

Sorrow, Comfort, & Joy

Healing Powers in World Music

by Verlene Schermer

Faery music is almost a *sine qua non* for the Celts to journey into the sidhe, the Hollow Hills, and other regions of the Celtic Otherworld.

-- Tom Cowan, *Fire in the Head*

There is in Irish folklore, a story about the three sacred strains of music. The three strains are known as the *goltraí* -- song of sorrow, the *suantraí* -- song of comfort, and the *gentraí* -- song of joy (Walton). The *Dagda Mor*, (the good god) is the leader of the *Tuatha De Dannan*, (the Fairy Folk - who are gods themselves), and it is his harp, *Uaithne*, that has the magical ability to bring listeners to tears, to put them to sleep, or to cause them to dance.

As a storyteller, none of the written versions of this tale was to my liking, so I wrote a story based on the three songs of the *Dagda Mor*, which centered around a fictitious character, Padraig O'Connail, who lived during the turn of the nineteenth century, and traveled to the *sidhe*, the land of fairy, to learn the healing magic of music (Schermer). The story, *Sorrow, Comfort, & Joy*, as it was published in a journal in 1994, can be found in Appendix I. I have performed this story to several audiences, and have written subsequent stories based on the same character, and his employment of the magical songs of the *Dagda Mor*.

The research presented in this paper was initiated by my desire to bring Padraig O'Connail to India in a new sequel, to renew his faltering faith in music's

magical powers. I was intrigued by the importance of a raga's *rasa*, or mood, and was especially interested in learning more about Indian beliefs about music's magical powers for use in healing arts, since the songs of the *Dagda Mor* are used in my story for healing. I found that it is not only in India that music is believed to have magical power, but also all over the world. And in many cases, that power is the power to heal, through the expression of sorrow (lament), comfort (lullaby), and joy (ecstasy).

Although instrumental music, and in particular, drumming, is used in the mystical applications of music for healing in many cultures, my focus is on the use of the voice – because the voice is the one instrument that is universal to all cultures: the voice is built into human anatomy. My research shows that the sung expression of the emotions, *sorrow*, *comfort*, and *joy*, is used for healing by many world cultures, and that its universality can be explained by the universality of human physiology.

Vocalizing Emotions

The notion that emotion is common to peoples of all cultures because of its ties to human physiology is supported in the literature of the fields of Voice Science and Linguistics. A voice scientist, Klaus Scherer describes the function of the somatic and autonomic nervous systems during emotional arousal:

The effects of emotional arousal on the vocalization process are primarily controlled by the limbic system. They are generally produced via tonic activation in the somatic nervous system (in particular the striated musculature) and sympathetic as well as parasympathetic activation of the autonomous nervous system. In addition, direct sympathetic or parasympathetic effects such as respiration changes and the secretion of mucus can affect the production of vocalization (Scherer, pg. 240).

A linguist, actually an *ethnomusicolinguist*, Anoop Chandola, supports Scherer's assertion that emotions are tied to human physiology in a book entitled *Music as Speech - an Ethnomusicolinguistic Study of India*: "Emotion has been defined as consisting of a synchronization of changes in all organismic sub-systems, thus accounting for the pervasiveness and power of emotional states. There is another dimension shared by language and music – the phonemotive components. We call them 'phonemotive' because they are those phonetic touches which express the emotive aspect of a sound... The finest narrow distinctions of phonemotive components are perceptible only through human voice" (Chandola). This is also an argument in favor of the human voice as the best instrument for expressing emotion.

In linguistics, it is well accepted that *intonation* (the rising and falling of the 'fundamental' or singing pitch of the voice) "is the same, in spite of superficial differences, no matter where we find it, because of its ties to human physiology" (Bollinger, pg. 26). Linguists have found that certain contours are apparently universal, such as the rise in pitch for questions, and for the normal breath group, "the terminal falling fundamental frequency contour" (Lieberman, pg. 195). Not only the contour of a breath group, but also the overall pitch level is a result of emotion:

Vocal pitch is more or less inseparably associated with the speaker's biological condition. Normally, the speaker's articulatory muscles begin to lose their elasticity as he grows tired, with the result that his voice becomes lower and his pitch range narrower. Conversely, when he feels cheerful and inflated, his general tone of voice tends to rise (Abe).

Many linguists believe that intonation, or melody, preceded spoken language. One linguist puts it this way: "Human language, like all other aspects of human behavior, must be viewed as the result of a Darwinian process of natural selection that gradually developed from simpler communications systems. Intonation can be viewed as a basic and 'primitive' element in human language in that the laryngeal and respiratory mechanisms that structure the segmenting aspects of human intonation are to be found in many other animals" (Lieberman, pg. 188).

Even in other sciences, this is a point of interest. Charles Darwin posited that the expression of emotions (such as pleasure and pain, as well as breeding calls) is shared by the animal kingdom, and thus, "seems to have been the primeval use and means of development of the voice" (Darwin, pg. 84). In discussing the writings of Herbert Spencer, Darwin says, "Mr. Spencer further shows that emotional speech... is intimately related to vocal music, and consequently to instrumental music; and he attempts to explain the characteristic qualities of both on physiological grounds -- namely, on the general law that a feeling is a stimulus to muscular action... This remark holds good, whether we believe that the various qualities of the voice originated in speaking under the excitement of strong feelings, and that these qualities have subsequently been transferred to vocal music; or whether we believe, as I maintain, that the habit of uttering musical sounds was first developed, as a means of courtship, in the early progenitors of man, and thus became associated with the strongest emotions of which they were capable" (Darwin, pp. 86-7). The idea that emotion and the

intoned expression of emotion precedes language is a good argument for the universality of intonation patterns and other non-linguistic aspects of emotional vocalizations.

In the music of India, there is a complex system of relationships between notes within a scale that allows for the expression of various emotions. Since every note is associated with a particular feeling, certain ones are omitted in certain ragas: “According to the theoretical explanation of the *shrutis*, all the notes cannot have the same kind of expression and in a scale, therefore, there are necessarily contrasts. This is why the most intense ragas should be pentatonic, since in a pentatonic scale it is easier to eliminate the notes that would not support the predominant expression” (Danielou, pg. 43). The fifth, (pa) expresses sunshine, and joy, so a very sad raga will leave it out. And since a fourth (*shuddha ma*) expresses peace, and serenity, a passionate raga will leave out the fourth. According to Danielou, “Each of the notes of the scale has its own kind of expression and a distinct psychological or physical effect, and so it can be related to a colour, a mood, a metre, a deity or one of the subtle centers (chakras) of the body. These relationships are given an important place in all Sanskrit treatises on music. For laughter (*hasya*) and love (*shringara*), *Madhyama* (fourth) and *Panchama* (fifth) are used. For compassion, (*karuna*), *Nishada* (minor seventh) and *Gandhara* (minor third); in peace, *Madhyama* (fourth)’ (*Vishnu-dharmottara*, 3, 18)” (Danielou, pg. 92-93). Danielou also claims that there is a “direct connection between intervals, determined by physical laws, and the emotions they arouse or express” (Danielou, pg. 44). I would have

thought that intervals and scale degrees being connected to particular emotions would be culture specific. Yet, in India, the minor 3rd and minor 7th are connected with *Karuna* (compassion and sadness – or *sorrow*) and the 4th connected with peace (*comfort*), and the 5th connected with laughter (*joy*). These strangely coincide with the melodic movement of the chord progressions I composed (with my own Western ears) to represent the three songs of the *Dagda Mor* in my Irish story: the song of sorrow is based on minor seventh chords, thus containing the minor 3rd and the minor 7th; the song of comfort progresses from the I chord to the IV chord; and the song of joy progresses from the I to the V chord. To hear how these are used in the story, see Appendix II. I did not base the compositions on anything other than my own intuition and personal experience with music, so I am rather surprised by the correlation, and even somewhat skeptical about the implications that the (very Western) chord movement could be tied into the same principles that govern Indian scale theory. It makes me wonder if there is, underlying every culture's music system, some musical element that is universal. And if so could it be that there is a physiological explanation?

Expressing Sorrow

In an article in *Psychology Today*, the search for a universal primeval melody called an "Ur-song" is discussed: "In his Charles Eliot Norton lectures at Harvard in 1973, the composer and conductor Leonard Bernstein asserted that there is a basic melody that children all over the world first chant. He even identified this Ur-song as describing an archetypal pattern of intervals on a scale.

The song, Bernstein said, consists of a repetitive, descending minor third, often elaborated by an additional step of a fourth” (Gardener).

This is the same tune as “ring around the rosy,” and many other children’s songs (in solfeg: sol sol mi la sol mi), but I also noticed the similarity to the Ecuadorian Quichuan woman’s lament (Titon - Cassette 3). In the recording, she sings the (relative) pitches D-C-A (la sol mi) which are the three important pitches from the *vacacion* played by the harpist earlier in the ceremony (Schechter, pg.472). She always started on the D, but the predominant pitches were the C and the A, which she oscillated between for the remainder of each phrase. The C was used in an almost recitative manner, and was held out for various lengths of time before descending to A and rocking between C and A. This melodic movement is similar to the that of the Rumanian woman’s lament heard on a recording of Rumanian folk music (Alexandru). The major difference is that instead of the (relative pitch) D, a D# was sung as the top pitch, and each phrase began with the C, moved up to D#, and then returned to and remained on C before oscillating between C and A for the remainder of the phrase. This pattern includes not just one, but two descending minor thirds – from D# to C, and then C to A. I noticed similar patterns during some portions of North Indian vocal music both in a concert (Shafqat Ali Khan), and in a recording of Kyhal music (Chatterjee). The effect of singing several syllables, or even just sustaining a note, and then dropping about a minor third had a very mournful sound, and I felt some kind of empathic “twang” internally, that I cannot explain.

This use of the descending minor third might be also tied to human physiology since, as was previously stated, there is a downward contour within each breath group. It is possible that the minor third represents a particular minimal amount of relaxation of the vocal folds and decrease in air pressure, and that an upward move to the fourth or augmented fourth would be the result of extra exertion, such as in the initiation of a cry. But I could find no data on these specific details to support that supposition. There is, however, a fair amount of scientific literature on the physiological aspects of the expression of sorrow, sadness, and lament.

In *Voice Science*, Klaus Scherer reports on a study of actors using “Stanislavski-like induction techniques, trying to at least partially produce the emotion to be portrayed,” that downward-directed *F₀* contours were found for both anger and sadness (Scherer, pg. 241).

From the field of Linguistics: “The universal shape of the cry associates it with the rise and fall of subglottal pressure on the one hand and of the nervous tension on the other... Rise and rise-fall are the basic patterns wired into the child’s own nervous system and vocal apparatus” (Bollinger, pg. 12).

In a paper titled, “Emotion and Expression: Temporal Data on Voice Quality in Russian Lament,” voice scientists, Mazo, Erickson, and Harvey reported on several aspects of lament. They report that “village women say repeatedly that lamenting makes them ‘feel better’ and brings a feeling of relief” (Mazo, et al, pg. 173). They state that laments are found not only in Russia, but

also in other parts of the world (as we have already found in Ecuador and Rumania).

It appears that what cuts across regional borders is determined not by formal structural features of melody and text, but by what we call intoning – that is, the total process of producing the sound utterances and the general sonic procedures by which a performance is conducted. In addition to regular singing, intoning in laments incorporates sobs, excited exclamations, speech interruptions, sighs, and voiced breathing (both inhalations and exhalatory gasps (Mazo, et al, pg. 173).

In Russian lament, the melodic contour descends to a final tone at which time “the vocal fry [pulse mode of vibration] invariably occurs at the end of the last vowel of the verbal line... more frequently when emotional tension intensifies” (Mazo, et al, pg. 178). That these similarities are found in different parts of the world is further support that human physiology underlies not only the expression of the emotion, but also the use of such expression for healing. “One can speculate that in the process of lamenting, as a result of emotional elevation, certain biological changes accompanying the cathartic outburst of emotion that make a lamenter ‘feel better’ after having lamented” (Mazo, et al, pg. 184).

One characteristic of the lament is a “sobbing” effect. In the Ecuadorian lament, “she sob-sings in short phrases that ultimately descend to the lowest pitch” (Schechter, pg. 473). In the Rumanian lament, “she breaks down and sobs regularly” (Slobin 1984, pg. 180).

Sobbing might also be experienced by the listener. Gurdjieff recalls an experience: “I... remember how all of us, sitting in some corner of the monastery [in Turkestan], had almost sobbed, listening to the monotonous music performed by the brethren during one of their ceremonies” (Gurdjieff).

In Rumania, the group lament follows similar melodic contours, but is done in a call and response form, and is more formally structured (the solo lament being improvised.) In Bosnia, there is a form of singing similar to the Rumanian group lament. The form is called *ganga*, and can be done either by a group of men or women. In Bosnian women's *ganga*, "a respected leader sets the tone, literally, and the fellow singers, usually two, chip in an accompanying pattern called "cutting," "chopping," or "sobbing" that is vocally and emotionally powerful" (Slobin 1996, pg. 218-219). The patterns of melody follow the same intonational curve as the lament (Titon, cassette 2). The *Ganga* is not always a lament: "When *ganga* is sung right, it has a powerful effect on its performers and listeners: 'Good performances can move them to tears and "shudders," but with a sense of happiness; and they arouse feelings of love and sexual passion among younger people, as well as strong feelings of regional identity among both young and old alike'" (Slobin 1996, pp. 219, 221).

Although there are other themes (such as warnings to young girls about male advances), some of the song text of Bosnian women's *ganga* succinctly expresses sorrow:

I will sing out of spite for my sorrow
So it won't conquer me when it tortures me.

Oh god, what would happen if there were no singing?
What would my heart do with all its burden (Slobin 1996, pg. 222)?

In Indian music, emotions are expressed not only in the specific notes, but also in the ornaments, or *gamaka*. One way to express sadness is to use the *gamaka* called *Gadgadita* (which means *sobbing*). This is a succession of grace

notes known as ‘struck’ notes, or *Ahatas*. This “succession of *Ahatas* makes a sort of sobbing trill... often used in Indian music” (Danielou, pg. 83).

It is not just in traditional world music that lamenting exists. For example, Carlo Gesualdo, Prince of Venosa “emphasized pathos in 16th century counterpoint by translating mournful sighs into music. Exclamations, chromaticism, repeated suspensions, and pauses are combined to give the intended effect of acute anguish” (Ostwald).

There is a commonality of intonation patterns and other vocalizations that suggests that the expression of sorrow or grief might not only be a result of the physiological effects of such emotions, but might also be expressed in order to find relief from these physiological effects. As the Russian women claim to “feel better,” so do Jewish women who return year after year to the graveside: “In Jewish tradition, as well as for some Hungarian peasants, it was possible traditionally for a woman to ease her emotional burdens by addressing a long improvised song in lament style to a departed relative, often singing directly at grave-side, for years after the relative’s death” (Slobin 1984, pg. 182).

Expressing Comfort

Thus far, we have looked at the expression of sorrow. Can we find similar parallels in the expression of comfort? And what is the expression of comfort? The Gaelic *suantraí*, which I have loosely defined as “comfort,” also contains the definition “lullaby.” That lullabies are universally a part of many (if not all) world cultures is evident in the vast collections of world lullabies such as *Folk Lullabies of the World* (Cass-Beggs). The lullaby, which is used in all cultures to soothe

baby and mother, and to induce sleep, can be seen to have magical powers – although we Westerners take this power for granted. In North American Indian music, lullabies (and other uses of music) are “thought to possess magic power, because through music one can communicate with, and gain strength from, the power which is behind and part of Nature” (Cass-Beggs, pg. 6). In India, the scale degree associated with peace is *ma*, (the fourth) and the *rasa* that expresses peace or “undisturbed” is *shanta* (Swarup), but it is the rhythm, more than the melody, that makes a song a lullaby (Cass-Beggs, pg. 8). What is it that gives the lullaby such power that sleep is induced? Let’s look again to the literature of science.

In a book on Vibrational Medicine, the activity of the heart during deep meditation is described:

It is known that when the heart contracts, it sends out a pressure wave of blood through the aorta... When the pressure wave front hits the aortic bifurcation, there is a reflected wave that travels back up the aorta in the reverse direction. Bentov discovered an unusual internal feedback loop between the aortic bifurcation and the heart which, during deep meditation, regulated the cycles of pumping activity as well as the rhythmic activity of breathing. When the pressure wave coming from the heart reached the aortic bifurcation, a signal was sent to the heart to initiate its next beat at the precise moment that the reflected wave front reached the aortic valve. This meant that there would be a wave front simultaneously coming and going at the same point. When the timing of the pressure pulses traveling down the aorta coincides or is in phase with the reflected pressure pulses, a standing wave is achieved. This wave activity coincides with a frequency of about seven Hertz (Gerber).

Although this is seemingly pretty far removed from the discussion of the expression of “comfort” or singing a lullaby, what I find interesting is the fact that the standing wave is the frequency of about 7 Hz, which is the same frequency as found in the dream state of theta waves: “One of the earliest discoveries made

about the EEG was that certain wave frequencies... occur more often than others. These frequencies were labeled with Greek letters such as: *delta waves* (less than 4 Hz), *theta waves* (4-7 Hz), *alpha waves* (8-13 Hz), and *beta waves* (greater than 13 Hz). Alpha waves are the most common rhythm in the normal awake adult EEG and are associated with a state of relaxation. Beta waves are the next most common and are associated with alert or excited states. Theta waves are not common to the normal awake adult EEG but they are the predominant rhythm in young children. Delta waves are also not common to the normal adult EEG but they do occur during certain stages of sleep” (Grings & Dawson, pg.19). What is interesting is that theta waves are predominant in children, but not in *awake* adults. What is even more interesting is that the average rate of vibrato seems to coincide with the theta wave. Voice scientist Johann Sundberg found in a study that vibrato rates range “between 5.5 and 7.7 Hz, mean 6.9 Hz” and that “the emotional involvement of the singer may increase the vibrato rate” (Sundberg, 1995, pg. 41). The following is an excerpt from his study:

I found some further support for this speculation by comparing two recordings of the same professional operatic baritone singer that I had stored in the lab archive. In one he sang sequences of sustained vowels and in the other he sang a song... The mean vibrato rate for the sustained tones averaged to 5.4 Hz... while that from the real performance of a song averaged to 6.2 Hz or about 15% higher... the hypothesis that emotional involvement influences vibrato rate seems worthwhile to analyze more thoroughly in the future. The results may shed some light on the physiological origin and the communicative function of the vibrato (Sundberg, 1995, pg. 41).

Sundberg also found that “there are rather narrow limits for the rate and extent of an acceptable vibrato. A rate slower than 5 undulations per second

tends to sound unacceptably slow, and vibrato rates exceeding 8 undulations per second tend to sound nervous” (Sundberg, 1995, pg.50). This would indicate that a vibrato that coincides with the normal awake state (alpha waves) would agitate rather than soothe, and that a vibrato that approaches the delta wave range would be resisted by the hearer.

Vibrato has been explained as an enhancement of a physiological rhythm that is already present in the normal adult. Another paper in voice science discusses this: “... even in straight tone there is threshold tremor ... this could be due to the effect of the central nervous system (CNS). According to Titze, the CNS produces a collection of tremor frequencies in the 4-7 Hz range and this might be thought of as low frequency noise produced by muscle contraction. Titze suggests that vocal vibrato may be a cultivated tremor produced from the CNS. .. Emotional arousal often stimulates an increase in vocal intensity and physical energy levels, plus heightened awareness of vocal quality and its relationship to text. This may, in turn, influence the CNS, allowing the emergence of an appropriate vibrato” (Light).

Vibrato is a topic of interest even to some who are outside the field of voice. George Leonard writes about the phenomenology of rhythm in “The Silent Pulse.” In the following excerpt, he makes the connection between vibrato and the theta-state:

The “dangerously sensual” quality of vibrato might be explained by the fact that its rate of vibration, about seven pulsations a second, precisely matches the theta-wave state of the brain. This state is associated with the twilight zone between waking and sleeping, in which the customary censorship of the conscious mind is absent. Vivid hypnogogic images (from the Greek *hypnos*, “sleep,” plus *agogos*, “leading”) pop into the mind spontaneously, as if from nowhere. The waking dreamer, in fact,

sometimes seems to have access to all the wells of memory and creation, perhaps to some sort of group consciousness. Elmer and Alyce Green of the Menninger Foundation have reported a number of extraordinary psychic experiences during the theta state. They also point to the classic examples of creative artists and scientists who have received inspiration through this kind of imagery -- William Blake, John Milton, Samuel Coleridge, Robert Louis Stevenson, Jean Cocteau -- and to Pincare's well-known description of a vision he beheld as he lay in bed awaiting sleep: mathematical ideas dancing in the clouds before him, and colliding and combining into what he recognized as the first set of Fuchsian functions, the solution to a problem he had long been struggling to solve.

The powerful musical vibrato might have the effect of capturing the rhythm in our own brains, thus creating the condition of reverie in which mysteries are revealed. Listening to music, especially the slow, sustained passages that allow the full development of vibrato, I have sometimes been "drawn into a spell." Could it be that the "enchantment" of music has a rhythmic, physiological basis? In any case, vibrato represents the spontaneous and the emotional rather than the rigid and the rational -- a threat to any repressive age, a joy and a beacon to the creative (Leonard).

Leonard refers to studies reported on by Elmer and Alyce Green, who were not actually studying the effects of vibrato, or even the act of singing at all. But the data on brain-wave activity is relevant to this paper: "Kasamatsu and Hirai studied the brain-wave activity of Japanese Zen monks, a few of whom were regarded by their fellow monks as masters of *zazen* (the Zen Buddhist way of meditation). They found that (a) as the subject began to turn his attention inward, long trains of alpha rhythm appeared, (b) as time passed the dominant frequency of the alpha pattern began to decrease toward the alpha-theta border region (8 Hz), and (c) some subjects (those considered most accomplished at reaching a state of deep meditation) produced long trains of theta waves. When in this state of meditative consciousness, Zen masters are said to be in a state of 'knowing' rather than 'thinking'" (Green & Green). Similar phenomena was found in other parts of the world: "In India, Anand, Chhina, and Singh studied people

practicing a yoga way of meditating. They observed that the meditative state could be intensely focused, or closely controlled, so that it could not be disrupted with flashing lights, sounding gongs, vibrations, or the touch of a hot glass test tube. In other words, the state of inner concentration was profoundly detached from sensory stimulation. These researchers also noted that during such deep-meditation periods, theta waves were appearing in the occipital brain records” (Green & Green).

Besides the use of vibrato to possibly induce the theta state, Indian music theory offers that “[ascending fourths] represent a ‘passive principle’: they all express moonlight, beauty, peace” (Danielou, pg. 45). According to Danielou, “Each of these series [referring to series of fourths, fifths and thirds] is based upon a particular type of ratio, and the notes of each series are seen to correspond to a definite type of emotion. Here there is a direct connection between intervals, determined by physical laws, and the emotions they arouse or express” (Danielou, pg. 44), implying that the ratio of each interval has a specific physiological effect. Perhaps, then, the movement of a melodic fourth (or even the movement harmonically from the tonic to the sub-dominant) would induce a more relaxed state because of that ratio.

Expression of Joy

It would follow, then that the movement up a fifth would be involved in the arousal of joy, or *hasa*, or ecstasy, since “[ascending fifths] represent an ‘active principle’: they all express sunshine, strength and joy” (Danielou, pg. 45). Not only is the interval of a fifth associated with joy, but also the *gamaka* that is a

staccato running-up of five notes in a scale: “When the notes follow one another in this order [five notes ascending] this is called ‘Laughing’ (Ullasita) (*Sangita-ratnakara*, 2, 3, 94.)” (Danielou, pg. 83).

But where is the research to support the physiological effects of the fourth for “peace” and the fifth for “joy?” I could not find very much – voice science seems more concerned with the expression of sadness than of contentment and joy. Perhaps the West is not comfortable with the idea of ecstatic states. Our society is more likely to lock up an ecstatic man or at least call him crazy. But more and more we hear reports on news programs about the benefits of laughter. After all, the saying, “laughter is the best medicine,” though overused and under-understood, might be a remnant of a wiser age when medicine was not limited to prescription drugs.

So what does laughter do physiologically? “The research hypothesis is that laughter stimulates the brain to produce hormones called catecholamines. These hormones may in turn trigger the release of endorphins, natural opiates that can reduce pain or discomfort from arthritis or allergies and from certain headaches and backaches... According to Freud, laughter occurs when aggressive and angry energy is freed from repression” (Halpern, pp. 160-161). Although I don’t agree with much of what Freud had to say, this somehow rings true, considering that anger and sadness are related in that their expression shares the same frequency contour, and that there is a physically felt relief from both sadness and anger when expressed. A story that exemplifies this

progression from anger to laughter is told by anthropologist, Marina Roseman, whose work brought her to the Temiar region of the Malaysian rainforest:

Stored anger, like illness, heats and compacts the heart. A heart narrowed by anger can be “opened” or “cleared” through invective or harangue. During the divorce of a recently married young couple, the female relatives of the groom were angry that the bride had run away and rejected their male kin. On the ground in the moonlight, outside the house where male representatives of bride, and groom were negotiating a divorce, the female relatives of the groom launched into stylized invective, graphically describing with exaggeration the body parts of the bride, who huddled in a darkened building several houses away. The intonation pattern of this stylized invective resembles that of the harangue: a suspended monotone leading into a plaintive downward curve. These intonation patterns are called *jenhook*, a term also used to describe a song or phrase characterized by a recitation tone evolving into a downward curve. Through this stylized invective, the groom’s female kin “expanded” and “cleared” their hot, compacted, angry hearts until finally they were seized with laughter at the absurdity and ingenuity of their exaggerate descriptions. Yet, while the groom’s kin are cooled and cleared, the head soul of the bride is endangered... by bearing the brunt of this angry invective and verbal assault (Roseman, pp. 32, 34).

Notice that the intonation pattern of the invective, or harangue, is described as a suspended monotone leading into a downward curve. This is also the same general pattern found in lament and in the expression of sorrow. But although their expression of emotion was healing to those on the expressing end of the invective, the effect on those who were on the listening end was the opposite. I am sure that if I were the bride in this story, I would see absolutely no humor in the taunts and ridicule, and would find no relief until I was able to express my own anger and sorrow, find comfort in the relief of the pain, and then perhaps to reach that state of ecstasy where I could laugh with joy.

Sufi philosopher Al-Ghazali wrote, “The purpose of music, considered in relation to God, is to arouse longing for Him and passionate love toward Him and to produce states in which He reveals Himself” (Halpern, pp. 175-176). These

states are called “ecstasy” by the Sufis. Whether it is called “closer to God,” or “happiness,” or “ecstasy” – it seems that this state would be preferred by most people over the states of anxiety, anger, grief, and a host of others that plague our modern society.

But do Westerners ever fully experience ecstasy? In many cultures, ecstasy is the key to magical feats and miraculous metaphysical occurrences:

In India a feast is celebrated every year where the people commemorate the great heroes of the past and mourn over their life’s tragedy; and certain instruments are played, certain drums... And there are some who on hearing those drums instantly fall into ecstasy; because the sound of the drum goes directly into their whole system, bringing it to a certain pitch where they feel ecstasy. And when they are in ecstasy they can jump into the fire and come out without being burned; they can cut themselves with a sword and they are instantly healed...

They need not be very educated to go into that trance, nor very evolved; sometimes they are very ordinary people; but the sound can have such effect upon them that they are moved to a higher ecstasy (Inayat Khan, pg. 262).

Another story that moves from sorrow, into comfort, and then into joy involves a student and Rabbi who are fasting and studying the *Kabbalah* together. The student, who has fasted too long wakes up in the middle of the night and calls out to the Rabbi – (omitted are the Rabbi’s responses such as “Then what?” and “That’s it!”):

Just now, I have been upon the highest summit... There was a melody, and it has been singing in me... I was anxious at any cost to learn that melody. Unable, however to succeed, I was greatly grieved and began to weep. Everything in me was weeping, all my members were weeping before the Creator of the Universe. I recited the prayers and formulas you taught me; strange to say, not with my lips, but deep down in my heart. And suddenly I was dazzled by a great light. I closed my eyes, yet I could not shut out the light around me, a powerful dazzling light... And in the midst of the strange light I felt so strong, so lighthearted. It seemed to me as if I had no weight, as if my body had lost its heaviness and that I could fly... And then I felt so merry, so happy and lively. My face remained motionless, my lips never stirred, and yet I laughed. I laughed so joyously, so heartily, so frankly and happily (Peretz).

This story assures me that there is indeed something universal about the progression of sorrow, to comfort, to joy.

Danielou, who writes about Indian music, also makes reference to the use of music for ecstasy and healing. In an earlier quote, the idea was presented that reducing the number of notes in a scale for a particularly sad raga would leave only the notes that support the predominant expression. “When sounds are used for creating ecstasy or for the treatment of mental or physical disease, the number of notes may be further reduced to a few sounds constantly heard, so as to create an overwhelming impression pulling in one direction only” (Danielou, pg. 43). The belief in India is that particular notes have the kind of power that can cause a physiological shift such that one can reach ecstasy, and even be healed.

Spirits, Magic, and Healing

Darwin knew that the physical, vocal expression of pain would have a healing effect: “We have also seen that intense pain, like rage, leads to violent outcries, and the exertion of screaming by itself gives some relief” (Darwin, pg. 85), but would he have called it magic? Whether or not you want to call a physiological shift the result of magic, or the result of the physical laws of nature, or the result of modern science, depends upon your predisposition to believe in one or another of these three “miracles.” The modern day atheist would insist that all can be explained by science, but the most honest scientists will eventually shake their heads in wonder. I have no intention of proving or disproving the realm of the spiritual in this paper, but only hope to discuss the physiological

manifestations of magical, metaphysical happenings, since these are the only measurable elements.

There is a lot of talk about “new age” remedies – and there are fanatics for and against anything bearing that label, but even as early as the 1400’s, song was recognized as an alternative to medicine. In a 15th century manuscript, Marcilio Ficino writes: “remember that song is a most powerful imitator of all things. It imitates the intentions and passions of the soul as well as words; it represents also people’s physical gestures, motions, and actions as well as their characters and imitates all these and acts them out so forcibly that it immediately provokes both the singer and the audience to imitate and act out the same things. By the same power, when it imitates the celestials, it also wonderfully arouses our spirit upwards to the celestial influence and the celestial influence downward to our spirit. Now the very matter of song, indeed, is altogether purer and more similar to the heavens than is the matter of medicine. Song, therefore, which is full of spirit and meaning... has as much power as does any other combination of things (e.g., a medicine) and casts it into the singer and from him into the nearby listener” (Ficino).

The *shaman*, or healer, must enter into a state of consciousness in which he or she has the power to heal. This often happens through the shaman’s own illness: “The man or woman being initiated into shamanic mysteries commonly suffers a debilitating illness during which he or she has the first meaningful encounter with spirits who use the delirium or coma to introduce the aspirant to the shamanic state of consciousness” (Cowan, pg. 23). In all parts of the world,

in order to do magic, the shaman must enter a trance state, during which magical songs are used:

The Papago Indians of southern Arizona, near the Mexican border, work their magic by singing. Every activity and mood has a corresponding song; if it is sung well and in the proper manner, the song casts a spell, the singer's wish comes true, and the people prosper. In a trancelike state or in natural sleep, the Papago hear songs... From nature and the spirits of nature, the Papago learn their songs...

A Yakut shaman in Siberia describes it this way: 'Mysterious noises are audible, sometimes from above, sometimes from below, sometimes in front of, sometimes behind the shaman...'

Often shamans will say that they received their songs from the spirits. A Gitksan shaman on the Pacific coast named Isaac Tens recalled that when he once fell into trance, his body began to quiver, and he started to sing uncontrollably and had visions of huge birds and animals. He explained that 'the songs force themselves out complete, without any attempt to compose them.' Among the Ainu of Hokkaido in Japan, the shamans sing epic songs and although each shaman sings in her own voice, her use of the first person refers to the gods themselves who are thought to be the actual singers (Cowan, pg. 71).

It is a common thread that "people experience sickness and healing through rituals of consciousness-transformation whose experiential core is musical. And while ethnographers often interpret these types of experiences as religious, the types are, nonetheless, part of long-standing indigenous health care practices" (Friedson, pg. xii).

In Africa, the dream state of the Tumbuka was studied by Steven Friedson: "Dreams do not have the same ontological status for the Tumbuka that they have for those of us in the West whose perceptions of the psyche have been shaped by depth psychologies. For the Tumbuka, dreams are *real*... According to the Tumbuka, a person has multiple souls, some of which are detachable from the physical body. One of these souls, a kind of dream soul, can leave the body through the ear when a person is asleep and can travel

about... For the Tumbuka, there is no sharp demarcation between the reality of waking consciousness and the reality of dreams. Events in both realms have the same status of reality” (Friedson, pg. 21).

He goes on to say, “Having the same status does not mean, however, that they share the same reality... There is no question that they clearly differentiate between the reality of waking consciousness and that of dreams. They do not, however, dichotomize the two into real and unreal (hallucinatory phenomena), as we tend to do in the West” (Friedson, pg. 21). It is helpful to keep in mind that a trance state or dream state might be simply defined as that state where the brain waves are in the 4-7 Hz range. The Tumbuka healers are called *nchimi* (prophet), and they must be possessed by *vimbuza* spirits in order to be effective as a healer. “*Vimbuza* – a complex of meanings and references – encompasses a class of spirits, the illnesses they cause, and the music and dance used to treat the illnesses. As spirit, *vimbuza* is the numinous energy of foreign peoples and wild animals; as illness, it is both a spirit affliction and an initiatory sickness; as musical experience, it is a mode of trance. For patients possessed by *vimbuza* spirits, trance dancing is a cooling therapy; for adepts, it is the means for transforming a disease into a vocation; and for healers, it is the source of an energizing heat that fuels the divination trance” (Friedson, pg. 12).

Chikanje, a prophet healer, sings a particular song that is about his mother who died the year before. The song was brought to him by the spirits in a dream. “The song reminds him of the past and makes him feel sad, for he misses [his mother]. According to Chikanje, sadness (*chitima*) helps to heat his *vimbuza*,

and this in turn helps him to 'see'" (Friedson, pg. 114-115). Here again is the use of expressing sadness or pain through singing in order to reach a state of consciousness that would enable healing. "The bodily sensations induced by drums sounding the rhythmic modes of the *vimbuzza* spirits, the dynamic power of call and response singing... are more than acoustical phenomena; for healers and their patients they are physically felt, substantial sources of energy" (Friedson, pg. 39).

The Temiar healers in Malaysia are also initiated into the trance state through dreams and songs: "During dreams... soul of the dreamer meets with... souls of entities... who express their desire to become the dreamer's spiritguide. The relationship is confirmed through bestowal of a song during ceremonial performance... Singing the song links person and spiritguide; thus transformed into a medium for the spirits, a person can diagnose and treat illness" (Roseman, pg. 6). The way this works is: "The spirit's presence flows through the medium's voice as song and through the medium's body as a cool spiritual liquid. Imbued with the overarching vision and vast perspective of the spirits when he sings, the medium is empowered to see and counteract illness. The act of singing demonstrates the translation of the spiritguide's vision into the medium's knowledge and power" (Roseman, pp. 78-79). This is not quite the physiological explanation I would like to have. Exactly what is a cool spiritual liquid? And how is illness counteracted? Is there perhaps something about the vibrations of singing that feels as if a cool liquid is pouring through the body, restoring a body's natural ability to heal itself? "In order to understand and accurately

assess the efficacy of health care systems such as those practiced by Chinese shamans or Tumbuka prophet healers [or Temiar mediums], one must expand the analytical focus beyond the confines of the Western biomedical model” (Friedson, pg. 100). That the West might benefit from this expansion, I have no doubt. That the West is ready to expand its analytical focus, I am not without doubt, but hopeful.

We return to India for a more physiological explanation of the phenomenon of healing with song, that might be known in the future as “how the West was won”: “The physical effect of sound has a great influence upon the human body. The whole mechanism, the muscles, the blood circulation, the nerves, are all moved by the power of vibration. As there is resonance for every sound, so the human body is a living resonator for sound... Sound has an effect on each atom of the body, for each atom resounds; on all glands, on the circulation of the blood and on pulsation, sound has an effect. This explains to us the method of the healers, teachers and mystics, who by the power of sound charged an object with their healing power” (Inayat Khan, pp. 261-2). Well, this is perhaps not as scientific an explanation as many would like to hear, but it is a start anyway.

So, what *would* happen if a nineteenth century itinerant Irish harper were to stow away on a ship and find himself in India? Would cultural differences be too much for him to handle? Or would East meet West on the common ground of the physiological response to emotions expressed in song? Certainly, he would learn that the magical healing powers of music exist in other parts of the world –

but with different names: the *goltrai*, song of sorrow, is known in India as *karuna*; the *suantrai*, song of comfort, is called *shanta*; and the *gentrai*, song of joy, is the *rasa*, *hasa* (Swarup). And perhaps he would even learn that the Indian word for the *sidhe*, is Nirvana.