that music is experienced differently by each person and that brain structures that process tunes adapt speedily to new circumstances. He is of the opinion that therefore “the world today holds about six billion unique ‘music centers’ – one for every human brain”. In the previous chapter it was seen that responses to trauma are equally individual. Therefore one could deduce that, although certain similar responses exist and could perhaps be predicted to a certain extent, mental aspects of traumatized music performers would be of a doubly individual nature: unique because of their unique ways of processing music as well as their unique ways of processing trauma.

## **4.2 The effects of trauma on musicians**

The previous section described some psychological aspects of music performance and pointed out ways in which trauma can have an influence on these. Of practical concern is describing examples in this and the next sections of how this actually occurred for some individuals and



how they overcame their experiences and their circumstances. A literature study brought to light various concrete examples of how musicians were affected by trauma. Firstly, the likelihood of attributing negative effects on performance caused by ASD or PTSD respectively is compared. Examples discussed thereafter include effects such as numbing of the emotions, impact of stigma associated with experiencing trauma-related symptoms, re-enactment through music, ‘moments of unconsciousness’ (Levine 1997:190), noticeable effects on bodily motions, constriction in the area of the ‘peripheral perceptual boundaries’ (Scaer 2001:11) in which the threat was first perceived, altered sense of perception of time, increased arousal and positive aspects of dissociative states.

#### **4.2.1 Attributing negative symptoms to trauma**

Due to the relative recency of a traumatic event in the memory of a specific individual, the likelihood of performers and teachers attributing symptoms of ASD to difficulties experienced in music-making around the same time as the occurrence of a traumatic event is much greater than in cases of PTSD. When students are upset, it can directly interfere with performance and they themselves will often attribute this to the adverse event. However, long-term effects of PTSD may become more difficult to identify. A reason for this could be that a gradual decline in performance standard and practice discipline is harder to notice and musicians may have become accustomed to living with residual symptoms such as chronic hypervigilance, emotional numbing or memory lapses. Awareness that a problem exists is a prerequisite for seeking professional assistance. Since such a high percentage of people with ASD subsequently develop PTSD, it is emphasized here that early intervention may be advisable.

#### **4.2.2 Symptoms involving the emotions**

If one contemplates the symptoms discussed in the previous chapter, most have to do with the emotions, whether by blocking out of emotions or intensifying emotions inappropriate to the current situation but appropriate to the abnormal situation in which the trauma occurred. From musicians’ point of view, numbing of the emotions is a very serious obstacle to playing their instruments and expressing subtle nuances. Numbing of the emotions has the possibility of negatively influencing music teachers, since a big part of the job of a music teacher is to act in the capacity of very attentive listener to music. In this regard, such a teacher’s ability to respond to and guide the student’s interpretation of music may suffer.

An example of how numbing of emotions may influence listeners to music is the dismissal and disregard of pianist Wladyslaw Szpilman's music by Jews in the ghetto cafe where he performed. He (Szpilman 1999:13) even stated that he lost two illusions whilst working in Café Nowoczesna, one being his belief in the musicality of the Jews. Stein (2007:451) argues that perhaps Szpilman's music was too full of feeling and too much of a reminder of what had been irretrievably lost.

Stigma attached to experiencing trauma-related symptoms complicated the recovery process for Szpilman. The movie *The Pianist*, directed by Roman Polanski, is based on the novel by Szpilman about his experiences and miraculous survival as a Jew living in Poland during World War II. Szpilman's son Andrzej writes in the foreword to his father's memoir, first titled *Death of a City* and written in 1945, that he suspects that his father did not intend the book for the public at large but that he wrote it as a form of self-therapy. "It enabled him to work through his shattering wartime experiences and free his mind and emotions to continue with his life" (Szpilman 1999:8). Andrzej Szpilman also states that his father never spoke about his wartime experiences until late in life. Szpilman wrote his autobiography in an era when 'shell-shock' still carried a stigma. The debate whether 'shell-shock' was a consequence of the effect of cowardice or the physical environment was ongoing (Mc Farlane & Van der Kolk 1996:563). Therefore it could be expected that survivors of the war would be reluctant to openly discuss any severe emotional reactions to the war. Perhaps it could be argued that in writing his experiences down, Wladyslaw successfully debriefed himself. The extent of his success in debriefing himself could be debated, however, as Welbel (2009) relates that he always asked for as little light as possible when performing – even when performing chamber music – since he associated light with increased danger of being discovered during wartime. It is interesting that Andrzej observed that his father did not speak of his war-time experiences to his family or publicly until he reached a relatively advanced age, as Welbel notes that for survivors of WWII, spouses, friends and teachers fulfilled the role of therapists since these people's road to recovery entailed telling and retelling their experiences.

#### **4.2.3 Re-enactment, area of perceived threat and internal perception of time**

Re-enactment can affect performers of music. Miller (1997:12) describes a case where she noticed in the gestures and body stances of a well-known musician that he was unconsciously repeating his traumatic childhood and trying to discharge his fear by means of music and body language. At times, re-enactment can possibly cause lapses of concentration. In section 4.3.2 it is

described how re-enactment as an attempt at integration influenced the famous composer, Richard Wagner (1813-1883). Levine (1997:190) mentions that automobile accidents can be attributed to a moment of unconsciousness, which could have several causes, including traumatic re-enactment. If this is so, the possibility exists that in some instances slips in practised music technique could be attributed to ‘moments of unconsciousness’, related to traumatic re-enactment or interfering memories.

Another point to consider is the area in which the threat was first perceived. Scaer (2001:11) explains how other stimuli observed in the area in which an individual first perceived threat in the past can be interpreted as threatening. When musicians perform on stage, whether in groups or solo performance, the aim is not to be constricted but to have accurate sensory perception and eliminating influences which could potentially inhibit communication. Therefore, in performing musicians, these areas in their ‘peripheral perceptual boundaries’ (Scaer 2001:11) should be identified and ways found in which to resolve any ‘conditioned arousal reflexes’. In essence, this would mean re-grounding the musician.

Regarding the control of performance, Epstein (1995:139) writes that “the performance of music is so deeply bound to periodic order” while Skar (2002:632) points out that music experience takes place in time and that music constitutes movement. In addition, considering the implications of Scaer’s (2005:71) description of trauma as a ‘disorder of the perception of time’, it can be seen that influence on performance could be far-reaching since musicians are required to (re)produce structured sound and silence in time. If their internal perception of time is altered, even in its common manifestation of not being fully in the present (or fully ‘grounded’), it will influence their music-making regarding both rhythmic matters as well as communication of musical ideas.

#### **4.2.4 Symptoms involving memory and concentration**

Increased arousal can cause muscle tension and draining of energy for a musician required to practise many hours per day, and the re-experiencing of the event or so-called flashbacks can cause interference in functioning. During performance on the instrument increased arousal is a normal state and if channelled correctly should facilitate optimal performance ability in the normal individual. For individuals suffering from PTSD this performance nervousness is closer to the state when the traumatic event was encoded in the brain than during regular practice sessions. Therefore the risk for flashbacks in individuals suffering from PTSD arguably increases

when they are on the stage. This is a physiological brain response and has nothing to do with failure to obtain optimal focus. Cutting (1997:6) describes this type of interfering memories as a cause of memory lapses. Chapter 2.8.4 was devoted to an in-depth discussion thereof.

All the aforementioned can contribute to concentration problems which impact on technique, memory and fluency of performance. Important to note is that psychological absorption defined as “total attention that involves a full commitment of available perceptual, motoric, imaginative and ideational resources to a unified representation of the attentional object” (Decker 2004:2) is a normal dissociative state. Decker (2004:4) even argues that dissociative ability could be a personality trait that assists people in surviving traumas, while on the other hand helping untraumatized people to excel. Musicians themselves refer to music’s capability to induce quasi-hypnotic states. Fleisher remarked (2004:2): “The two Bach pieces, to me, are like mantra music. They serve to get us into the ‘zone’.” Gorrie (2009a:22-6) refers to this heightened state of awareness when performing as ‘playing in the zone’ and explains that it is attained when the ideal level of performance arousal is attained. This state is important for performing musicians, but it can be questioned how the similarity of these states, namely that of heightened attention and the pathological dissociative state, could interfere with each other and increase the possibility of flashbacks for the traumatized musician.

### **4.3 The influence of past trauma on famous musicians**

A discussion of the numerous traumas suffered by famous musicians of the past is beyond the scope of this thesis. For readers with a background in music, many examples would likely come to mind. However, for the benefit of readers without a background in music some examples were chosen with the purpose of illustrating particular aspects of how trauma influenced famous musicians. For more complete information, biographical books and encyclopedias on music history that detail the life events of famous musicians can be consulted for more specific information (see *The New Grove Dictionary of Music and Musicians*, edited by Sadie and Tyrrell, 2001).

#### **4.3.1 Physical and occupational disabilities, extra-ordinary lives and extra-ordinary tenacity**

Some famous musicians had illnesses, lived through difficult circumstances and manifested emotional problems that could in various cases be classified as belonging to the spectrum of modern mental health diagnoses (see for example Martin 2000, Hershman and Lieb 1998 and Hildesheimer 1982), others lost limbs in wars, developed neurological disorders such as focal dystonia or had strokes affecting one side of the body and turned to playing the piano one-handedly (see for example Kahn 2006, Patterson 1999, Edel 1994 and Barchilon 1986).

The fact that so many famous composers and musicians endured tumultuous or extra-ordinary circumstances may be one reason for people's fascination with the stories of their lives. It is important that their admirers realise that some of the notorious mental symptoms observed in famous musicians could possibly have been a consequence of the after-effects of traumatic circumstances. However, respected biographers writing about the lives of the great musicians are clear about not only the capacity of the truly great artists to transcend their circumstances, but also about our inability to grasp their particular fate (Hildesheimer 1982:328). Hildesheimer criticises the tendency of programme notes to ask the concert public “to rate the degree of the creator’s nobility in defying fate with his works”. He writes that we do not know how Mozart experienced his fate, but that he knew how to control his fate “and compensate for it like no one else”. The researcher agrees with Hildesheimer that we cannot truly understand what influence trauma could allegedly have had on great artists of the past. This obstacle is circumvented in this study through gleaning the opinions of living musicians about their personal experience in this regard.

#### **4.3.2 Mood disturbances, familial trauma and re-enactment**

It is within human nature to speculate about the exact extent of traumatic influence on the work, relationships and behaviour of famous musicians. In the case of Ludwig von Beethoven (1770-1827), Hershman and Lieb (1998:63-92) attribute his notorious behaviour to bipolar disorder. However, it could be argued that the consequences of his traumatic upbringing should not be underestimated. Writers such as Bremner (2002:221-248) explain how trauma damages the brain, potentially leading to psychological disorders. Hershman and Lieb (1998:62) discuss the fact that Beethoven’s alcoholic father abused him, but do not acknowledge the possibility that this could have played a role in shaping his brain and affected his behaviour later in life. In fact, they choose to emphasize the possibility that Beethoven’s ‘mental abnormalities’ may have been

inherited without discussing the role of circumstances. Mood disturbances and trauma are in many cases not mutually exclusive and one can even lead to the other.

Familial trauma also affected Sergei Rakhmaninov (1873-1943). Gordon (1996:432) identifies the emotional upheaval caused by the separation of Rakhmaninov's parents as resulting in him failing his general examination in 1885. Some years later, severe criticism of his first symphony was sufficiently traumatic to lead to a depression lasting three years. Gordon (1996:433) recounts that hypnotherapy by Dr Nikolay Dahl in 1899 assisted Rakhmaninov to regain his former level of creativity, after which the first work he wrote was the famous second piano concerto, Op 18.

Re-enactment as an attempt at integration can be illustrated by considering the links between themes that the composer Richard Wagner used in his operas and Wagner's own troubled childhood. Berger (1998:15) writes that Wagner's uncertainties about whether Friedrich Wagner or Ludwig Geyer was his biological father are reflected in his operas since only one of Wagner's operatic heroes is not fatherless in some way. In a discussion of familial relationships in Wagner's *Ring des Nibelungen*, Smithey (2006:4) interestingly refers to poor decisions which lead to pathologies and are carried forward through generations, using as an example the abused son who becomes an abusive father. Lee (1999:20) refers to the attempts at integration of the conflicting forces in the human psyche in Wagner's mature works. He discusses Wagner's own faults and wounds and contrasts this with his art that he 'wrote for the rest of us'. Considering the troubled psychological make-up of Wagner, as described by his contemporaries and biographers, one could argue that he did not succeed in integrating and transcending events from his troubled childhood. However, he succeeded remarkably through his art in communicating his troubled legacy to his own and future generations.

#### **4.3.3 Positive outcomes and the prevention of traumas**

The potential positive effects of trauma should also not be underestimated. Even though some musicians discussed in this section did not acquire fame in their own lifetime, how they reacted to circumstances is testimony of determined, strong-willed people utterly dedicated to their art. In many cases, it seems that by having experiences beyond the ordinary, these people matured and that this played an important role in their composing music that goes beyond what others before them did, or interpreting music at a level demonstrating much deeper insight than their colleagues. One can ask the question whether treatment is therefore at all necessary? It is the

contention of this researcher that, having access to contemporary knowledge of the functioning of the human brain, it is evident that treatment carefully chosen to suit individual needs will be beneficial. In the past much less was understood about the working of the brain and therefore musicians active as recently as twenty years ago did not yet have access to the possibilities of treatment that exist today. It can be argued that doing all in their power to overcome adversity by resorting to medical intervention is a testimony to the commitment to their art and not a sign of weakness. Scaer's argument that "no person who has apparently overcome past trauma through sheer force of will is ever free from the vestiges of that past and the procedural memories associated with it" (2005:253) is supportive of this viewpoint.

While trauma can have positive effects, the prevention of traumas such as war, domestic violence, genocide and racial discrimination would obviously be more desirable. It may be asked how this could be achieved. On the factual level, Bremner (2002:162-73) states that domination over another is a compelling force and that cycles of violence have been perpetuated by humans for thousands of years. He comes to the conclusion that trauma-related disorders can be prevented only by eliminating violence in our society. One means of preventing trauma is employing music and art to foster memories of past traumas and to warn future generations against repeating history. The most obvious mediums are those of films, poetry and painting, but musical works such as operas, songs, and programmatic works inspired by specific events can also serve this purpose. Perry writes (1999:18): "Creative artists have always played the role of 'emotional' memory for a culture. In ways that standard recording of simple facts and figures cannot convey, a painting, poem, novel, or film can capture the emotional 'memory' of an experience."

In a positive vein, there are numerous examples of how musicians have been affected by trauma and still become truly great artists or managed to further their careers in spite of setbacks. A few examples are given below:

Itzhak Perlman contracted polio at the age of four, the effects of which necessitate his performing seated instead of standing as is conventional for violin recitals. Potter (2009) declares that Perlman has been recognized as the finest violinist of his generation and that playing whilst seated does not hamper his technique or tone on the instrument. Potter adds that Perlman generally makes light of his disability but has on occasion been a spokesman for the disabled.

The celebrated cellist Jacqueline du Pré suffered from multiple sclerosis, but continued performing until late in her illness (du Pré and du Pré 1998). Another great cellist, Misha Maisky, was imprisoned in 1970 for 18 months in a labour camp near Gor'kiy, interrupting his career in his early twenties, but was freed and left the USSR in 1972. He had been nicknamed the 'Rostropovich of the future' already in 1965 after which his successful international concert career spans up to the present (Maisky 2008).

Shostakovitch is an example of a musician on whom political circumstances had a great influence, namely through denunciation and censoring of his music (see Fanning 2009a and b). Great names who survived WW II include Gyorgy Solti (1912-1997) and Arthur Rubinstein (1887-1982), the latter who was the only member of his family to do so (Maniura 1997 and Rosen 2004). Welbel (2009) draws attention to the significance of Rubinstein's traumas, describing the first as his mother leaving him in Berlin at the age of 13 and the second as the Holocaust. She states that Berlin was the only place where he experienced stage anxiety.

#### **4.4 The use of music and art in the recovery process after trauma**

Numerous writers and highly respected professionals refer to the healing role that creative expression by means of music or art can play in the aftermath of trauma (see for example McClary 2007, Scaer 2005:267-8, Rose 1993 and Jung 1973).

##### **4.4.1 The healing role of art as representation and expression of human experience**

Before an attempt can be made to understand music or art as representative or expressive of human experience, it should be asked what music is for those involved with it. Welbel explains that from a psycho-analytic or developmental point of view music is an object relationship. Stein (2007:444) was also referred to earlier in this study as describing music and auditor in terms of an 'object relation' (see section 2.5.2). From the above can be deduced that the same psychic operatives are at work between performer and the instrument. Welbel explains that a relationship always exists between the artist and surroundings and states that while psycho-analysis is sometimes dismissed it is still cultivated by the way relationships are described. She even describes music as a substitute for the loved object that leaves and returns and notes that this view provides the possibility for mastering anxiety in some cases. In her view, music is the best way to re-enact trauma and performance of music is therapy in itself – translating into performers getting therapy every day.



The ability of art to contain, express and communicate emotions lies at the basis of its healing potential. While pointing out that degrees of tension and release underlie the experience of emotion, Rose (1993:509-510) describes art's biological and developmental roles as follows:

Whatever the mixture of regressive and progressive elements, art performs a valuable biological, that is, a developmental function: at its least it provides a normative mode or opportunity for stimulating and assimilating potentially dangerous degrees of affect — in short, extending the limits of the bearable. Instead of a traumatic reexperiencing of affective storms, or a repression of affective signals with regressive resomatization and fragmentation, a greater degree of integration and differentiation of affects can take place within the safe holding presence of the aesthetic structure.

McClary (2007), Marshman (2003), Skar (2002) and Tilly (1977), authors of a number of articles discussing music's role in the treatment of trauma, follow the psychotherapeutic philosophy of Carl Jung. Central to Jung's psychology is the concept of individuation. Furthermore, he believed that true works of art have their origin in the collective unconscious and could possibly bring balance to the conscious values of a society. The artistic impulse to create has similarities to a pathological state, but is not entirely the same (Marshman 2003:24, 26, 28). Despite all the biological explanations, the question can still be asked: On the continuum of past and present experience as well as future hopes, is it brain mechanisms that are responsible for behaviour and creativity, or is it deeper-lying inspirations, including philosophical constructs such as the collective unconscious, or both?

An example of one such individual deeper-lying inspiration could be traumatic influence. In Welbel's (2009) opinion, real trauma is often so deeply hidden in the unconscious mind that it never reaches the surface but lies at the core of artistic endeavour. She believes that in such cases artistic expression helps the artist to survive and that music can be associated with something of which the performer is not necessarily conscious. This could be possible in some cases, but there are many other factors that should also be taken into consideration. This includes the possibility that artistic expression of equal depth could be achieved even when a person is fully conscious of a trauma or has integrated such experience(s). As Welbel acknowledges, a person who has no memory for a major trauma personally experienced can sometimes be reminded thereof when others talk about the details of such an event or events. However, the value of art in dealing with traumatic material cannot be disputed and many great artists indeed suffered significant trauma as was discussed in section 4.2 and 4.3.

#### 4.4.2 Ways in which music and art can facilitate healing

The question arises: in what ways does music facilitate healing? Jung (1973:542) wrote in this regard:

Music expresses, in some way, the movement of the feelings (or emotional values) that cling to the unconscious processes ... music represents the movement, development, and transformation of the motifs of the collective unconscious.

Jung is quoted by music therapist Margaret Tilly (1977:275) as having said that music reaches deep archetypal material and should be an essential part of every psychological intervention.

Patricia Skar (2002:631), working from her perspective as musician, piano teacher and Jungian analyst, observed in her adult students that their attraction to certain types of music could reveal dormant aspects of the unconscious. She says that these were often complementary qualities to the student's dominant conscious characteristics. Marshman (2003:26) is of the opinion that, in the psyche's quest to restore or maintain balance and achieve individuation, changes to a person's musical preference might be determined by current psychological needs.

Montello (2002:124) states that music bypasses cortical functioning, enabling it to directly enter emotional centres of the brain before being processed by the conscious mind. McClary (2007:159) explains that music's ability to bypass defences and provide a direct pathway to emotional and unconscious material is because music can act as symbolic representation for otherwise inexpressible experience. Peretz and Hebert (1995:128) illustrate by means of a case discussion of two brain-damaged patients that processing avenues of music and language are not the same. Therefore it can be argued that music may provide an avenue to the brain that cannot be accessed through traditional therapy. In the opinion of McClary (2007:156), the physicality and kinaesthetic aspects of making music could provide an avenue for releasing blocked feelings and accessing repressed memories. Therefore, in addition to the expressive nature of music, the physical nature of making music facilitates its healing potential. Another important aspect that McClary (2007:259) briefly refers to is the healing nature of musically induced vibrations. Frawley (1997:227) states: "Sound, as the most primary sensory potential, generates the strongest emotions. Each emotion creates a particular kind of sound." According to Tooley (2007), given that all matter vibrates to a precise frequency, it is possible to restore balance by means of using resonant vibration.

Aldridge quotes from his own earlier work as follows (Aldridge 1993:20):

It may be that different diseases differently affect the responses we have to music. If we consider our human biology in terms of musical form rather than mechanical construction and our responses to biological challenge as a repertoire of improvisations, we can view disease as a restriction of our abilities to improvise new solutions to challenges – in musical terms, a restriction of our abilities to play improvised music.

If this is true, what responses traumatized individuals, including traumatized musicians, have to music should be studied in greater detail. If a positive correlation is found, more weight can be given to the argument that trauma affects the music-making of musicians. In addition, Aldridge's statement would imply that creativity, including the ability to interpret written music, would be restricted in musicians suffering from pathology caused by trauma.

Music can be used as a therapeutic medium both to aid in restoring the communication process as well as refining the ability to communicate (Di Franco 1993:83). Sutton (2002:32-25) explains that what makes music therapy such a powerful tool is that through it can emerge a narrative which can be listened to and responded to, structure can be built and emotions expressed without the use of words. She expresses the view that, since trauma disturbs the sense of bodily connectedness and music is a means of experiencing oneself in time, music therapy can be useful because of its qualities of 'musical embodiment'. This can then be used to find a form to adjust to extreme experiences.

While music can assist in healing, art has the same ability because of its expressive nature. In Scaer's (2005:268) view this healing ability presumably lies in changing the meaning of the event or events to the 'survival brain'. He explains that a drawing or sculpture could be effective if it is created as a realistic or symbolical representation of traumatic events. This is particularly important in the case of victims of early childhood trauma, since, according to Scaer, they carry somatic experiences of traumatic events in procedural memory, the long-term memory of skills and procedures, unconsciously perceiving events and situations bearing some degree of resemblance to the trauma as threatening.

If music and sculpture can be healing, it follows that any art form that involves expressing the emotions can take on a healing role. In an interview with Barry Ronge (2008:18), Oscar-winning South-African actress Charlize Theron said:

Some people go to therapy, I go to work ... I feel incredibly blessed that I can deal with my demons when I go to work. It's a scary place, and that's why it is so important for me to be able to trust the director, so I can turn on some lights in places I haven't visited; confront emotions and feelings I haven't faced for a long time so I know I can deal with them.

A component of the job of professional musicians is also acting in the form of portraying musical drama by means of their instruments. Therefore when expressing emotions that are painful to access is approached with a positive mind-set, musicians can enjoy the same benefits from their work as Theron described enjoying from her job as actress. Indeed, if channelled correctly, having experienced emotionally challenging events could potentially aid in making the rendition of an acting role or the performance of a musical work more convincing.

#### **4.4.3 Music therapy as a means of facilitating the communication process**

Peters (1987:5-10) defines music therapy as the prescribed and structured use of music and music activities by a qualified professional music therapist to improve the client's physical, psychological or socio-emotional functioning and to rectify maladaptive conditions or behaviour patterns. Hanser (1999:1-2) refers to music's profound impact on human behaviour which she affirms is observable and measurable. As a music therapist, she states that she brings out the creative spirit in everyone she sees. She describes the client's 'music' as the part of each client that is free, that sings and that has rhythm. She explains that music therapy is based on scientific principles, objective observation and systematic assessment of the client's needs.

The effectiveness of music therapy in the treatment of trauma as well as mental disorders such as autism and schizophrenia lies in its capacity to express emotion and feeling in an abstract way. Di Franco (1993:83) contends that music can be used where pathology exists which involves a damaged communication process. If this is the case for individuals who are not professional musicians, the possibility also exists of music being helpful to professional musicians, provided the correct ambience is set and that it can be done in a non-threatening setting separate from the professional demands and high expectations of the career. One way of promoting such a beneficial scenario would be with the assistance of a competent and well-trained therapist who facilitates this process.

Needs that Hanser (1999:52) identifies in potential clients include communication, cognitive and emotional needs – these are all aspects of functioning that can be affected in trauma victims. Music therapy is often used to assist people affected by trauma. In addition, abused and sexually

abused children or adults are listed amongst categories of clients treated by music therapists (Hanser 1999:4). A technique used by some specially qualified music therapists to change their client's perception of a traumatic event, to create more positive associations and to thereby empower themselves is Guided Imagery and Music (GIM). GIM is a technique commonly used by music therapists in the treatment of trauma victims. Carol Lotter (2009), a registered music therapist, explained that GIM assists clients in accessing unconscious material. She continued:

Through this technique the therapist facilitates a process, through the use of carefully selected programmes of classical music which are played for a client. The role of the music is to evoke imagery which may have symbolic relevance in dealing with past stress or trauma. This technique may only be practised by therapists with the relevant training.

#### **4.4.4 Music as coping mechanism, its anxiolytic effects and potential as counter-vortex to the trauma-vortex**

In addition to aiding in the recovery process, music can aid survival during an extended traumatic situation, even without having access to an instrument or when not allowed to sing. The ability to vividly remember pieces of music, past performances and performances with other musicians can aid the victim of trauma in dealing with the fear, loss and separation experienced during the traumatic situation. Stein (2007:450) calls this the 'musical-hallucinatory coping mechanism'. Stein proposes that by imagining a performance as soloist with orchestra, music fulfilled Szpilman's psychological need of 'connectedness to others'.

Studies have shown that music has the potential of greatly reducing anxiety and aiding in significantly reducing distress in perioperative patients. Anxiolytic music also reduced the need for medication such as sedatives in such patients (Spintge 1991:65). Since these studies on music's role in reducing anxiety during and after medical procedures have shown such positive results, this could strengthen the argument for using music when debriefing victims of trauma. In addition, in the immediate aftermath of trauma, music can possibly provide an alternative stimulus, engaging the brain's attention to the music and thereby reducing intrusive traumatic memories.

Levine (1997:197-198) explains how the process of recovering from trauma should be a process of transformation and ultimately of renegotiation. He explains that the container of experience is ruptured by the trauma and this causes life-energy rushing out, creating what he calls a 'trauma vortex'. In an attempt at healing, nature provides a counter-vortex. Healing occurs when during

the process of moving between these two vortices, accumulated stuck energies are released at their cores (Levine 1997:199). For musicians, it is important to acknowledge that, if used intelligently, music could possibly be this counter-vortex. Since such a major part of musicians' lives are spent with music, they may even find it necessary that their 'healing vortex' incorporates music. This may also be true for non-musicians, simply because music expresses what language cannot.

#### **4.5 Responsibilities of music teachers regarding witnessing and referring**

The detailed discussion in this and the preceding chapters served to lay a foundation for the understanding of how trauma can influence musicians. More specific information as assimilated in the research survey is discussed in the remaining part of this thesis. From the examples and findings discussed it should be clear that there are times when intervention is necessary. It is also clear that at times the music teacher may be the person in the best position to take action. This may take the form of the immediate reaction of 'compassionate witnessing' as Weingarten (2003:163) refers to, but most importantly of appropriate referrals to professionals trained to intervene in such situations. An appreciation and understanding of the uniqueness of each student and of different students' and individuals' reactions to trauma are prerequisites to even begin to act in an appropriate manner.

The importance of showing an interest in and understanding for the different cultures from which students come cannot be overestimated. The world has become a 'global village' and interactions between cultures have greatly increased with the advent of modern transport and communication systems. Especially in large cities, music teachers may also find themselves teaching students from different parts of the world. The success of treatment and perhaps even the tone in which a referral may be accepted depends on respecting what may be culturally acceptable to the individual student or artist. Hlynka and Yeaman (1992:3) highlight that individuals who think in a postmodern way have arrived at the realization that there is no one best manner in which to communicate and to educate. On a practical level for this study this could also be interpreted to imply that there is also no one best way to deal with and guide traumatized students.

Teachers should know that they are not therapists and cannot act in that capacity. However, the importance of their influence on their students should never be underestimated. Welbel (2009)

explains that ultimately any relationship between human beings can have therapeutic components, but even more so the relationship between a teacher and a student. She goes as far as stating that teachers are therapists *nolens volens* – whether they want to be or not. Brice (2004:41) narrates a dialogue between Emile Jacques-Dalcroze (founder of Dalcroze Eurhythmics) and Howard Gardner (developer of the theory of ‘multiple intelligences’) that is supportive of this viewpoint, as Gardner is reported to have said that “[t]he teacher ... must be at once physiologist and psychologist.”

The responsibility that teachers have in the well-being and musical maturation of their students extends to choosing age-appropriate music for them to learn. Welbel (2009) is of the opinion that young children should not play too dramatized music since then they “take the trauma of the composer on their own soul”. Such music could include mature compositions or music written during times when composers were experiencing great individual or collective turmoil. Excessively virtuosic music written for themselves by young composers embarking on solo careers could also fall in this category. Types of compositions given to students to play have certainly become a concern recently as younger and younger musicians competing in contests are playing increasingly demanding music – both technically and interpretatively. Sometimes their life experience does not yet prepare them for this, but it could also be possible that children who had suffered trauma could be inclined to play more mature music. If Skar’s observation (2002:631, referred to in section 4.4.2) that adult students’ attraction to certain types of music could reveal dormant aspects of the unconscious could be applicable to younger students as well, this could perhaps suggest that giving younger students freedom to indicate their musical preferences could circumvent such problems. In addition, Welbel (2009) explains that teachers actually perform music therapy just by being, relating to their students, hearing and experiencing. Identifying emotions appropriate to the music and guiding students to assimilate the development of these into the musical structure, for instance how the musical ideas and intent communicated transforms during the course of a work, such as through the exposition, development and recapitulation sections or a series of variations, is simply music therapy in a different form. Stein’s insight (2007:451) quoted at the beginning of this chapter is of particular relevance here as it can also be interpreted as cautionary advice pointing out the very delicate balance that exists between different possibilities: art can represent experiences that could otherwise be too overwhelming to express but it can also break down necessary protective mechanisms that trauma victims employ to obscure extreme experience.

Knowing signs of possible existing trauma can help educators to act in the best interests of their students and even possibly to avoid mistakes that could have been made had they not possessed that knowledge. Teachers have the responsibility to be familiar with various intervention strategies and be prepared to discuss such possibilities with parents of students or fellow music teachers whilst maintaining confidentiality. They should be prepared to refer students to the appropriate healthcare services in a timely manner. It is also important that any person in a teaching capacity is aware that there are clear linkages between childhood trauma and many psychiatric disorders. A broader knowledge of the effects of trauma and of the different types of trauma is also essential to empower teachers to exercise good judgement and intervene in an appropriate manner. Educators should be familiar with their legal responsibilities regarding the reporting of child abuse. Chapter 6.1.7 discusses teachers' legal responsibilities in more detail.

Knowledge of the immobility response and learned helplessness can aid teachers in having the necessary understanding to help re-instil their traumatized students' sense of control and mastery. Jensen (1998:58-9) draws attention to the potentially debilitating effects of learned helplessness, also a possible consequence of the immobility response. In cases where learned helplessness manifests as a result of trauma experienced, great patience is required by teachers or therapists in rectifying the situation. Many repetitions of being shown the ability to exercise control over their circumstances and encouraged to reengage in choice-making are required to reverse the effects that biological rewiring of the brain had on subjects who perceived themselves as helpless during a traumatic situation (Jensen 1998:58-9).

An understanding of how trauma can influence psychological aspects of music performance, amplify stage fright, lead to concentration problems and even cause memory lapses is important to enable teachers to assist all their students - and not only the more resilient or 'lucky' ones - to reach their full potential.

Adequate knowledge of examples of how trauma influenced other musicians, particularly famous musicians, can help equip teachers to highlight potential for growth. Such examples or identification with others could assist students to remain motivated even in the face of adverse circumstances. In line with the postmodern spirit, students can be guided to 'deconstruct' their responses to trauma and explore alternative responses and points of view. However, a prerequisite for such growth is that teachers begin by questioning their own metanarratives. Hlynka and Yeaman (1992:4) regard it as important to support one's 'way of knowing' by



operating from a mode of criticism yet not evaluation, and thereby finding dysfunctions as well as functions. Only by not judging and not evaluating can dysfunctional as well as functional responses to trauma be identified.