Action, Criticism & Theory for Music Education

The refereed scholarly journal of the

MAYDAY GROUP
Action for Change in Music Education

Volume 4, No. 2
September 2005

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Electronic Article

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ISSN 1545-4517
This article is part of an issue of our online journal:
ACT Journal http://act.maydaygroup.org
See the MayDay Group website at: http://www.maydaygroup.org

How Music Might Impact on Us and the Implications for Music Education

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Abstract

Music appears to engage humans in a holistic, abstract and often unconscious way. This paper theorises that music contributes to the fulfilment of basic human needs. It suggests how these needs may have developed and describes the unique features of music that might meet those needs. The article concludes by proposing that an understanding of how music assists in fulfilling fundamental human needs should influence both curriculum design and pedagogical approaches to music in education.

'The Violin Tree' is a short animation by Australian cartoonist Michael Leunig. A businessman sits with head bowed in hands, forlorn, depressed. Another businessman dances to background music as a branch of the tree plays a violin nestled within its top bows. As the music becomes more robust the two men dance around the tree, sometimes independently, sometimes in synchrony. Even the flowers they stomp on in their exuberance rise up and sway to the music. Leunig has a passion for music. For my money he also has what Michael Polanyi would call 'tacit knowledge' (1975) of what music 'is' and 'does'.

Tim Winton is an author but he, too, seems to have an inherent understanding of some of the inner mechanics of music. In his award-winning novel *Dirt Music,* Winton speaks of the main character:

> Music, as well as being the most dispensable of arts, is probably the hardest to throw off. It pursues Luther Fox by strange means. He discovers that music lives beneath the soles of our feet. Given no encouragement, it still rises as if from the dust itself. Just as memories and landscapes eventually emerge to make emotional claims upon us, music comes, uninvited. Throughout

Stefanakis, M. (2005). How music might impact on us and the implications for music education. *Action, Criticism, and Theory for Music Education. Vol.4*, #2 (September 2005). http://act.maydaygroup.org/articles/Stefanakis4_2.pdf.

> his tropic exile Fox feels drawn to some underlying drone in nature. There is, he discovers, no silence out there. His dirt music is the lure of place, the call to belong (2001a).

Some see music and all the arts as representational or presentational of aspects of life (Gardner, 1994; Langer, 1953). Others, such as evolutionary psychologists Steven Pinker (1997) and Richard Dawkins (1998), feel that music is either biologically useless or acts like a virus (respectively), that is, music serves no purpose that could be seen as helping to sustain evolution.

Human needs

Perhaps one of the reasons for these perspectives, despite music's ubiquity, is a pervasive view of what constitutes fundamental human needs. In other words, although music does uniquely fulfil human needs, these needs are not seen to be significant by some evolutionary theorists such as Pinker and Dawkins. In the final of his articles for 'The Age' newspaper, psychologist and social commentator, Hugh Mackay puts forward an alternative predominant need to those commonly referred to:

> The deepest of all our needs is the need to be taken seriously as individuals. The other things usually described as basic drives – sex, power, the need to belong – actually flow from that one central need. If you doubt it, look at what happens when people feel as if they are *not* taken seriously: they become angry, depressed, cynical, aggressive or petulant, to say nothing of plain unhappy. … I've also decided that the meaning of our lives is to be found in the quality of our personal relationships and nowhere else. We are all part of the same humanity. We learn our most valuable lessons from each other (McKay, 2003, p. 11).

McKay makes two points here; the first is the need for self-worth, and the second for mutually valued personal interaction. Further, he suggests that one affects the other. I'd

like to follow McKay's ideas by referring back to one of the physiological needs of other more primitive organisms, that is, the need for spatial orientation, to determine whether there are parallels in the way this physiological need may be manifested in a more holistic way in humans. This is because there is a possibility that it may influence the way we understand at least one of the purposes that music serves and its level of significance.

There has been a resurgence of interest in researching the origins of music, particularly over the last decade (Cross, 1999; Hodges, 1996; Juslin and Sloboda, 2001; Wallin, 1991; Wallin, Merker and Brown, 2000). Several authors discuss regulating the body's state of equilibrium as one of the purposes of music, either fleetingly (Hodges, 1996; Storr, 1992) or more substantially (Wallin, 1991). My own research into the area has begun from the kind of tacit knowledge I feel Leunig and Winton have of music. My desire has been to try to make sense of this inner knowledge - this musical knowledge – and to articulate it by following leads in an array of disciplines as diverse as cybernetics, fractals, the audio- perception of fish, neurobiology and acoustics. This research is theoretical and the journey is, by no means, complete.

Regulation of an organism's position in space

One would think that statoliths had absolutely nothing to do with music, however, perhaps there is a link. Statoliths, which are weighted particles, grains, sand, or crystals, are found inside many organisms and they help those organisms, from plants to humans, to respond to gravity. Plants, for example, have stems that grow upwards, resisting gravity, (negative gravitropism) and roots that grow downwards, succumbing to gravity (positive gravitropism) (Wayne & Staves, 2003). It is still not completely understood what causes stems to grow up and roots down. Statoliths, having a greater mass than other parts of, for example, the cell structure in some plants, are less resistant to gravity

and cause an organism to renegotiate its position in space, or its direction of growth. There appears to be an interdependent relationship between the external force of gravity on statoliths and the internal force of the microtubules and actin filaments in surrounding cell structures (Bisson, 2003; Volkmann, Baluska, Lightscheidl, Driss-Ecole, Perbal, 1999). However, simplistically, even if a seed is placed in the ground on its side, the stem from that seed grows vertically, not horizontally (Wayne & Staves, 2003). The suggestion is that the internal force and the external influence of gravity on the statolith collaborate in order to negotiate the direction of plant growth.

There are statoliths inside the statocyst of fish. The statocyst is connected to the hearing and feeling organ in fish, which is called the lateral line. Both have hair-like cells, called 'cilia' (also structured with microtubules) along them. When fish move, the weight of the statolith lags behind and connects with the cilia that send messages to the fish brain indicating a need to re-position, or re-orient. Similarly, loud sounds, which affect the hair cells of the lateral line, send messages to make a physical response, such as fleeing. The whole orientation, feeling, hearing system in fish is an interrelated one requiring a balanced response (Zelick, Mann, & Popper, 1999). Fish are so reliant on these hair cells, that they have been shown to re-generate when damaged (Popper, 2003). Though less is known about this interrelationship in whales, it is has been suggested that these grand sea mammals beach themselves when they have damage to their hearing, which also impacts on their ability to navigate their position in space. It is thought that this occurs because the animals become disoriented. (Uhlenbroek, 2002;Valles and Dooley, 2002). For this reason there's a saying that a deaf whale is a dead whale (Uhlenbroek, 2002, p. 56).

Although located next to the cochlear, the human vestibular system, (the equivalent of the statocyst in humans) has traditionally been perceived to have a stronger link with visual sensory input than auditory stimuli (Chiras, 1999). This is thought to be because of

the central role the visual sense plays in human perception. However, the neuroscientist Antonio Damasio believes that the vestibular system is an essential component of our mapping and responding to all sensory input (1999). This integration, he believes, begins in the brain stem. At a higher level of the brain, recent research suggests that vestibular function required for a sense of the body's upright orientation to gravity appears to be independent of vision in the posterolateral thalamus (Karnath, Ferber, & Dichgans, 2000). The multi-functional thalamus acts as a central sorting house of the brain, sending incoming stimuli to the most appropriate areas of the cortex. It is also implicated by some as essential to consciousness (Ratey, 2001). Neil Todd, from the University of Manchester, is studying why some people choose to listen to loud music, particularly in contemporary genres. He feels that loud notes, particularly bass notes, trigger the same responses in the vestibular system as in ancestral species, like fish, stimulated by noisy mating calls (Sample, 2003). Other researchers such as Juan Roederer, a psychophysicist, (1995) and Anthony Storr, a psychologist (1992) cite a similar ancestral connection.

Todd feels noisy sounds send messages to the pleasure centres of the brain, ultimately alleviating stress and keeping us happy and healthy (Sample, 2003, p. 5). However, I would challenge the notion of loud sounds being purely the province of mating rituals. Loud noises can also be highly threatening and, as suggested, evoke a 'flight' response. Todd is also studying how the body might develop a synchronous response to beat (Todd, Lee and O'Boyle 2002). Beats are louder sounds punctuating time into regular intervals. Often beats are inferred. Perhaps there is interplay in our desire to move to strong rhythms, between the very basic physiological need to make a physical response to a loud noise and the sense of well-being we feel in perceiving a regular pattern. What we seek in all perception is precisely this – familiarity, regularity, clarity, pattern (Bregman, 1990). Our brains can draw on memory when something is repeated. We don't have to work so hard. There's also the familiarity of body rhythms. A

great deal of literature shows how bodily functions such as body temperature, heart rate and breathing rates can be slowed down or sped up by music of varying tempi, (often reliant on an implied beat) or emotive carriage (Bartlett, 1996; Blood & Zatorre 2001).

The human need for control

Our perception of beat is not always a pleasant experience. Our brains suppress internal bodily sounds. We would go mad if we were constantly aware of them. The sound of a dripping tap has been used to torture people. There's a choice factor in music. In essence, through music we have control over the sound environment (Storr, 1992). Sound can be a warning signal. It's our best warning signal. Darkness stops us from waking during the night, but we are always sound ready – hence fire alarms, rather than fire lights: hence babies cry when they need feeding, rather than waving their hands in the air. Music is a sound environment we like to choose and control (from the time we are born). The Canadian vocal group Aradia is named after the daughter of Apollo's twin sister who was sent by the Gods 'to teach mankind to order the music of the natural world into song' (2000). This personal ordering is becoming increasingly difficult. *So* personal can our choices of music be that we resist those made for us. For example, Tia DeNora, who conducted ethnographic research into contemporary uses of music, describes how some people found music intrusive if they sought physical privacy, such as in the changing room of a boutique (2000).

DeNora also investigated the responses to music in an aerobics class. Illustrating the deliberate sculpting of music to influence physiological responses, she discusses the formation of aerobic music tapes by commercial companies to accommodate the varying needs of participants throughout a forty-five minute session. For example the warm up music maintains a beat per minute rate of 130 to 138 while the 'core' of the session runs at 140 to 146 (p. 91). 'Cool- down' at the end of the session is around 130 bpms. Stylistic

features of the music are also meticulously sculpted, with the rhythm in the foreground and vocals in the background because, DeNora says, the clarity of the rhythm is perceived to be so important. She also describes the way female vocals are used and worked to the top of the vocal range. She says that melodies and harmonies 'are typically positioned as the musical telos'. They 'press up and lift in ways that are homologous with the gravity resistant physical practices of aerobics' (2000, p. 92).

Human responses to gravity: Music as such a response

Carl Ginsburg, an educator in the Feldenkrais method of body awareness and movement, believes that, 'The organisation of erect standing and walking is undoubtedly the most complex thing a brain accomplishes in life' (2003, p. 2). He says that in standing up in gravity, a great deal of our muscular activity is not under conscious control, 'but is directed through the vestibular system, the extra pyramidal muscular responses, the vestibular-optical responses' (p. 2).

The neurophysicist and concert pianist, Manfred Clynes (2003), says that gravity influences our emotions.

> Without gravity, the heaviness of grief is different and the lightness of joy is no longer special. But reverence too is involved, in that our perception of where our bodies end is altered, so that our space seems to expand, as well as some degree of lightening of the apparent weight.
>
> What we perceive is very much an effect of our sensory attunement: for example the pressure on our feet of the body weight is not really sensed, even though an unevenness of even a pea is perceived (2003).

He draws a strong link between emotional responses and responses to music, which, he feels, also involve gravity, with bass notes seeming to have a greater mass and inertia

than high notes. For example, he says that 'a flying insect with a low pitched note would be scary indeed' (2003).

The philosopher, Mark Johnson suggests

> that meaning includes patterns of embodied experience and preconceptual structures of our sensibility (i.e., our mode of perception, of orienting ourselves, and of interacting with other objects, events, or persons). These embodied patterns do not remain private or peculiar to the person who experiences them. Our community helps us interpret and codify many of our felt patterns. They become shared cultural modes of experience and help to determine the nature of our meaningful, coherent understanding of our 'world' (1987, p. 14).

Johnson sees a connection between the way we respond to basic physical needs and our often sub-conscious mindful needs. These needs are in personal perception and orientation and in interacting with others and the environment. There are aspects of music, which would appear to fulfil these needs in unique ways. One of the particular features of music is its non-linearity and its irreducibility. Where we might say that most characteristics of music could be found in language – melodic shape, rhythm, dynamics, tempo, even tone colour - there is no beat, and no harmony. If two or more people speak at the same time, it does not make sense. However, musically, we *aim* to connect through sound (Brown, 2000; Peretz, 2001).

Connecting through music

We achieve this connection through music in two ways. Beat and rhythm keep us together through time. William McNeill (1995) has studied the use of rhythm to coordinate and connect people in such diverse pursuits as dance, the morning exercises of factory workers in Japan and marching drills such as the goose-stepping of the Nazis. He refers to the synchronisation of movement to rhythm as 'muscular bonding' (p. 199) and

similarly to Becker (2001), believes that it promotes both internal body regulation and group cooperation. He feels that such activity derives from emotional responses that people have when moving together rhythmically; that it creates and sustains communities, improving the chances of individual and collective human survival.

Choices we make in creating sound environments

Similarly, harmony, or the sharing of unison pitch, unites us in space. Harmony is essential to making sense of any sound. We identify all sounds, including words, according to several parameters – their loudness, their length, their pitch, the direction from which they emanate and their harmonic spectrum (Bregman, 1990; Rigden, 1977). Perhaps tacitly, we use the harmonic spectrum to construct musical harmonies (Bregman, 1990; Cross, 1999; Pinker, 1997). Even infants tend to find the lower partials of the harmonic spectrum more consonant than the muddier ones higher up (Trehub, 2003). Our choices are more complex than this. They also relate to the cultural context of the music, individual contexts and previous experiences, but we seem to possess a tacit knowledge of the ways in which we de-construct all sounds to make sense of them, in the way we reconstruct them to make music. For example two women, both amateur singers share the ambivalence of performing together for an audience.

> So why am I feeling like I'd rather crawl from Melbourne to Darwin on my hands and knees than get up in front of 100 people and sing this afternoon? …Shoulder to shoulder we stand .. watching each other's ribs from the corners of our eyes for that simultaneous intake of breath. … ping – a fortissimo top "A". The vowel, a hard German "I" bounces off the high ceiling and comes back at us … . [W]e feel our bodies as bellows, separate and yet connected by these waves of vibrato which, without consciously trying, we have synchronised. Our ears buzz with the strange harmonics of Mozartian triads, and we can

> hardly hear which note comes from which throat. … And it feels so, SO good. Can we do it all over again? (Prior, 2002).

As a form of harmony, drones are almost universally used in music (Reck, 1997). In Reck's opinion, 'Drone notes establish a strong gravitational pull, a point of reference, for and against the notes of melodies' (p. 277). We might see the drone as Leunig's tree, the point of equilibrium, a constant, around which other sonic events navigate space and time. Arvo Pärt, a contemporary Estonian, minimalist composer has an extraordinary sensitivity to those parameters of sound previously described and he luxuriates in these in his compositions. All his works also show a deep understanding that music can pull one gravitationally, or even suspend one's sense of gravity. Describing Pärt's composition, *Tabula Rasa* (clean slate), Meurig Bowen says it is 'surely some of the most ethereal, free-floating, serene music ever written. It can transport the listener into a space where time is suspended, where consciousness reaches zero gravity, and where the tenderest, saddest utterances can reach deep into the soul' (1997). The drone in Pärt's *Fractres* appears to provide a sense of constancy. The movement around it seems to be a pulling away from this constant – and it sends shivers up and down my spine. This is not to deny that stylistic and cultural music conventions contribute to the meaning we derive from it. However there is increasing evidence that these conventions spring, at least partially, from physiological sources (Hauser and McDermott, 2003; Trehub, 2003).

Ann Blood and Robert Zattore (2001) conducted an experiment in which they used MRI imaging of participants listening to music chosen by them because, in a similar way to my response to Pärt's music, it evoked a 'chills' response. Like Todd, they concluded that the centres of the brain affected by the music were associated with emotions, 'pleasure' centres, and that music, as the neuroscientist Susan Greenfield (2000) concurs, acted like a drug.

However, in citing this experiment, Damasio suggests that this is not the only function of these centres of the brain. He says that they also constantly map the body's state, and, as a result, help regulate heart rate, blood flow and breathing rate. Damasio feels that the human body constantly and dynamically negotiates a state of equilibrium in order to remain healthy (2003a). His interpretation of the results of this experiment intimate that music is a way in which we attempt to control this dynamic state.

A connection between body mapping and mind mapping?

Like Johnson, Damasio (2003b) believes that the mapping of the body is connected to our mindful sense of self. In essence, he feels that where we unconsciously map and regulate our body state and our position in space, the mind consciously asks, 'Who am I? How do I relate to others and to my environment?' The areas of the brain involved in the 'chills' experiment are all emotion sites and mapping sites, including the thalamus and the insula. Emotions, 'from the Latin, *movere* – to move' (Ratey, 2001, p. 227) demand a physical response. Their ultimate purpose is to formulate an action, a renegotiation of the current state of the organism. Music is an activity in which the body, the emotions and the mind are all actively engaged in this process. Leunig's exploration of music in his animation is like a mindful manifestation of what the body already knows and this has been my own experience with music, of knowing, and attempting to articulate this knowing. It is this bodily knowing that Johnson suggests is what we explore through the use of metaphor (1987). However Johnson's emphasis is on the use of metaphor in language and visual images.

Music: Interrelated sound mapping of body and mind?

According to Damasio (1999), language is an important aspect of higher levels of consciousness, but anyone who has ever tried to follow the written instructions for a do-

it-yourself kit knows that words are not always the most adequate form of communication. Visual images, gestures, movements, looks and music are no less demanding of conscious thought and often far more potent and apt in conveying meaning.

Unlike most uses of language, music is not usually a representational medium, in terms of 're-presenting' objects in a coded form (Trehub, 2003). The conductor and music educator, Eleanor Stubley, sees the focus on 'the nature of the relationship between the name and the thing to which it points or refers' (2004, p. 5) as a limitation on our ability to truly understand the nature of music. She says:

> It is as if I am seeing the cracked and broken landscape of a discipline that, having left the body behind, ended up separating content and context, form and feeling, and in so doing, found it-self unable to accommodate change, the way in which music, as organized sound, is constantly evolving (2004, p. 5).

The sociologist, John Shepherd, argues that music

> makes no direct appeal to the world of discrete objects and concepts. It is nondenotative. … Music evokes directly the textures, processes, and structures of the social world as that world is manifest in the external, public realm of social interaction *and* the internal, private realm of individual subjectivity. The prime focus of music's evocation distinguishes it quite radically from language as the other mode of communication based in sound (1993, pp. 103-4).

In essence, Shepherd suggests, in music, the meaning is embedded in the sonic event and our experience of it. In addition he says, 'music's appeal is primarily and initially somatic and corporeal rather than cerebral and cognitive' (1993, p.104).

However the music philosopher and educator, Wayne Bowman, feels that through music our knowing is also

> a valuable cognitive resource, not because of what it teaches us about the disembodied metaphysical realm of feeling, but what it shows us about the profoundly embodied and socio-culturally situated character of all human knowing and being (2004 a, p. 31).

Thus, although our personal articulation of musical experience can be wordless, it is, nonetheless, deeply meaningful because it would seem to touch very old, felt truths. The structures and choices we make in organising sounds to make music seem to encapsulate a subconscious knowledge of these truths and a subconscious knowledge of our intimate relationship with gravity. Music appears to be a holistic way in which we come to know ourselves and our relationship with the world. We dance around the tree of 'being taken seriously' as McKay describes it, or the tree of 'who we are and how we relate to the world'. There seems to be an inherent purposefulness in all this (Penrose, 1989). Seeking purposefulness is the province of those species who possess what Damasio describes as 'extended consciousness' (1999).

Creativity as a necessary act of consciousness

Damasio feels that consciousness is burdensome. He sees it more as an accident of evolution (1999). However Ginsburg (2003) questions the deduction that consciousness has no biological function and contends that without it, we would never have learnt to stand erectly. As with Bowman, Shepherd, Johnson and Damasio he, too, argues that the mind and body are interrelated. He believes that it is because researchers tend to seek an understanding of consciousness only through cognition, that it is elusive.

Consciousness, as Greenfield (Throsby, 2000) points out, also allows us to imagine and create, or as Johnson describes it, imagination is a way of synthesising information in order to make sense of it. He believes that 'there can be no meaningful experience without imagination' (1987, p. 151). As the ultimate biological control freaks, humans

use their imagination, not only to make sense of the environment, but also to create it. In looking around any room it is difficult to find anything that is not the result of human invention. Music is inherently a creative process. We create images as listeners and performers, and sound environments as composers.

Music: Orienting and connecting with changing physical and mindful environments

The pleasure-state Damasio associates with equilibrium is not so clear-cut, at least in music. The 'chill-factor' in music, does not always come from choices that make one happy. In discussing the importance of how we *feel* to our well-being, the social psychologist, Richard Eckersley, concludes that such well-being is not only attained through the achievement of happiness. He says that 'meaning', which he associates with balance and sense of self, 'is important beyond any contribution it makes to happiness. My work gives me meaning. I can't say it always makes me happy' (2004, p. 97). He feels the pursuit of optimum happiness is culturally motivated and suggests we should 'question the extent to which we focus on maximised happiness (like maximised wealth) as the bottom line of progress, the supreme good' (p. 98). Similarly, the feeling of treasured music for me, is sometimes more resemblant of a thin thread suspended over a fiord, the pleasure state on one side and the pain state on the other with, as Clynes (1989) describes it, many other emotions in play. My favourite music causes this thread to vibrate between these two states, and on this thread, or as Leunig would have it, around this tree, I dance, we all dance. The violin music causes the trampled flower to resist gravity, rising and swaying with the music. The trampled businessman rises too, resisting, even laughing at gravity, connecting with another businessman, re-orienting, re-negotiating body, mind and the environment in which both find themselves. The thread is dynamic, the fiord the inherent risk factor in making music, in making a commitment with music and with others through music.

In *Dirt Music*, Luther Fox has chosen solitude in an isolated environment. 'The moon waxes and wanes and takes a whole cycle of tides with it and for much of that time Fox feels disoriented' (Winton, 2001b, p. 386). He then plays a drone on a piece of nylon string he has tied to a tree.

> He bangs away until he finds a sound … Gets himself a four-four beat with a bit of shell-grit footstomp for colour and suddenly there's a groove, a little room in there for feeling. … Makes you laugh dammit. Gets your teeth buzzing. … Just one note. … you go up and down your note like a pup up and down a dune until you don't feel your festering bites or your oozy eyes or sun-scoured neck, until you're not one moment empty, nor one bit lost or one breath scared. You're so damn far into ones you're not one anything. You're a resonating multiplication. You're a crowd (p. 388).

To summarise, some of the purposes of music would seem to be:

- To dynamically orient the body and mind, internally and in relation to the environment, both consciously and unconsciously. Thus, the integrated, experiential nature of music makes it a profound and unique way of knowing, being and being well.
- To connect with others, both physically and mindfully, providing an avenue for unique personal and socio-cultural interaction.
- To control and make choices about the sound environment by reconstructing the same sound parameters as those used to make sense of incoming sonic events.
- To sculpt individualised, imaginative thoughts as listeners, performers and composers.

These uses are interrelated. In regard to the first two points, a vast array of organisms need to orient physically, and some, mindfully. Similarly, all organisms depend on a cooperative relationship with the environment. These are basic biological needs fulfilled in different ways by different species. The third and fourth points differentiate humans from most other species. We imagine and create our environment to have greater control over it (for better *and* for worse) and to develop a greater understanding of our place in it. On this basis, music could be seen as a natural and evolving part of an organic system we call 'life' – not a metaphor for lived experience, but part of the experience itself. I believe this has implications for music education.

In research conducted by the Youth Research Centre at the University of Melbourne in which 'student action teams' were required to work in groups to find solutions to real life tasks, the authors cite literature addressing connectedness and resilience in health and educational settings. Their review suggests that establishing strong self-concepts and a focus on ongoing learning and development in young people requires them to be engaged in programs that promote three major factors. They are:

1. A sense of meaning and purpose
2. A sense of control or capacity
3. A sense of belonging or bonding' (Holdsworth, R., Cahill, H.,& Smith, G., 2003, p. 5)

Such research is leading curriculum designers to re-consider the structure of curriculum and its method of implementation. In Queensland, the 'New Basics' curriculum has been organised around much broader concepts than the traditional disciplines adhered to previously. The design of curriculum there suggests that real-life experiences should somehow be acknowledged within formal educational learning environments. The

structure focuses on four areas of knowing intended to embrace all areas of the curriculum. They are:

'1. Life pathways and social futures

- *Who am I and where am I going?*

2. Multiliteracies and communication media

- *How do I make sense of and communicate with the world*

3. Active citizenship

- *What are my rights and responsibilities in communities, cultures and economies?*

4. Environments and technologies

- *How do I describe, analyse and shape the world around me?*

Education Queensland, 2000' (Stevens, 2003, p. 170)

The Stevens Report was the culmination of a collection of data Australia-wide, researching the nature and extent of music programs in schools. In his conclusions, Stevens is pessimistic about the role of music in education within a framework such as that being developed in Queensland. He says:

> Although there is presumably the possibility of including some music within this context, its traditional role as a discrete area of the curriculum appears to have been entirely lost. Such a radical approach to curriculum design and development could well be the direction taken nationally in the future and may well mean that the number of students receiving formal music instruction

> may well decrease markedly under any new curriculum regime (Stevens, 2003, p. 170).

However, from the research cited here, there appears to be a strong correlation between the 'New Basics' questions and the issues music addresses and explores in everyday life. What educators in Queensland are attempting to do is to cater for the fundamental needs of students in an educational setting. We, as music educators, might consider thinking this way too. It may be a change in philosophy for some but it is one which has been mooted in successive arts curriculum framework documents in Australia, although perhaps not always reflected in the design and implementation of curriculum (Stefanakis, 2003). Such an emphasis means that rather than teaching music to students, educators are advocating that students learn about themselves, about their interactivity with others and about their world *through the medium of music*. And as discussed here, music comes with an inherent aspect of control. Our control of the sound environment through music impacts on our ability to develop a degree of control over our own lives and our interaction with others. 'How do I describe, analyse and shape the world around me?' Music, as suggested in this paper, answers the above questions in unique ways.

It is no surprise, that many eleven and twelve year olds want a portable discman for their birthdays. They are at an age where they are constantly renegotiating their physical position in space, their emotional and cognitive positions and their relationship to others. Paul Morley writes:

> The 45rpm single. It was the first thing you owned for yourself as a kid. It was a sign you were establishing your own identity. (2003, p. 3).

Into this potent mix we educators add the burden of academic striving, where the emphasis is on students negotiating their intellectual 'place' in the world, often through tasks that bear no relationship to their real world.

Music can provide a connecting point, a way of knowing, a means of physical, emotional cognitive and socio-cultural navigation through this whirlpool of experiences. Students turn the music up, or plug guitars into amplifiers to feel it, to connect with it and with others wholly. As Todd suggests (Sample, 2003, p. 5), it's as basic as a fish feeling/hearing sound in the environment and adjusting its position accordingly. Music can provide something very positive in students' lives.

Rather than working against this, perhaps we need to work with it. As music educators there is little point in exploring what the purposes and values of music might be if the knowledge is not educationally applied. As Bowman points out, the need to advocate for music in education is often the result of failings in its application (2004 b). A conductor or teacher who makes all the musical choices, even decisions about interpretation, can reduce a student's musical life to one of technical competence and subservience. Though technique provides a physical and cognitive connection to music, it is not all there is to music and it certainly does not fulfil all students' musical needs. There exists an opportunity to connect the perceived values and inherent purposes of music to the design of curriculum, and pedagogical approaches to its implementation as the Queensland model is bravely attempting across all areas of learning. By defining those needs and using them as a contextual framework for the development of what have been referred to in the Queensland model as 'rich tasks' (Education Queensland, 2004), it is proposed that students can musically navigate self and relationship to others and the environment through interrelated musical processes. By listening and responding to a range of musical genres, developing ideas and identity (personal and social) through composing, and linking with other composers and performers through interpreting other's

works, student endeavours should have a real life focus, meaningfully engaging the whole person.

The Queensland model is in the midst of a four-year trial. Future research will determine whether music education experiences are enhanced through such a model attempting, as it does, to draw on the everyday life values and purposes of disciplines as the basis for learning.

Mandy Stefanakis

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Mandy Stefanakis has taught music at pre-school, primary and post-primary levels and lectured in music education at the University of Melbourne where she obtained her Master of Education. She worked for many years in the Curriculum and Development section of the Victorian Education Department and continues to contribute to curriculum initiatives for them. She is the Vice-President of the Association of Music Educators (aMuse), Victorian Coordinator of the Australian 'Music. Play for Life' campaign and the author of 'Turn it Up!' a set of music education kits published by McGraw-Hill. She is currently Coordinator of Music at Essex Heights Primary School. She is also studying for a PhD in the area of music composition and philosophy.

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