A COSMIC VIEW OF MUSIC

by Rev Dr June Boyce-Tillman MBE, Professor of Applied Music, University of Winchester, Artistic Convenor of the Winchester Centre for the Arts as wellbeing and Extraordinary Professor of North West University, South Africa
June.Boyce-tillman@winchester.ac.uk

Opening Song

CHORUS:

Sing us our own song the song of the earth,
The song of creation, the song of our birth,
That exists in belonging to you and to me,
To the stars and the mountains, the sky and the sea.

2. It is not one song but patchworks of sound. That includes all the pitches that people have found That includes the vibrations of earthquakes and bees Of the laughing fire's crackling and murmuring bees. CHORUS

 All blend together to make the earth song, Fragmented parts separated too long,
 True notes and rhythms and colours and beat Make sacred spaces where we all meet. CHORUS (Boyce-Tillman 2006a)

Framework

I start with this song as it represents my attempt to restore the connectedness of music including its connection with the heavens. Throughout the history of Western music spirituality or the heavenly and music have been associated – from the ancient goddess traditions (Drinker 1948/1995), through Plato (Godwin 1987 pp3-8) and on through Hildegard of Bingen (Boyce-Tillman 2000b). It was seen, as the opening song suggests, as connecting human beings to one another, to God and spiritual or heavenly beings and to the earth. Inspiration was seen for the vast majority of Western history to come from some heavenly source, whether it be the Muses, Angels or God. It was in the hands of the philosophers of the Enlightenment that the link between music and the heavenly became weakened and the search for the spiritual became an essentially human search located in the unconscious (Harvey 1999), rather than one rooted in the essentially exterior spirituality of the heavens.

The spiritual became associated with notions of self-actualisation (hooks, 1994) and self-fulfilment in Maslow's hierarchy of human needs (Maslow 1967) in which he included the aesthetic – the need for beauty, order, and symmetry. As Western culture edged towards an aggressive individualism, a sense of finding some place in a larger whole – the cosmos – became a priority in the human search. But this was now to be sought by exploring the heavens materially rather than with the imaginal mind.

This process of objectifying the cosmos associated with the advance of science had not happened in the same way in Eastern cultures; and it was on these cultures that the New Age (Boyce-Tillman 2000a, pp. 155-166) and some areas of rock and jazz traditions (Hamel 1978/1976, pp. 134-135) drew, in order to offer the desired sense of relationality. This included a more holistic view of the mind/body/spirit relationship, with transcendence approached through physical practices such as chanting (Gass and Brehony 1999) or dancing.

This paper will look at the heavenly through the lens of the spiritual. It will use a phenomenography of the musical experience to examine different dimensions of the musical experience. It will draw largely on western classical traditions which will base them largely within a frame of Christianity.

Introduction

Praise the Trinity

Our life-giving music.

She is creating all things.

Life itself is giving birth.

And she is an angel chorus praising

And the splendour of arcane mysteries,

Which are too difficult to understand.

Also from her true life springs for all.

(Hildegard translated June Boyce-Tillman 1994 No page numbers)

I will examine the potential role of music within a relational theology frame. It will look at different views of the natural world at different times in differing cultures. It will examine a phenomenography of the musical experience that includes the totality of the experience and will use this as a frame for examining the role of music as a significant phenomenon in the networking of the cosmos. It will use this frame to examine an event held in Winchester cathedral and finally suggest three interlocking models for the potential of music as an ecological tool.

The Music of the Spheres

Sophie Drinker in her remarkable book *Music and Women* sees the loss of a relational view of music in the loss of matriarchal religions.

These goddess-mothers were generally represented as giving speech, music and their art of gesture to humanity, and as being themselves dancers and musicians...... There can be no doubt that women were creative musicians in that age which preceded the epoch of written history. (Drinker 1948/95 p68-9).

But this view became subjugated as the patriarchal religions dominated Europe (Boyce-Tillman 2007a). It is the notion of the Music of the Spheres that underpinned a great deal of thinking in the Classical World but became subjugated at the Enlightenment.

The importance of the link that Pythagoras established between human thought and nature, for religion, science, mathematics, music, medicine and cosmology, body, mind and spirit were linked in a complex synthesis. Plato, Cicero, Pliny and Ptolemy followed Pythagoras and the theories filtered into medieval Europe via such writers as Boethius (c480-524/5). His *Principles of Music* became the primary textbook for music in the Middle Ages (Godwin 1986 p43). Because the fundamental nature of the universe

is music then music in their system became an important tool to heal the body and lift the soul (Godwin 1987b p130). From it an associated system of numerology was developed, through mystical movements like the Rosicrucians and figures like Robert Fludd (1574-1637) and Johannes Kepler who wrote in 1619 his *Harmonice Mundi* (Godwin 1989).

These ideas also filtered into the Church and underpinned the design of many of the great cathedrals of medieval Europe produced spaces of unparalleled resonances which are still there to be rediscovered. One theory sees each building having a particular note. I experienced this in 1999 in a piece written for York Minster. The piece centred around a single note. In rehearsal the piece appeared somewhat drab and uninteresting. In the cathedral the repeated sounding of the note were taken up by the building. What such theories restore is the building itself as an intrinsic part of the musical experience.

The theologians of the Middle Ages drew heavily on these theories. The medieval mystic Hildegard of Bingen (1098-1179) saw it recreating the original harmony of God and the world in the Garden of Eden:

Music expresses the unity of the world as God first made it, and the unity which is restored through repentance and reconciliation. (Van der Weyer 1997 p80)

Central to her cosmology is the notion of viriditas – a divine creative energy that fills the cosmos, the earth, its creatures and human and heavenly beings. It links the universe together:

No creature, whether visible or invisible lacks a spiritual life....the moon and stars flame with fire. The trees shoot forth buds because of the power in their seeds. Water has a delicacy and a lightness of motion like the wind....No tree blooms without greening power; no stone is without moisture; no creature is without its own power. (Fox 1987 p277).

These ideas were clearly linked with the basic medicinal frame of medieval Europe – the Doctrine of Humours – which saw the human being inextricably linked with the natural world as being made of the same basic elements. Music plays an important part in this greening power:

Just as the power of God extends everywhere, surrounding all things and encountering no resistance, so too the sound of human voices singing God's praise can spread everywhere, surrounding all things and encountering no resistance. It can rouse the soul lost in apathy, and soften the soul hardened by pride. (Van der Weyer 1997 p80)

She connected singing with embodiment and as an act of incarnation (Baird and Ehrman 1994 p79).

At the Enlightenment these ideas gradually moved from being part of the dominant way of knowing to being subjugated (Boyce-Tillman 2007a) by the development of the scientific rationalist paradigm and the centrality of humanity to the cosmic schema. This meant that music lost its central place as the stuff of the universe and the notion of the aesthetic developed. The aesthetic came to be about the highest expression of human achievement. A barrier was set in place between human beings and the natural world which now becomes 'inanimate' – lacking a soul. What was lost essentially was the connection with the earth, the material world and human beings. The connection of music with the spiritual world persisted. The notion of transcendence as part of self-actualization led people to regard the musical experience as the last remaining place for the spiritual in Western society (Hills and Argyle 2000 pp61-75, Hay 1982). Some of the ideas, however, survived through such figures as the harmonic astrologer John Addey (1920-82), Gurdieff and Rudolph Steiner and later figures who we shall consider later in a search for a concept that will unite the cosmos.

The area I have called Expression is concerned with the evocation of mood, emotion (individual or corporate), images, memories and atmosphere on the part of all those involved in the musical performance and play an important part.

The medieval abbess Hildegard of Bingen expresses this domain through images:

In music you can hear the sound of burning passion in a virgin's breast. You can hear a twig coming into bud. You can hear the brightness of the spiritual light shining from heaven. You can hear the depth of thought of the prophets. Music expresses the unity of the world as God first made it.

Scivias 3.13.13 (Van der Weyer 1997 p79)

As Romanticism progressed mood became increasingly central to the musical experience and to its portrayal of ideas of the heavens. Gustav Holst at one point called *The Planets* a set of "mood pictures." Written 1914-16 but first performed publicly in 1920, the set examined the Planets through the lens of astrology and he only added the titles of the planets later in the life of the piece. He visited Spain with the astrologer Clifford Bax. Through him, he rediscovered a former interest in theosophy, possibly reading Alan Leo's *The Art of Synthesis*. The titles of the movements appear to be drawn from it:

Mars, the Bringer of War- Venus, the Bringer of Peace- Mercury, the Winged Messenger- Jupiter, the Bringer of Jollity- Saturn, the Bringer of Old Age- Uranus, the Magician- Neptune, the Mystic

Various critics have seen deeper patterns in the set. One theory sees the order as rooted in the interface between the astrological signs of the zodiac and the planets. A further suggestion is that the planets are ordered in their terrestrial relation to the sun – the first four being the inner terrestrial planets and the last ones being the gas planets. There is a theory (from David Hurvitz¹) of mirror imaging in the ordering with Jupiter at a pivotal place in the middle, so that the motion of Mars is balanced by the static feel of Neptune which has a similar 5 beat rhythm; the ethereal nature of Venus is balanced by the earthiness of Uranus and the lightness of Mercury by the heaviness of Saturn. He reinforces the mystery of Neptune by using a fade-out ending unusual in classical music of the day. He requires women's choruses "to be placed in an adjoining room, the door of which is to be left open until the last bar of the piece, when it is to be slowly and silently closed", and that the final (scored for choruses alone) is "to be repeated until the sound is lost in the distance "Whichever of these theories about the piece were in Holst's intention with the piece, he never used this subject matter again and all that was retained of his attraction to astrology was casting his friends horoscope. He came to dislike the popularity of the piece.

Earlier in Western musical history, ideas of heaven or the sublime were rooted in theories of the sound of the universe and situated not in the area of Expression but that of Construction with a heavenly connection being made by means of numbers associated with the spinning of the heavenly spheres. It is in this area where many claims for a spirituality associated with order have been made by traditional writers on aesthetics and spirituality linked with James's view of the religious experience associated with harmony (William James 1903/1997 p59, Jamie James 1993).

The notion of the Music of the Spheres underpinned a great deal of thinking in the Classical World. It is difficult to examine the complexities of the ideas as part of a short article.² The fundamental idea concerns musica universalis (or mundana) or the music of the spheres. This sees the proportions in the movements of celestial bodies - the Sun, Moon, and planets—as a form of music. It is not regarded as literally audible, but as a mathematical or religious concept designed to represent the essential harmony of the universe. In this ancient view of the cosmos, the planets were thought to ascend from Earth to Heaven like the rungs of a ladder. Each planet corresponded to a musical note to produce a musical scale the underpinned the universe and these were related to the rates of rotation around the Earth. It originated in

¹ http://en.wikipedia.org/wiki/The_Planets Oct 6 2011

² For more detail, see James (1993)

the ideas of <u>Pythagoras</u>. (James 1995 p.30). This link meant that religion, science, mathematics, music, medicine and cosmology, body, mind and spirit were linked in a complex synthesis. The theories filtered into medieval Europe through writers like Augustine (CE 354-430).

Music enabled one to study the relations pervading God's creation, relations which have their source and supporting ground in the eternal God, who *is* music. (Begbie and Guthrie 2011 p14)

The linkage of a celestial numerology with the heavens and the Divine ideas also underpinned the design of many of the great cathedrals of medieval Europe and produced spaces of unparalleled resonance. Associated systems of numerology developed through mystical movements like the Rosicrucians and figures like Robert Fludd (1574-1637) and Johannes Kepler who wrote in 1619 his Harmonice Mundi (Godwin 1989).

If all musical construction was deemed to be rooted in the celestial in the conceptual frames of the Middle Ages; it was lost during the secularization that characterized the Enlightenment. However, some more contemporary composers have sought to re-enchant Western music by re-examining these principles. One of the people who attempted this was Olivier Messiaen.

In the middle of the triumph of rationalism that produced serial technique and pitch set theory, the staunch Catholic Messiaen who was organist at St Trinite Church in Paris, unashamedly wanted to re-enchant the 20th century.... [He] communicated the eternal mysteries of his Catholic faith in a way that not only drew people to them, but enabled his listeners to participate in and be transformed by his visions of glory. (Sholl 2011 p163)

He turned to the area of Construction to achieve his end. Robert Sholl describes in detail how Messiaen's use of his structural technique of "modes of limited transposition", collections of pitches that can only be transposed a limited number of times before the original pitches return, which he uses to construct chords and gives his music a distinctive colour (Sholl 2011 p171-2)

Messiaen was fascinated with the relationship of time to eternity or in terms we have discussed above, the heavenly and the earthly:

For Messiaen, even mundane measured time remotely echoes eternity, while duration echoes eternity to a still higher degree. (Pickstock 2011 p198)

Messiaen returned to the ideas of Aquinas to develop his theory of the celestial qualities of his music:

Time is a space, sound is a colour, space is a complex of superimposed times; sound-complexes exist at the same time as complexes of colours. The musician who thinks, sees, hears, speaks, is able, by means of these fundamental ideas, to come closer to the next world to a certain extent. (Sholl 2011 p173-4)

However, Messiaen's music in terms of Expression (comparing it with the Holst described earlier) does not always convey the heavenly characteristics for its audiences to which he aspires:

"St. Francis" is not easy listening. It is five hours long, devoutly Catholic in content, and by turns dissonant, jubilant, voluptuous, and austere. ...It harks back to one of those archaic Christian liturgies in which spells of boredom give way to precisely staged epiphanies."³

The development of and centrality of notation systems to European music also led to a process of separating music from context. In the case of indigenous traditions each place and its associated music will have its own soundscape of the natural world with animals, birds and sounds of wind and sea. Songs were reworked for each occasion and were related to particular holy sites and the mineral and animal world:

In North Russia, where the song leaders (stihovoditzi) are particularly musical, the chantress conducts the old rites.....She knows by heart the ancient portions of the incantations and invocations.....she improvises new texts and new melodic lines to suit the emergency. Drinker 1948/95) p13

Once notation was developed music could be conceived of as a separate entity lacking a body or a specific place. The score of the classical piece became 'the music' and music became separated from:

- The body of its creator
- The place of its creation
- The context (time, place, event) of its first intended performance

Classical music became about the abstraction of dots on a page and often its connection with anything other than its own internal construction systems became fractured. The 20th century composer Janacek complained in a musical analysis class that music was not about a page of a score but about life, passion and nature.⁴ The other aspects of the musical experience became subjugated in value and Construction became the dominant are of interest for musicologists (see below). The development of recording techniques has enabled this to happen for more improvisatory and non-notated traditions. They too now face a situation where their music can be taken anywhere, by anyone, for any purpose. ⁵

To develop a relational theology of music we need to rediscover music theories from

- medieval Europe with its notion of the Music of the Spheres described above
- indigenous musical traditions often entering the West through the phenomenon of the New Age described below
- the area of music therapy, particularly in the area of entrainment when our bodies adjust our heart rate to the speed of the music⁶
- post -modern feminist theorists in the area of embodiment and music (Isherwood 2000)

Contemporary science is rediscovering the notion of a sound coming from the earth itself⁷:

a relentless hum of countless notes completely imperceptible to the human ear, like a giant, exceptionally quiet symphony, but the origin of this sound remains a mystery.....unexpected

http://www.therestisnoise.com/2004/04/messiaens st fr 1.html Oct 10th 2011

⁴ The Gaglogitic Mass BBC Radio 3 April 26th 2008

⁵ This idea is developed further in Boyce-Tillman, J (2001)

⁶ For further examination of this see Boyce-Tillman, June (2000a)

⁷ livescience.com

powerful tunes have been discovered in this hum.This sound, first discovered a decade ago, is one that only scientific instruments - seismometers - can detect. Researchers call it Earth's Hum."8

There is a rediscovery of vibration as the essential stuff of the universe with molecule and atoms circulating in apparently static matter and vibrations of liquid crystal giving the colour to digital displays. However, the fracturing of the link between arts and sciences has meant that this is not extended to see music again as a powerful agent of destruction or creation. It can bring down fragile church spires but less work has been done on its capacity to build and heal.⁹

The current development of consciousness studies has also entered the area of the interconnectedness of creation with works like Ken Wilber's The Eye of Spirit (1997) and Integral Psychology (2000); but seldom does music hold a significant place in notions of consciousness. Here the search for the perennial philosophy drawing on a variety of traditions looks at a spectrum of consciousness often called *The Great Chain of Being*, (Wilber 2009) to develop a hierarchy of consciousness. E. F. Schumacher's set out four great Levels of Being in which matter (m), life (x), consciousness (y) and self-awareness (g) (Schumacher 1977 pp27-8):

'Man' [sic] can be written m+x+y+z'Animal' can be written m+x+y'Plant' can be written m+x'Mineral' can be written m (Schumacher 1977 pp32-3)

If in this model we establish the mineral level as vibrating we have a sense that vibration links all these levels.

So in pre-patriarchal and pre-Enlightenment Europe music was considered central to the cosmic schema but the development of scientific rationalism subjugated these ideas. Although ideas of the interconnectedness of the cosmos remained in subjugated form the centrality of music became lost as the subjects held together by the notion of the Music of the Spheres were fragmented in contemporary knowledge systems. The development of musical notation and recording weakened the link of music and place and context.

The separation of animate and inanimate

Traditional societies would not subscribe to the animate/inanimate division of contemporary science which colonialism attempted to subjugate wherever it found it. The entire world has its own energy or quality and human beings and the natural world are in constant interplay:

Did you know that trees talk? Well they do. They talk to each other, and they'll talk to you if you listen. Trouble is, white people don't listen. They never learned to listen to the Indians, so I don't I suppose they'll listen to other voices in nature. But I have learned a lot from trees; sometimes about the weather, sometimes about animals, sometimes about the Great Spirit. ... I think that Western people who come into an Indian environment and attempt to preach take along their own set of categories and use it to deal with Indian people they meet. Anthropologists, summarizing what they find in the Indian tradition, always calling us animists, and that view is accepted by a great many people in the field of religion. We are put in a cultural evolutionary framework, and then we are supposed to move from animism to some great abstract conception of one god. Science describes things at a level of abstraction, by leaving out of account a whole range of properties that they have (colour, beauty, consciousness...) (Tinker 2004)

⁸ www.praisecharts.com/live/articles/219/1/The-Rocks-Will-Cry-Out/Page1 contacted April 14th 11pm

⁹ The development of cymatics has produced claims for vibrations to heal and mend organs of the body. Greater work has been done on music and the mind in the area of music therapy.

But some Westerners are relearning their connection with the land from traditional cultures. David K. Turner describes how in playing the didgeridoo he realised his own connection not with Australia but with his own land:

I was where my own spiritual stuff was – in Canada where I had grown up, where I always returned and where parts of me were buried. (Turner 2001 P49)

This represents a rediscovery of these subjugated uses of music. It is now much more acceptable to sing to plants to encourage growth than it would have been 20 years ago.

The rise of a new interest in paganism and pre-Christian history has led to a renewed interest in sacred sites involving music. For example, the *Clach a' Choire* on Tiree's coast is an Ice Age boulder which produces a metallic clang when struck.¹⁰ There is evidence of current veneration in the form of coins left in a little hollow on the top. ¹¹ Ringing stones are now known to be in Central, Eastern, Southern-Eastern, and Western Asia, Africa, South America and Europe. These could be like indigenous mythic "points of emergence...where the stories begin and end" Music sits as a profound power in societies where there is a profound place connection:

To the western mind music is essentially something created by man [sic], although it may be an unconscious process. For the shaman, music is something separate, a form of spiritual power that has an autonomous being apart from human minds. (Frowen-Williams 1997 p51)

But writers like Chris Clarke endeavour to merge scientific and indigenous paradigms by weakening the notion of hierarchies of being. If he were to link music with awareness we would have a very helpful paradigm on which to build a theory of the vibrations of the different elements of the cosmos to produce a cosmic symphony. He postulates the notion the difference between humans and worms is not the degree of awareness but its content:

Quantum states are aware.if we consider a living, and hence coherent entity, then the entanglement will take over the individual states of the parts, which will no longer be definable, and replace them with the quantum state of the entangled whole. (Chris Clarke 2002 P263-6)

Christian theologians like Mary Grey (2007) and Andrew Linzey (1994) are seeing redemption as cosmic and including the environment. This is based on the statement in Revelation "I am making all things new" (Revelation 21:5) and includes "every living creature that is with you, the birds, the domestic animals and every animal of the earth with you, as many as came out of the ark" (Genesis 9:10). I have recently returned to the 1662 version of the Lord's Prayer which includes the line

Thy will be done in earth as it is in heaven

But now theology is separated from music and tone of the central aims of this article is to re-establish that link that would have been commonplace in the Middle Ages and traditional societies.

So the indigenous pagan traditions, current philosophers and theologians challenge the division between animate and inanimate matter and have found a variety of frames for seeing the essential interconnectedness on the cosmos but whereas indigenous frames have included music, the western ones reflect the fragmentation of knowledge that characterises western culture.

¹⁰ www.users.zetnet.co.uk/gshaw/**ringing_stone**.htm Contacted April 15th 1am

¹¹ www.megalithic.co.uk/article.php?sid=17933&mode=thread&order=0&thold=0 Contacted April 15 1am

¹² www.landscape-perception.com/a_stone_age_holy_land/ Contacted April 15 1am

The Music of the Angels

It is here that we return to Hildegard's antiphon to the Trinity, that God is actually music. Dionysius uses the word participation giving a sense reflected again in Hildegard that divine life is immanent in all things – inanimate, living and rational creatures. "It implies not only a movement from the divine into us, but also that we are part of the life of the divine being." (Fox and Sheldrake 1996 p47), because matter is made of energy, it is vibratory;

An atom is more than 99.9% empty space – or rather it is full of fields/ electrons, protons and neutrons are vibratory patterns within these fields. (Fox and Sheldrake 1996 p49)

This means that in making music we are participating in these vibratory patterns using our creative agency to influence events and be part of musicking the divine. We can rethink nature not as a series of fixed laws but as

Evolving habits rather than as eternal truth independent of the physical universe, as if in a transcendent mathematical mind. (Fox and Sheldrake 1996 p47)

This means that by musicking we can potentially be part of the evolving creativity of the universe. Here we need to be aware of our intention – the intention to be part of the angels' activity of blessing and being aware of being blessed (Fox and Sheldrake 1996 p117). This gives a whole new meaning to the angels' act of praising which is between humans as well as to God.

Praise is the act of not remaining in oneself; it's going out. I call praise the noise that joy makes. (Fox and Sheldrake 1996 p124)

Meister Eckhart adds to this that a good person is one who praises good people. (Fox and Sheldrake 1996 p125). So the use of music to affirm people like *Happy birthday to you* is to join in the choirs of angels. For as Hildegard says

The song of joy and blessedness rules throughout the heavens. (Fox and Sheldrake 1996 p136)

She believed we are joined to this song by singing. Her images of full of fire, heat, dynamism, movement link with her idea of us mirroring God and vice versa. The universe is singing and we can pick up only part of it because some of it is beyond our hearing. We need to resonate with God so we resonate with God. She sees god us plucking us like a lyre or lute – as lutes and harps of God's kindness:

It is strange when two lectures come together and on Friday I shall be lecturing on angels at Lampeter University. But this has led me to revisit angels who are of course, always portrayed as singing or playing – the image of the choir of angels is revisited in every Sanctus at a Eucharist. Her use of concentric circles for angels rather than the traditional ladder image links with the thinking of Fox and Sheldrake who want to see the traditional hierarchy of angels as a nested hierarchy or to use arches Koestler's term a holarchy (Fox and Sheldrake 1996 p37)

He goes on link them with morphic fields:

The same goes for the electromagnetic fields within a crystal; within the crystal field are the molecular fields; within those, the atomic fields, the fields of electrons, and the atomic nucleus. These are not only electromagnetic fields but quantum –matter fields. (Fox and Sheldrake 1996 p39)

This gives a far greater sense of angels as process - activity flowing from participation in God's beauty, drawing on ideas from Dionysius the Areopagite. Hildegard picks this up later in her 'speculative mysticism' in which each of us is a glittering mirror of the divine (speculum meaning mirror) (Fox and Sheldrake 1996 p38).

The traditional role of an angel as messenger is easily understood as connector:

We should put up a sign: angels needed. There's plenty of work for angels in a period of interconnectivity. (Fox and Sheldrake 1996 p41)

An InterGaian view of angels as a nested musicking hierarchy gives a profound role for music at the cosmic heart. 'Gaia is a playing of fields' (Fox and Sheldrake 1996 p125).

So we have the macrocosm of the celestial spheres and the microcosm of the human sphere. The angels are connectors, administrators, messengers that touch and connect the microcosm, the human being and integrate us with the sphere of cosmic forces. (Fox and Sheldrake 1996 p55) So the song of the angels is both microcosmic and macrocosmic:

This means that angels can be operating in small individual situations, as in the tradition of guardian angels, or in terms of nations, continents, planets, solar systems and galactic systems. (Fox and Sheldrake 1996 p76)

We will see the possibilities of this in an exercise below. The loss a sense of our interconnectivity may be the basic reason for the current tendency to ridicule angels

During the machine era when the principle of interrelationship was not honored. (Fox and Sheldrake 1996 p77)

Inspiration is clearly an important part of angelic action. The notion that creativity is received from a higher being or intelligence is present in many great artists' accounts of their working processes. However Aquinas also suggests that they are announcers of divine silence and those emphasising the intimate relationship within music of sound and silence.

Inspiration similar to the angelic

Leading contemporary composers have absorbed ideas from other cultures, sometimes located in particular phases in their lives. These have provided conceptual ways of linking the transcendent and the physical. Karlheinz Stockhausen wrote widely on religion and music drawing heavily on eastern traditions. Here he uses the notion of the chakras to explain his ideas on music and healing:

Each of us is... a person with many levels ... I have a sexual center, three vital centers, two mental centers and a suprapersonal center. If I can perceive that, I have come far enough to have awoken seven different centers in myself. And with different things I can bring each center into vibration....

There is also music that goes through all the centers: hence there are moments in which you are addressed in a purely sacred, a purely religious way; and other moments in which you are addressed purely sensually, purely erotically. That is pretty reckless music. One must be very strong to be able to experience that completely. Above all, this music must be exceptionally well balanced,

fantastically composed. If it is not, then there are overloadings, and when one hears it one is overexcited in a certain way, and brought out of equilibrium. Hence it is naturally better if one hears music that draws one up higher than one is by nature. We are mostly pretty physical sacks, are we not - all of us? (Godwin 1987a pp288-9)

We can see here how he struggles to bring the embodiment of the Eastern tradition together with the more transcendent Western tradition; in the middle we can see how he rates the physical as 'lower' than the spiritual. His work *Aus den Sieben Tagen* required of its performers that they fast and meditate for seven days before playing it. Its instructions read more like a manual of mediation than a musical score:

A note lives, like YOU, like ME, like THEM, like IT.
Moves stretches and contracts.
Metamorphoses, gives birth, procreates, dies, is reborn.
Seeks, stops seeking, finds, loses, marries,
Loves, tarries, hurries, comes and goes. Stockhausen 1968

Two ways of knowing

Scientific realism is so dominant that many would see all of the previous sections as simply metaphor and simile. Isabel Clarke in *Madness, Mystery and the Survival of God* sees the necessity of what she calls the transliminal or relational knowing. In her thinking, this way of knowing is to do with our 'porous' relation to other beings and is where spirituality sits. It is in contrast to 'propositional knowing' which gives us the analytically sophisticated individual that our culture has perhaps mistaken for the whole of knowing (Isabel Clarke 2005 p93). To access the other way of knowing we cross an internal 'limen' or threshold. She sets out two ways of knowing – the propositional characterised by either-or logic and the relational or transliminal - characterised by paradox and both-and logic;

I have floated the hypothesis that we are only partly individual; through our relational minds we are part of the whole. This brings responsibility and pain. It also brings wonder and joy...And the deepest and widest of those circles of relationship which we both are, and are beyond us, is god or whatever label you choose. (Isabel Clarke 2008 p172)

Clarke's notion of the transliminal way of knowing is drawn from cognitive psychology (Thalbourne et al 1997). In her thinking, this way of knowing is to do with our 'porous' relation to other beings and is where spirituality sits. It is in contrast to 'propositional knowing' which gives us the analytically sophisticated individual that our culture has perhaps mistaken for the whole (Isabel Clarke 2005 p93). To access the other way of knowing we cross an internal 'limen' or threshold. Langer (1942) suggested a 'non-discursive' form of communication that characterised music and religion which is different from propositional ways of knowing.

In this hypothesis she validates the two ways of knowing as of equal worth and value, the relational including the artistic and the religious. The notion of human connectedness with the cosmos is an essential part of human experience and ignoring of it can lead to madness. It validates composer's accounts of the process of inspiration when he sounds appear to emerge from the universe just like Michelangelo sees his sculpture hidden the marble and waiting to be discovered. This experience sits within the relational way of knowing.

Place memory

In human experience certain memories are regularly attached to certain places. Visitors to the Holy Land are often overwhelmed by the fact that they may be walking on the same stones as Jesus walked on.

The Wailing Wall in Jerusalem holds the tears of many Jews. Gravestones in a million cemeteries bear testimony to many unanswered prayers. I remember visiting Romsey Abbey and wondered at an Anglo-Saxon crucifix, in which it appeared to me that all the devotion from past ages to be contained. We can harness and transform these energies. Community drama groups, for example, have performed dramatic rituals to purify places in Serbia where terrible massacres occurred.

Michael Perry in his book on *Deliverance* tells how the memories held in a place can join with later human experience to produce paranormal phenomena. He tells the story of a young father of two children. Three weeks after the cot death of a child your third child he is woken by what he thought was burglars. He opened the bedroom door to find groups of people walking along the landing of the house and disappearing through the far wall. They were dressed in 17th century costume and looked very sad. They were carrying bundles. A young police officer saw the phenomenon as well and the police dog would not enter the house. He describes how the man's grief and the memory in the place combined to produce the phenomenon and sees the necessity to bless the place as well as counsel the person to deal with the phenomenon (Perry 1987 p34)

So places do appear to hold the memory of events that have happened there in the past. It is therefore possible that music can be a way of accessing and redeeming them.

Sacred sites, in particular, like cathedrals, are often regarded as sacred because of the memories of sacred acts that have been carried out across the ages. These memories seem to be stored in the very fabric of the building, and become part of the performance, and the process is in itself reciprocal as the performance itself becomes part of the memories stored in the building. It is an idea explored by T.S. Eliot in his poem *Little Gidding*.⁷

You are not here to verify,
Instruct yourself, or inform curiosity
Or carry report. You are here to kneel
Where prayer has been valid.
And prayer is more
Than an order of words, the conscious occupation
Of the praying mind, or the sound of the voice praying.
And what the dead had no speech for, when living,
They can tell you, being dead: the communication
Of the dead is tongued with fire beyond the language of the living.
Here, the intersection of the timeless moment
Is England and nowhere. Never and always.

Before the event I always go to the cathedral to pray the space, to get in tune with the feelings in the building. I sit and sometimes lie on them and ask for their cooperation in the same way I would ask the human performers for their cooperation within it.

Other comments picked up the relational character of the relationship between the sounds and the space.

While classic works by Beethoven, Britten and others bear witness to the fact that the pursuit of harmony through music is no mere equivocation, in her *Space for Peace*, June Boyce-Tillman approaches the subject not only as a condition of spiritual grace, to which countless settings of the Mass have aspired, but also as a process. This in turn implies not only musical form, but also dimension and movement... its bold yet simple structure, fruit of many years' preoccupation with exploring the parameters of music and worship, was expertly conceived to turn the venue into a resonant meditative space.

The result was an extraordinary evening of complex soundscapes which nonetheless yielded an uplifting message: that peace might be obtained not from top-down imposition of values, but through collegial pursuit of diversity within a commitment to beauty and the needs of others... (Williams 2009)

Another account puts it thus:

I think the fact that the cathedral had been emptied of chairs was an important factor in the experience. First, it created a root to its past back to a time when cathedrals were masses of movement and diverse activities going on at the same time. Second, it literally created the space for sound and movement... I thought this must be what heaven is like, a space where diversity finds its unity and unity blossoms into diversity...

The cathedral in some of its history would have been somewhat like this with masses being celebrated but not synchronized in the chantry chapels. Indeed, the building had an amazing capacity to keep the sounds separate and yet merged simultaneously. It represented a unique co-operation between stone and human agency.

The musical experience

I have developed a phenomenography (Marton and Booth 1997) of the experience (Boyce-Tillman 2004) drawing on the notion of encounter.¹³ This widens the musical experience to include a variety of parameters traditionally ignored by recent music theory and widening it beyond dots on a page. It uses the frame of the 'I /Thou' experience described by Martin Buber (1970) and develops into a number of domains:

Expression – anOther self
Values – anOther culture
Construction – the world of abstract ideas
Materials - the environment

All music consists of organisations of concrete Materials drawn both from the human body and the environment and is essentially a co-operation between the vibrations of the human being with those of the natural world. And as we have seen, the human body is made of the elements of the environment. These materials include musical instruments of various kinds, the infinite variety of tone colours associated with the human voice, the sounds of the natural world and the acoustic space in which the sounds are placed. Playing and singing are two of the most intimate relationships human beings have with the environment other than eating it. In traditional societies a drummer would reverence the tree and the animal that give the material for his/her drum and all performance being an intimate relationship with tree and animal. Sadly in the west the loss of the connection with the natural world has been reflected in the way we treat and regard instruments. We need to re-establish this reverence in relation to instruments in our western fragmented culture. If every child opened their musical instrument case and reverenced the elements of the natural world and the labour of craft workers, we could transform ecological awareness at a stroke.

¹³ To take Allegri's choral piece *Miserere* from sixteenth Italy, in the area of Materials it consists of a choir. In the area of Expression it is peaceful with fluctuations as the plainchant verse come in. In the area of Construction it is an alternating psalm with full harmonic verses and plainchant alternating verses. This is intimately related to its role as a psalm liturgically. In the area of Value it is held as a masterpiece within the western canon of music and is frequently recorded and achieved a place in classical music charts and it represents an important statement about the Christian's attitude to penitence based on a Jewish psalm, especially as expressed at the beginning of the penitential season of Lent. It has a declared Spiritual intention.

Instruments are a tangible link with the natural world. Science is showing us that the stones – the mineral - do have an energy which has bee channelled in our technology. Early radios were called crystal sets because at the heart of them was a crystal which took the incoming signal and helped to convert it into intelligible sounds. Quartz crystals are still part of transmitters and receivers. Some of us will have made a glass sing with a moistened fingertip and glass is a form of stone. Rock contains iron ore which when crushed with limestone and coal produces steel. So steel, like that used on a steel string guitar, is made of ground up stones with some carbon (coal) thrown in and heated up. So it could be said that in both the gong rocks described above and the steel strings rocks have a 'voice'. In some cases this does not require human agency. There are in history accounts of singing statues like the two statues of the Egyptian Pharaoh Amenhotep III split by an earthquake which emitted a hum at dawn.¹⁴

The use of natural material unrefined by manufacture is growing, as interest in the environment grows. In a recent piece *Between* in York Minster I used quantities of stones knocked together. There is a rediscovery of lithophones – instruments constructed from struck stones. One example of the construction of a contemporary instrument is by Ela Lamblin and Leah Mann. The instrument is created with 100 river rocks suspended by music wire from a wing-shaped sound box and hanging in a steep arch. The strings (vibrating longitudinally) release their music as the performers dance and, with rosin-covered gloves, stroke, caress, and tug the strings. Stearns and Sunsinger recorded the rocks on a portable digital audio system - equipment that was designed to record vibrations within the Earth near volcanoes and recorded the sounds of rocks "singing." They discovered that a wide variety of sounds could be produced by striking or stroking rocks with different items, including their hands and other rocks. ¹⁶ It is also possible to purchase magnetic Hematite singing power stones which will make 'most mysterious singing sounds' when thrown in the air. ¹⁷ Such developments represent a simplification of musical materials in the light of current complex technological systems.

The area I have called Expression is concerned with the evocation of mood, emotion (individual or corporate), images, memories and atmosphere on the part of all those involved in the musical performance. This is where the subjectivity of composer/performer and listener intersect powerfully. The sounds themselves hold some meaning but the listener will bring extrinsic meaning to the music – meaning that has been locked onto that particular piece or style or musical tradition because of its association with certain events in their own lives like tunes associated with certain special events. This is an area of empathy and imagination. Singing songs from different cultures can, for example, give children a chance to empathize with cultures different from their own. I set a prayer from the black township of Gugulethu in *The Healing of the Earth* and when I ask to children to sing it I tell them the story of how I collected it. One child said: "When I sing that song to myself I think that somehow I am part of those people you talked about so far away." But there may be an even deeper connection with heart:

Once I prayed in a kiva with a Hopi Indian, and we talked about praying with rattlesnakes. I asked him "When you capture a snake and start praying with it, isn't it very nervous?" He said "Yes, it is, but I sing to it. A snake is very sensitive to cold and heat, being a reptile, and it catches the heat of the song and calms down quickly." The idea that music and heart-work can create warmth is another generator of fire and energy.

Perhaps it's as powerful as photosynthesis. But we haven't yet discovered how to unleash our warmth. And Hildegard says, "No warmth is lost in the universe," (Fox and Sheldrake 1996 p66)

¹⁴ www.theparanormalreport.com/**singing-stones**-2.html . Contacted April 15th 1a.m.

¹⁵ www.oddmusic.com/gallery/om25400.html. Contacted April 15 0.45 am

¹⁶ www.rambles.net/stearns_singston94.html. Contacted April 15th 0.15 am

¹⁷www.whitemagic.com.au/**singing**power**stones**.html. Contacted April 15 0.20 am

Yvon Bonenfant talks about the power of music to touch and warm the skin, caressing it almost beyond hearing and those of you who have done the humming bath exercise with me may well have experienced this.

This has been further developed by Guy Manners in the development of cymatics:

'Sound has the ability to rearrange molecular structure. When you are born every cell multiplies. Then at Puberty, the frequency patterns of the cells change and instead of multiplying, cell replaces cell. As we age, cells still replace each other, but the tempo slows down. Within a few years of time, we will be able to prevent this slowing down of cell replacement and all this can be done with sound. If we take a frequency sample of your cells, they will regenerate.' (Manners 1990)¹⁸

This therapy based on Cyma the Greek for wave-forms draws on the principle of the vibrating universe for healing:

The Cyma Method took the sounds and integrated them with a method of detecting the precise frequencies for the correction of any misalignments in the body/mind and emotions of people. Characteristic of Cymatics frequencies is that they can be applied safely and directly to the body and use a process of 'entrainment' to help restore the original cell structure and form.

He personalises each treatment looking at the person's own energetic frequencies. This is broadly in the area of a direct relationship between the energy of the music and the vibratory character of matter.

In the area of Construction, effectiveness often depends on the right management of repetition and contrast within a particular idiom. The way in which contrast is handled within a tradition – how much or how little can be tolerated – is often carefully regulated by the elders of the various traditions – be they the composers or theoreticians of the Western classical tradition or the master drummers of Yoruba traditions. It is in this is the area where many claims for a spirituality associated with order linked with the ideas of the Music of the Spheres. Medieval writers are often taken up with the pattern of the universe and sacred geometry and music can reflect this well. Below we shall look at the choirs of angels and these are always arranged in ordered patterns often of nesting circles, resembling fractals.

Our quest for communion with the divine is a quest for communion with the pattern of things. (Fox and Sheldrake 1996 p58)

The area of Values is related to the context of the musical experience and links the experience with culture and society. The musical experience contains both implicit (within the music) and explicit (within the context) Value systems. However, these two areas of Value interact powerfully. Notions of internal values are a subject of debate in musicological circles (McClary 1991, 2001) but as soon as a text is present – either in the music or associated with it (Blake 1997 p7). Value systems will be declared, like the words of hymns. Music mirrors the structures of the culture that created it and people's ways of being in them (Shepherd and Wicke 1997 pp138-9). This is why feminist theologians, for example, fail to get a spiritual experience out of much of traditional hymnody with its non-inclusive language. Here also is the intention of the musicker which reflects their own Value systems. Music has the potential of transmitting love and in much of Western culture we have lost the notion of intention in a musical performance. Kay Gardner explores this as she uses Hildegard's concept of viriditas to construct a piece composed for 'people with life-threatening dis-ease.' (Gardner 1990 P229) One exercise that I do is what is called a 'humming bath' in which a group of people surround two of their number with hummed sounds which are produced with the intention of loving their colleagues. This always produces feelings of great joy and uplift. As the aesthetic

¹⁸ http://quantum-change.co.uk/index.php/trans-spatial contacted June 9th 2015

and analytical became dominant value systems in western culture, value systems such as connecting with the natural world, healing, peace and reconciliation became subjugated. They are now being rediscovered (Urbain 2007).

The area of Values is related to the context of the musical experience and the values implicit within it. It links the experience with the wider culture and society. The musical experience contains both implicit (within the music) and explicit (within the context) Value systems. However, these two areas of Value interact powerfully. Notions of internal values within music are a subject of debate in musicological circles (McClary 1991, 2001) but as soon as a text is present – either in the music or associated with it (Blake 1997 p7), Value systems will be declared, like the words of hymns. Music mirrors the structures of the culture that created it and people's ways of being in them (Shepherd and Wicke 1997 pp138-9). This is particularly true in relation to the church context. Many religious traditions are very hierarchical and elitist in relation to music. In many cultures the leadership is male whether it is the drumming traditions of sub-Saharan Africa or the boys' choirs of the Christian tradition. The Values of those in power in the time will be implicit within the music itself as well as the context. The predominance of patriarchy in Western society is why feminist theologians fail to get a spiritual experience out of much of traditional hymnody with its non-inclusive language.

Listen to the hymn. It falls like icicles on snow. Or, if it happen to be one of the old genuine outcries of the church, sprung from real human anguish or hope, it maddens the listener, and she flees from it, too sore a thing to bear the touch of holy music. (Ward 1896 pp. 97-8)

In the area of Values the theology of the spiritual space is constructed. This includes where the music comes from. My own experience of staying with native Canadians illustrates the differing value systems very clearly:

I was privileged to spend some time with a native people in North America. I had been present at several sweat lodges at which a particular medicine man had been working. I had also purchased a small hand drum and he had consented to beat the Bear Spirit into for me. One evening he was preparing for a sweat lodge and said that he needed a powerful woman to help him and sit alongside him. This would usually be his wife but she was unable to be there so would I help him. I was both honoured and terrified; but he said he would help me with the ritual and so I agreed to the role. The first round of prayer took place and he concluded it by saying that now June would sing a song about the eagle and the sunrise. It was here that I thought that I had met an insuperable problem. I knew no songs from the culture. But I remembered that in the songs I had heard each phrased started high and then went lower in order to bring the energy of the sky to the earth. So I started each phrase high and took it lower while singing about the eagle and the sunrise. It was a powerful experience for me and my voice seemed to come from a place of power deep inside that I had not experienced before. With the prayer round ended we went outside to cool in the night air. 'Great song, June' said the leader of the sweat lodge. I was about to say that, or course, I had to make it up and then remembered from my previous conversations with some of the women singers that in this culture everything is given not the creation of an individual. So I replied: 'The Great Spirit gave it to me when I was in the Lodge.'bb

Here I was in a culture where the intuitive way of receiving musical material - construed as coming from a connection with a spiritual source - was the dominant way of knowing, not the individualistic, humanistic way of the individual composer creating an individual song from their own experience in their own personal subconscious. I had previously been in a women's sweat lodge after which the leader had said that she thought the Great Spirit had given her the whole of the song when she was in the Lodge and that previously she had only received part of it. In the West we would probably have said something like that we had not yet finished it and were working at completing it.

Whereas these four domains exist as overlapping circles in the experience, Spirituality, I am suggesting, exists in the relationship between these areas. I am defining it as the ability to transport the audience to a different time/space dimension - to move them from everyday reality to 'another world'. It is in this experience that some would see music as the last remaining ubiquitous spiritual experience in a secularised Western culture (Boyce-Tillman 2001). In describing this experience of have drawn literature from many sources — psychological, philosophical, aesthetic, anthropological, ethnomusicological, theological,(Boyce-Tillman 2006), including Isabel Clarke's transliminal described above. The Spiritual domain, then, is defined as a time when the experiencer is able to negotiate a relationship with all four domains. It can be represented like this:

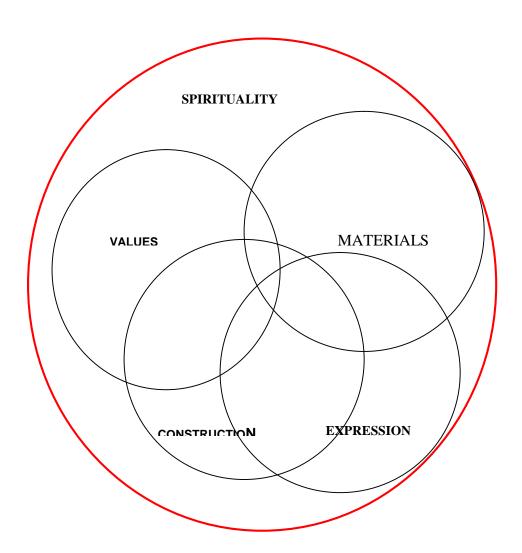


FIGURE ONE The complete spiritual experience

So the musical experience can be seen to include the natural world both in the instruments used or the human voice and the venue with its distinctive acoustic and soundscape and in its associations and memories which are released by the act of musicking and potentially in the area of Values the notion of relation between the human, the natural and the Divine..

I am defining Spirituality as the ability to transport the audience to a different time/space dimension - to move them from everyday reality to 'another world – that has a quality of transcendence'. The perceived effectiveness of a musical experience – whether of performing, composing or listening - is often situated in this area (Jackson 1998). Indeed some would see music as the last remaining ubiquitous spiritual experience in a secularised Western culture (Boyce-Tillman 2001). Here, I have subsumed within my own thinking the following ideas:

- flow, coming in from psychologists of creativity (Csikszentmihalyi M. and Csikszentmihalyi I.S. 1988, Csikszentmihalyi, 1993, Custodero 2005)
- ecstasy, often associated with idea of 'the holy' coming from the religious/spiritual literature (Otto 1923, Laski 1961)
- trance coming from anthropological (Rouget 1987), New Age (Collin 1997, Goldman 1992, Stewart 1987) and psychotherapeutic literature (Inglis 1990)
- mysticism, coming from religious traditions, especially Christianity (Underhill in Rankin 2005)
- peak experiences (Maslow 1967)
- the religious experience (Rankin 2005)
- the spiritual experience of children (Hay and Nye 1998, Erricker, Erricker, Ota, Sullivan and Fletcher, 1997, Hay, 1982, Robinson 1977)
- liminality (Turner 1969, 1974)

Turner's concept of liminality draws on an analysis of ritual. The notion of transformation is central to religious ritual whether it is a Christian Eucharist or a shamanic healing rite (Driver 1998). It can be personal or communal or both. Van Gennep (1908 quoted in Roose-Evans 1994 p6) saw parallel stages in any ritual. This he entitled: 'severance, transition and return'. Severance he associated with leaving everyday life by means of ritual gestures like holding hands or lighting candles. In the transitional or liminal phase contact was made with the transpersonal; and this might take the form of change of consciousness. The Return phase signalled a coming back to earth and the beginning of a new life. It is possible to identify these moments in a musical piece even when not associated with ritual and to relate accounts of transformation through experiencing music with this concept. He develops it to include the notion of encounter, sometimes with the material through the process of healing and sometimes inner to do with mind or spirit.

The Spiritual domain, then, is defined as a time when in the experience of the experiencer there is a perfect fit between all the domains (Sullivan 1997 pp9-10). This can happen gradually as this account shows:

For the first twenty-five minutes I was totally unaware of any subtlety.... whilst wondering what, if anything, was supposed to happen during the recital.

What did happen was magic!

After some time, insidiously the music began to reach me. Little by little, my mind all my senses it seemed- were becoming transfixed. Once held by these soft but powerful sounds, I was irresistibly drawn into a new world of musical shapes and colours. It almost felt as if the musicians were playing me rather than their instruments, and soon, I, too, was clapping and gasping with everyone else....I was unaware of time, unaware of anything other than the music. Then it was over. But it was, I am sure, the beginning of a profound admiration that I shall always have for an art form that has been until recently totally alien to me. (Dunmore 1983 Pp20-1)

Acoustic spaces

In my pieces I have been concerned to include the building as an important 'instrument' or player in a musical experience. Traditionally musicians have been placed in the middle of spaces and the walls have been used as places against which the sounds bounce to produce resonance and echo. I have become fascinated by placing musicians around spaces and close to the walls so that the walls support the sounds from behind and are coaxed in resonating. In this I have learned a great deal of the music of John Tavener. In Winchester cathedral I started with a piece called *The Call of the Ancestors* where a rock group, Thai gongs and African drums were placed around the cathedral. For Liverpool Metropolitan cathedral I wrote Ecological celebration in which small groups of singers were place around the circular building. This proved immensely successfully as they were singing into the widest part of the building rather than from the middle singing into the narrowest part. PeaceSong in Winchester cathedral used 12 different choirs scattered all over the cathedral for the first movement singing fragments of song that might have been sung in there in the past separated by periods of silence. I called it If these walls could only speak and I felt I was making unheard sounds stored in the stones audible. Before the performances of these pieces I go down to the cathedral and sit on the stones and pray that it will play their part in the pieces. It has never failed me and before Space for Peace I saw a gold cloud rise from the floor of the cathedral as if it had responded.

Space for Peace was my most radical piece so far. For this we assembled together local choral groups from a variety of sources – community choirs, schools, the university, the cathedral choristers and quiristers and Rabbi Mark Solomon who chanted the Hebrew Scriptures. There were some solo singers who wandered around freely singing some Hildegard chants. Some used notation; some had no grasp of it and learned everything orally; some were older and singing for fun, others were skilled musicians in an independent school, some were Jews, some Christians, some secularists, the age range was 7-85. It used the cathedral as a resonant meditative space able to contain and merge diversity in a way that accepted it without obliterating it. The groups for one section were situated around the cathedral in various chapels and the transepts. Each had chosen in advance what they would sing – some of their favourite pieces. The musical material included motets, hymns, worship songs, chants and chanting. There were 9 shared peace chants (learned by the congregation) which each choir had to sing each 20 minutes. These produced some common threads which threaded through the texture binding the diversity together.

The middle section of the vigil was created by the participants on the basis of choice. Each group chose when to sing and could also be invited by the congregation to sing. The congregation moved around the building, lighting candles, praying, being quiet, as they chose, but also participating in creating the musical sound. It was designed therefore to reflect a new model of peace making based on the principle that peace will only work if we all do what we want to do but also then have the responsibility of working out how far it fits with what other people want to do. Everyone present (and the stones of the building) had a part in the creation of an experience of beauty and togetherness and experience intuitive ways of relating to and co-operating with others.

The effect was beyond my imaginings. Children singing *I think to myself what a wonderful world,* merged with plainchant, Jewish cantillation and Taize chants and motets in a way that saw diversity held in a unity that was not a uniformity.

It was not liturgy as we have known and practised it but it showed the creativity of a diverse group of people given freedom to exercise their own choices - unity without uniformity.

The comments picked up the relational character of the relationship between the sounds and the space

I think the fact that the cathedral had been emptied of chairs was an important factor in the experience. First, it created a root to its past back to a time when cathedrals were masses of movement and diverse activities going on at the same time. Second, it literally created the space for sound and movement....I thought this must be what heaven is like, a space where diversity finds

its unity and unity blossoms into diversity.As the whole event drew to a close I noticed a child near me sitting on the floor in the classic eastern meditation position.

Others described transliminal way of knowing:

"Space for peace" was one of the high points of my life.The cathedral was cleared of chairs which was wonderful - one great echoing space. It was all about peace - calls for peace constantly mingling and changing. ...I was able to sit and meditate on the stone floor in the middle of the North Transept, one of the most beautiful parts. It came to me that "peace is possible".

It would be not unlike the medieval cathedral with masses being celebrated simultaneously in the chantry chapels. It represented a unique co-operation between stone and human agency.

Music as relational theology

So how can we reflect these ideas in our lives? John Chryssavgis (pp123-6) sets out three models for ecological prayer which I have adapted here for music as relational musical liturgy drawing on the ideas in this article. The models interface with one another.

The first is the Biblical. The Hebrew Scriptures are filled with the notion that creation makes music in praise of its creator not unlike the ideas taken from indigenous religions above. Isaiah Chapter 55 sees creation praising God musically with the mountains and hills bursting into song and the hills clapping their hands. In Psalm 65 the valleys decked in grain sing in joy. Mary Grey shows how the God of the Book of Job:

'Calls from the whirlwind for a total ecology of place; *ecological* rather than exclusively economic objectives must be human priorities. (Grey 2007 p40)

It is on this tradition that Jesus is drawing in the account of the Palm Sunday entry. Jesus enters Jerusalem and songs of praise surround him. The Pharisees ask Jesus to stop his disciples singing. To this he replies that if they keep quiet, the stones will cry out.

In this model the universe cosmos does sing. It is similar to musica universalis but includes not only the spheres but the earth and its creatures as well. Listening to these sounds can lead to singing the psalms, hymns and chants alone or together with the intention of joining this cosmic act of praise. Because of the vibrational nature of the universe it is possible for human beings to create or destroy with sound as in the destruction of Jericho's walls with rams' horns. Here we need to be sure of our own positive and justice seeking intentions in our music making.

The Ascetic model is a call to simplicity – a return to natural and simpler instruments and an investigation of the sounds of the natural world and the infinite possibilities of the human voice. It involves honouring the earthy origins of the instrument or the voice as well as its spiritual aspirations. We will Rock you and acoustic instruments. Embracing simplicity. The contemplation of a single note, particular the one that is your own note – the one you find easiest to sing – is a re-enchanting experience. In several of my pieces I have included the 'shalom' procession. A large group of people light candles and on a single note chant shalom freely while moving through a large building. One singer who had sung all her life (some 45 years) said that for her singing had always been about the pitch and length of the next note (the Construction that has dominated music education). In this simple act it was the first time she had realised that singing was about the breath moving through her body.

This can also re-establish the relationship between music and everyday life as in the re-imagined Celtic spirituality where songs accompanied the lighting of the fire and the baking of bread. Carol Christ calls for the re-establishing of these links in her rediscovery of the goddess traditions, describing a doxology to the goddess whish she sings while washing the dishes or swimming (Christ 2003). In the mid 20^{th} century people were still generating their own musical material whistling, humming, singing while walking, cycling and walking. They were generating their own musical compositions that were intimately related to their bodies and helping them manage their own internal rhythms. The advent of the walkman and MP3 players has deprived people of opportunities for such improvisation and fragmented the relationship between the subtle changes in body, mind and spirit and musicking and put them in the control of the moguls of the music industry. What appears like freedom is actual a constraint on their own creative power. Singing including wailing, screaming, humming, can provide the profound connection with the earth of which feminist theologians write:

Linking ourselves as women with body and nature and darkness and moisture and dirt and sex can illuminate the Sacred. (Heyward 1989 103)

It is also possible to harness technology to different ends from the massive amplification of sound that destroys ears and potentially the environment. It involves here contemplating the crushed earth in the technology. New Age recordings are increasingly including natural world sounds in pieces as if the sense of place can be restored by sampled natural sounds. The virtual is replacing the real. Elaine Graham encourages us to embrace technology:

So just as the boundaries between humans, animals and machines erode; so do the distinctions between the virtual and the real. (Graham 2007 P132)

So the use of a small digital recorder to record earth sounds for editing later can be a powerful experience of this kind.

The Sacramental model treats music as a sacramental tool for reconciliation at all levels. Here we have a profoundly incarnational act where heaven and earth are merged. *Space for peace* blurred the boundaries between liturgy and concert. Music to be sacramental needs to be inclusive and traditionally liturgy has embraced only certain musical styles and not in combination as we perpetuate the misguided division between sacred and secular. The worshippers of the Goddess are closer to this Value system than many Christian churches because of their earth connection. A neo-shaman Maria Mar describes her initiation into the sacraments of the Goddess.

Stones are not closed, my child. Stones are open to all that the wind brings them. Dead creatures, dust, sharp objects, knocks and stains...it a work of art that is themselves....Now I am "Dances the Bones, Sings the Stones." ¹⁹

Within Western culture, the twentieth century was characterized by yet another search for a uniformity that might bring peace, based on the methodology of science. But as with previous attempts at the enforcement of a metanarrative on a large part of the globe, it has failed, and we are quite rightly asked again to respect difference in all areas of contemporary life. As noted by Jonathan Sacks, the chief rabbi for the UK:

¹⁹ http://www.shamansdance.com Contacted April 15th 0.05 am

The world is not a single machine. It is a complex, interactive ecology in which diversity—biological, personal, cultural and religious—is of the essence... nature and humanly constructed societies, economies and polities, are systems of ordered complexity. That is what makes it creative and unpredictable. Any attempt to impose on them an artificial uniformity in the name of a single culture or faith, represents a tragic misunderstanding of what it takes for a system to flourish... Through exchange, difference becomes a blessing, not a curse. When difference leads to war, both sides lose. When it leads to mutual enrichment, both sides gain (Sacks 2002, 22).

The free market has been seen as an attempt at this idea of exchange as an alternative to war. However, the deliberate secularization of the market by Western cultures has led to conditions in which moral considerations have become marginalized. We now live in an age of bureaucratic and managerial political systems, whose prime aim is to offer maximum choice to individuals with sufficient wealth to access the uncontrolled market. In this current liberal democratic view, religion is seen as archaic and pernicious, and yet in the values of many faiths were, and are still, ideas of "solidarity, justice and compassion and of the non-negotiable dignity of human lives" (Sacks 2002, 11-2).

Infinity and the Liminal Space

Steiner goes on to describe the liminal space (that we explored above) to be like waking and sleeping and by using this analogy he highlights its similarity with the altered time/space dimension of liminality, a concept which I have developed in the area of music, and based on the work of Victor Turner (Boyce-Tillman 2006a, 2006b, 2007a and 2007b). So infinity resides in the spaces between differences and is linked to the concept of mystery which is, as Begara puts it:

a mixture of certitudes and uncertainties; of probabilities, hypotheses, realities that surpass us, and fundamental questions to which we have no answers... It is one of those words that is indefinable, but that can in the final analysis be part of any definition (Begara 1999, 133).

The idea of a space where paradox is held without resolution is one that has fascinated many theologians and philosophers, particularly those who wish to break away from the Aristotelian right/wrong logic that has dominated Western thought for so long:

We look at the world through analytical lenses. We see everything as this or that; either...or; on or off, positive or negative; in or out; black or white. We fragment reality in an endless series of "either ... or." In short, we think the world apart. Of course this has given human beings a great power over nature, a lot of success, many gifts of modern science and technology. But we can say that we have also lost the sense of mystery. This dualism of "either ... or" thinking has also given us a fragmented sense of reality that destroys the wholeness and wonder of life. It misleads and betrays us when applied to the perennial problems of being human in this world. Therefore, we need to move away from an "either ... or" attitude to a "both ... and" attitude. In certain circumstances, truth is a paradoxical joining of apparent opposites, and if we want to know that truth we must learn to embrace those opposites as one (Kaggwa 2008).

The challenge to dominant patriarchal cultures is to point to "a diversity of ways of being human" (Johnson 1992, 155).

The linkage in *Space for Peace* of freedom, choice, diversity, intention and Value in the form of peacemaking, inclusion of a variety of abilities and styles use of freedom and diversity in a resonant space linked stone and heaven in a transliminal experience:

My favourite part was sitting in the (then empty) choir whilst the sounds and performances washed in and out. It reminded me of what Heaven must be like!

Conclusion

I have charted the move from music as central to theology to its place in the entertainment industry. It has examined theorists of connectedness and seen how their ideas can be combined with a phenomenography of the musical experience as encounter. It has seen the rediscovery of subjugated Value systems and attempted to restore a relationship between theology and music, suggested ways in music can be used as a tool of a relational theology by blurring the distinctions between liturgy and concert:

[Space for Peace] made me realise that when I go to a concert, I focus on the performers and what is coming from them but last night it was as if the very stone was sounding out itself into that wonderful spaceas if it was joining in.

It reminds me of a poem...

After a Poetry Reading in Winchester Cathedral by Doreen Pearce

These huge Quarr stones have stood for centuries soaking up sounds, divine and secular, thinning the human voice to a mere thread, de-thundering the organ, damping down the choir.

But when the last trump comes and graves give up their dead, when kings and bishops, saints and noblemen rise from their chests, sort out their bones, and are re-fleshed, will then the transept walls give up their sounds, poems re-echo round the arches pillars resound with Benedictine psalms? Will youth guitars, visiting choirs, sermons of deans and Handel's hallelujahs all combine with organ notes in one triumphant shout of praise before the world dissolves?

For me the process began last night. Thank you.

So music brings together heaven and earth as Hildegard describes in this antiphon to Wisdom:

HILDEGARD'S Antiphon to Wisdom
O the power of Wisdom:
You, in circling, encircle all things,
You are embracing everything in a way that brings life into being;
For you have three wings.

One of them reaches highest heaven
And another is sweating in earth
And the third is flying everywhere.
Therefore it is right to give you praise,
O Sophia wisdom.
Boyce-Tillman 1994, no page numbers

Bibliography

Ainsworth-Smith, Ian (1998), The Spiritual and Pastoral Dimensions of Chaplaincy Work. *Journal of Interprofessional Care Vol. 12 No 4*, November pp383-387

Baird, Joseph and Ehrman, Radd (1994) (translators) *Letters of Hildegard of Bingen,* Oxford: Oxford University Press

Begbie, Jeremy S. and Guthrie, Steven R. (2011), introduction to Begbie, Jeremy S. and Guthrie, Steven R. (2011), *Resonant Witness: Conversations between Music and Theology,* Grand Rapids. Michigan: William B. Eerdmans Publishing Company, pp1-24

Berlin, Isaiah. 2002. Liberty, Oxford: Oxford University Press.

Blake, Andrew (1997). *The Land without Music: Music Culture and Society in twentieth century Britain.*Manchester: Manchester University Press

Boyce-Tillman June B. (1994), Singing the Mystery: 28 Liturgical Pieces of Hildegard of Bingen, London, Hildegard Press and Association for Inclusive Language

Boyce-Tillman, June (2000a). Constructing Musical Healing: The Wounds that sing. London: Jessica Kingsley

Boyce-Tillman, June (2000b) *The Creative Spirit- Harmonious Living with Hildegard of Bingen* Norwich: Canterbury Press

Boyce-Tillman, J (2001), Sounding the Sacred: Music as Sacred Site. Chapter in Ralls-MacLeod, Karen and Harvey, Graham. (ed.) *Indigenous Religious Musics*, Farnborough: Scolar pp 136-166

Boyce-Tillman, June (2006a), A Rainbow to Heaven, London: Stainer and Bell

Boyce-Tillman, J. (2006b), *Music as Spiritual Experience*, Modern Believing: Church and Society, Vol 47:3 July 2006, p20-31

Boyce-Tillman, June (2007a), Unconventional Wisdom, London: Equinox

Boyce-Tillman, June (2007b), Music and Value in Cross-cultural work. Chapter in Urbain, Olivier (2007), *Music and Conflict transformation: Harmonies and Dissonances in Geopolitics,* London: I. B. Tauris pp 40-52

Boyce-Tillman, June (2007c), Peace Making in Educational contexts. Chapter in

Boyce-Tillman, June. 2009. The Transformative Qualities of a liminal Space created by musicking, *Philosophy of Music Education Review* Vol. 17, No. 2 Fall; 184-202.

Boyce-Tillman, June. 2010. Even the stones cry out: Music Theology and the Earth Chapter in Isherwood, Lisa and Bellchambers, Elaine (ed.). 2010. *Through us, with us, in us: Relational Theologies in the Twenty-first Century* London SCM Press; 153-178.

Buber, Martin, trans Walter Kaufmann (1970). I and Thou. New York: Charles Scribner's Sons

Christ, Carol (2003), *She who changes: re-imagining the divine in the world,* NY and Basingstoke: Macmillan Palgrave

Chryssavgis, John (2004), Light through darkness: The Orthodox Tradition, London: Darton, Longman and Todd

Clarke, Chris (2002), Living in Connection: Theory and Practice of the new world-view, Warminster: Creation Spirituality Books

Clarke, Isabel (2008), Madness, Mystery and the Survival of God, Ropley: O Books

Clarke, Isabel, 2005), There is a crack in everything – that's how the light gets in. Chapter in Clarke, Chris ed. (2005), Ways of Knowing, Exeter: Imprint Academic pp90-102

Collin, Matthew, (1997), Altered State: The Story of Ecstasy Culture and Acid House, London: Serpent's Tail

Csikszentmihalyi M. and Csikszentmihalyi I.S. (1988), *Optimal experience Psychological Studies of Flow in Consciousness*, Cambridge: Cambridge University Press

Csikszentmihalyi, Mihaly (1993), The Evolving Self, New York: Harper and Row

Custodero, Lori A. (2005), Observable indicators of flow experience: A developmental perspective of musical engagement in young children from infancy to school age. *Music Education Research*, 7(2), 185-209

Derrida, Jacques. 1972. *Margins of Philosophy*. Chicago: University of Chicago Press. Dewey, John. 1934/1980. *Art as Experience*, New York: Capricorn Books; 22.

Drinker, Sophie (first published 1948, reissued 1995). *Music and Women, The Story of Women in their relation to Music.* City University of New York: The Feminist Press.

Driver Tom F. (1998), *Liberating Rites: Understanding the Transformative Power of Ritual,* Boulder, Colorado: Westview

Dunmore, Ian (1983), Sitar Magic, *Nadaposana One*, London: Editions Poetry Erricker, C., Erricker J., Ota, C., Sullivan D. and Fletcher, M. (1997), *The Education of the Whole Child* London: Cassell

Fox, Matthew (ed.), Hildegard of Bingen's Book of Divine Works, with Letters and Songs (1987), Santa Fe, Bear and Co.

Fox Matthew and Sheldrake. Rupert (1996), *The Physics of Angels: Exploring the Realm where science and spirit meet*, NY: Monkfish book publishing

Frowen-Williams, Gareth (1997) *Between Earth and sky: Explorations on the Shamanic Path* Unpublished Dissertation for MA in Ethnomusicology, University of Central England

Gardner, Kay (1990) Sounding the inner landscape: Music as medicine, Rockport Mass and Shaftesbury, Dorset: Element Books

Gass, Robert and Brehony, Kathleen (1999), *Chanting: Discovering Spirit in Sound,* New York: Broadway Books

Gebara, Ivone. 1999. Longing for Running Water, Minneapolis: Fortress Press.

Godwin, Joscelyn (1987a). Music, Magic and Mysticism: A Sourcebook. London: Arkana

Godwin, Joscelyn (1987b) Harmonies of Heaven and Earth, London: Thames and Hudson

Godwin, Joscelyn (1979) Robert Fludd: Hermetic Philosopher and Surveyor of Two Worlds, London: Thames and Hudson

Graham, Elaine, (2007), Embodying technology, becoming our tools: discussing the post/human. Chapter in Jonathan Baxter (ed.) Wounds that heal: Theology, Imagination and Health London: SPCK pp 125-148

Green, Lucy (1988). *Music on Deaf Ears: Musical Meaning, Ideology and Education*. Manchester and New York: Manchester University Press

Green, Lucy (1997). Music, Gender, Education. Cambridge: Cambridge University Press

Grey, Mary, (2007, Ecomysticism: a contemporary path of Christian healing. Chapter in Jonathan Baxter (ed.) Wounds that heal: Theology, Imagination and Health London: SPCK pp 36-56

Hamel, Peter trans Peter Lemusurier (1978). *Through Music to the Self – How to appreciate and experience music anew* (first published in German in Vienna 1976). Tisbury: Compton Press

Harvey, Jonathan (1999), Music and Inspiration, London: Faber and Faber

Hay, David (1982), Exploring Inner Space, Harmondsworth: Penguin

Hay David. and Nye Rebecca (1998), The Spirit of The Child, London: Fount

Heyward, Carter (1989) *Touching our Strength: The Erotic as Power and the Love of God*, San Francisco: HarperSanFrancisco

Hills, Peter and Argyle, Michael (2000), Psychology and Religion, London and NY: Routledge

hooks, bell (1996), Killing rage, ending racism, London: Penguin.

Huntington, Samuel. 1996. The Clash of Civilizations and the Remaking of World Order, New York: Simon and Schuster.

Ignatieff, Michael. 1993. Blood and Belonging, London: Viking.

Levinas, Emmanuel, trans Alphonso Lingis 1969

Inglis, Brian, (1990), Trance: A Natural History of Altered States of Mind, London: Paladin, Grafton Books

Isherwood, Lisa (ed.) (2000), *The Good news of the Body: Sexuality and Feminism,* Sheffield: Sheffield Academic Press

Jackson, Philip W. (1998), John Dewey and the lessons of Art, New Haven and London: Yale University Press

James, Jamie (1993). The Music of the Spheres: Music, Science and the Natural Order of the Universe. London: Abacus

James, William (originally published 1903, this edition 1997), *The Varieties of Religious Experience*, NY: Simon and Schuster

Johnson, Elizabeth. 1992. She Who Is. The Mystery of God in Feminist Theological Discourse, New York: Crossroad; 155.

Kaggwa, Robert. 2008. Unpublished Review of Between.

Langer, Suzanne (1942), Philosophy in a New Key, Cambridge, Mass; Harvard University Press

Laski, Marghanita (1961), Ecstasy: A Study of some secular and religious experiences, London: Cresset Press

Linzey, Andrew (1994), Animal Theology, London: SCM

McClary, Susan (1991). Feminine Endings. Minnesota: University of Minnesota Press

McClary, Susan (2001). Conventional Wisdom. Berkeley: University of California Press

McDonagh, Enda (2004), Vulnerable to the Holy in faith, morality and art, Dublin: The Columba Press

Maslow, Abraham. H. (1967), The Creative Attitude. In Mooney and Razik (eds.) *Explorations in Creativity* New York: Harper and Row pp40 –55

Ong, Walter. 1982. Orality and Literacy: The Technologizing of the Word Methuen: London and New York.

Otto, Rudolf, (1923), The idea of the Holy: An inquiry into the non-rational; factor in the idea of the divine and its relation to the rational, Oxford: Oxford University Press

Perry, Michael ed. (1987), *Deliverance: Psychic Disturbances and Occult involvement*, London: SPCK Pickstock, Catherine, Quasi una sonata: Modernism, Postmodernism, Religion and Music. Chapter in Begbie, Jeremy S. and Guthrie, Steven R. (2011), *Resonant Witness: Conversations between Music and Theology*, Grand Rapids. Michigan: William B. Eerdmans Publishing Company, pp190-211,

Rahn, John, (1994), What is valuable in art, and can music still achieve it? In John Rahn (ed.) *Perspectives in Musical Aesthetics*, New York: Norton

Rankin, Marianne, (2005), *An Introduction to religious experience*, Lampeter, Wales: religious Experience Research Centre

Roose-Evans, James (1994), *Passages of the Soul*, Shaftesbury: Element Books Marton, Ference and Booth, Shirley (1997). *Learning and Awareness*. Mahwah NJ: Lawrence Erlbaum Associates, Publishers

Rouget, Gilbert (1987) translated by Biebuyck, Brunhilde, *Music and trance: A Theory of the relations between Music and Possession*, Chicago and London; University of Chicago Press

Sacks, Jonathan. 2002. *The Dignity of Difference*, London and New York, Continuum. Schumacher E.F. (1977), *A Guide for the Perplexed*, London, Jonathan Cape

Shepherd, John and Wicke, Peter (1997). Music and Cultural Theory. Cambridge; Polity press

Sholl, Robert (2011), The Shock of the Positive: Olivier Messiaen, St Francis, and Redemption through Modernity. Chapter in Begbie, Jeremy S. and Guthrie, Steven R. (2011), *Resonant Witness: Conversations between Music and Theology,* Grand Rapids. Michigan: William B. Eerdmans Publishing Company, pp162-89

Sullivan, Lawrence E (1997). *Enchanting Powers: Music in the World's Religions*. Harvard: Harvard University Press

Taylor, John V. (1992), The Christlike God, London: SCM Press

Thalbourne M.A., Bartemucci L, Delin P.S., Fox B. and Nofi O. (1997) Transliminality, Its nature and correlates, *The Journal of the American Society for Psychical Research* **91** pp 305-31

Temlan, John. 2008. *The Rocks Will Cry Out*. Accessed: April 14, 2009 from www.praisecharts.com/live/articles/219/1/The-Rocks-Will-Cry-Out/Page1.

Tinker, George E. - The Stones Shall Cry Out: Consciousness, Rocks, and Indians - Wicazo Sa Review 19:2 Wicazo Sa Review 19.2 (Fall 2004) pp105-125

Turner, David H. (2001), From here into eternity: Power and Transcendence in Australian Aboriginal Music. Chapter in Ralls-MacLeod, Karen and Harvey, Graham. (ed.) Indigenous Religious Musics, Farnborough: Scolar pp 35-55

Turner, Victor (1969, 1974a). The Ritual Process: Structure and Anti-structure. Baltimore: Penguin Books

Turner, Victor (1974). *Dramas, Fields and Metaphors: Symbolic action in human society.* Ithaca NY: Cornell University press

Turner, Victor (1982). From Ritual to Theatre: The Human Seriousness of Play. NY: Performing Arts Journal Publications

Turner, Victor (1986). The Anthropology of Performance. New York: Performing Arts Journal Publications

Urbain, Olivier (2007), *Music and Conflict transformation: Harmonies and Dissonances in Geopolitics,* London: I. B. Tauris

Van der Weyer Robert (ed.) (1997) Hildegard in a Nutshell, London: Hodder and Stoughton

Ward, Elizabeth Stuart Phelps (1896), Chapters from a Life, New York: Arno Press

Westerlund, Heidi. 2002. Bridging experience, action, and culture in music education. Studia Musica 16, Helsinki: Sibelius Academy.

Wilber, Ken *The Eye of the Spirit- An integral Vision for a world gone slightly mad,* Shambhala Publications twm.co.nz/kwilb eyspir.html. Contacted April 14th 2009 11pm

Williams, Nicholas (2009) Review in the Church Times Feb 27th

Notes

- 1. It is has been repeated it every Holocaust Memorial Day—January 27th—each year. See Space for Peace Website: http://www.spaceforpeace.8k.com.
- 2. The developing community choir movement is primarily an orate tradition and represents an attempt to re-empower people musically when they have felt disempowered by the literate Western classical\tradition. The struggle between orality and literacy is well described by Ong, Walter, (1982), Orality and Literacy: The Technologizing of the Word, London and New York: Methuen.
- 3. The ideas described here applying Complexity theory to musical construction are embryonic and need further development. However, they are helpful to argument of this paper because of the way in which Western Music has traditionally been structured. In the classical traditions, in particular, there has been a great stress on order and, closely associated with it, control, often by a single person.
- 4. These characteristics are set out in more detail at: Ferreira, Pedro. 2001. *Tracing Complexity Theory,* Accessed: April 18, 2009 from http://web.mit.edu/esd.83/www/notebook/ESD83-Complexity.doc.
- 5. Temlan, John. 2008. *The Rocks Will Cry Out*. Accessed: April 14, 2009 from www.praisecharts.com/live/articles/219/1/The-Rocks-Will-Cry-Out/Page1.
- 6. These ideas are more fully explored in: Boyce-Tillman, June. 2010. Even the stones cry out: Music Theology and the Earth Chapter in Isherwood, Lisa and Bellchambers, Elaine (eds.), Through Us, with Us, in Us. London: SCM; 153-178.
- 7. Eliot, T.S., Four Quartets 4: Little Gidding Analysis. Accessed: from http://www.eliteskills.com/analysis_poetry/Four_Quartets_4_Little_Gidding_by_T_S_Eliot_analysis.php.
- 8. See Space for Peace Website: http://www.spaceforpeace.8k.com.