

**PAIN MANAGEMENT
THROUGH
VOICEWORK AND MUSIC PSYCHOTHERAPY**

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PAIN TREATMENT

Pain is often defined as a multidimensional phenomenon that results from actual or potential tissue damage or psychological trauma or both and is influenced by a number of variables. Cheryl Dileo, Professor of Music Therapy at the Temple University Philadelphia, elaborates on this by describing that pain and suffering are related phenomena, and these terms are sometimes used interchangeably. She identifies suffering as a reaction to emotional and physical pain that contains feelings of uncontrollability, helplessness, hopelessness, intolerability and interminability (Dileo & Bradt, 1999).

Function of Music Therapy

Music therapy has been shown to be an effective intervention for pain in persons who have medical conditions or who are undergoing medical procedures. Both active and receptive methods of music therapy may alleviate pain in medical as well as in psychological situations. It is hypothesized that music therapy contributes to pain relief. There different methods and approaches but the function of music therapy is similar everywhere – reducing or eliminating pain in one or more ways:

- (a) as a distraction from the pain;
- (b) as a stimulus for comfort and relaxation
- (c) a conditioned stimulus;
- (d) as a provider of sensory stimulation (according to the Gate Control Theory);
- (e) as a means for mood-enhancement;
- (f) as a mechanism for providing choice and control;
- (g) as a means for perceived time-compression;
- (h) as an outlet for self-expression;
- (i) as a method for cognitive reframing;
- (j) as a vehicle for social support.

(Dileo, 1999)

Music Therapy as a clinical intervention of entrainment is based on inter-related principles:

- the iso-principle -- music which is intentionally matched to the existing mood of a person can alter the mood through gradual changes in the music;
- the concept of resonance or sympathetic vibration -- a system capable of vibrating at a certain frequency is acted upon by another system vibrating at the same frequency causing vibration in the former (Dileo).

The therapeutic goal is “entrainment” in which a music therapist locks in to rhythm, melody or vibration of the patient to offer support. If indicated, the therapist can use the music to move with

the patient toward a new state of balance. This process is often used to simultaneously deal with the many different aspects of pain and suffering, and to finally achieve pain relief.

Pain Interventions

The following are my own theories based on clinical experience along with interventions developed for pain management by Dr. Joanne Loewy, music therapist and researcher at Beth Israel Medical Center, NYC. All are effective in working with pain as well as anxiety and stress which almost always are inseparable of stress:

- Breathing with intention moves air in the body and creates space. It can bring vibration to the site of tension or pain and can change the dynamics of the painful or stressed parts of the body.
- Singing, toning or vocalizing specific intervals can enhance the feeling of balance or shifts in one's own body energy. The vibration of the voice can be experienced as a sound massage both internally and externally. Specific intervals in combination with particular vowel sounds resonate at different frequencies in the body and seem to open parts of the body, which can result in a release of tension and a reduction in pain perception.
- Resonating instruments, e.g., a gong or stringed instrument, can vibrate at particular points in the body or function as a sound bath for the whole body. These instruments can be used to enhance blood flow and increase the energy in the body. This musical experience also can integrate the pain/stress/anxiety into symbolic sounds and change the person's relationship to it.
- Expressing sad and angry feelings to liberate the body and the soul; providing musical support for crying, screaming and yelling, versus holding back and creating more tension in the body. Also drumming - beating the hands in the flow of this energy - can release emotions.
- Soothing through sedative sounds such as chanting, lullabies or meditative open vocal sounds to let go of the pain/stress/anxiety and allow the patient to relax and to sleep. This works to counter the tendency to fight off the tension/pain which can block blood flow, restrict or cramp muscles.
- Visualizing colors, sounds, pictures, and stories to stimulate brain activity into images and fantasies, and provide diversion as well as concrete coping strategies. This symbolic work addresses a patient's needs of feeling safety and in control, understanding and accepting the reality of the medical/serious situation.

Vibrational Principles

The vibrational aspects of music make change possible. Pythagoras taught us that anything that moved or vibrated creates a sound. This sound, created through singing can cause human beings to vibrate in different frequencies, opening themselves to a broader range of feelings and experiences, a greater balance.

Singing can bring our bodies to a full and deep experience of resonance. This strong, energetic form of vibration occurs in individual parts of the body, on a cellular level, in the brain as well as in the body as a whole. This vibration is energetic and connected through sound waves that the voice is emitting. This vibration creates organized forms and patterns outside and, I believe, also inside the body which can stimulate healing processes.

The energy source is pure, physical, wave vibration. The vibrations of the waves bring the cells into periodic motion, creating different frequencies in the body. Through these frequencies, the body is mobilized: shaken through tiny, wave-like movements through the whole body and involving each cell of the entire system.

Nearly every cell, every muscle, every organ, vibrates and moves in the extended singing frequency which can create a new organization and structure within the body. These changes vibrate and move forward in the body, stimulating a loosening and liberating dynamic in the cells that can have a healing effect. Relaxation or extension of their old forms can help to remove blockage and stimulate new vibration that might then support a change in a frozen, inflexible part in the body.

Lisa Sokolov, music therapist and director of the Institute for the Arts in Psychotherapy in NYC, talks about a physical block when she describes how physical or psychic traumas can appear in the body: "a physical block can be described as a barrier to the normal route of flow of energy". Emotional shocks, bodily injuries, traumas and accidents can create many kinds of physical and psychological blocks. When this physical block is diffused or re-moved and the body is stimulated to follow the natural flow of energy, the body's internal systems get activated. The idea that music and singing can have healing effects is based on this pure, simple energy concept of bringing movement into stagnation of cells, i.e., muscles, organs, etc.

Singing and using the voice provide a vibrational massage to the body from inside which renews the flow and flexibility of energy. Physical blocks, manifested through years of stagnation, can be brought back into a flow of energy. The flow transports or removes the physical blockage out of its fixation and restores the natural stream of energy. When the entire body is integrated in this process, the totality of vibration could cause relief for the internal systems of the body.

Annette Cramer, musician, philosopher, psychologist, and Professor of Music Therapy in Munich, Germany, urges that our ears need high frequencies to stimulate normal brain functioning. The main part of the hair cells in the ear reacts to high tones. The most natural way to create these is through the voice. When this part of the ear is activated, the impulses go to the cerebral cortex which stimulates concentration, balance in the body, and sensorial movement. The high frequencies in the voice of a singer - around 3000, 5000 and 8000 Hz - create significant overtones that mimic the frequency sector that already exists in the nerve network that is responsible for activating the *formatio reticularis* (the concentration, attention or awake-center of the brain). These tones have been established as 'inner tones' and are audible during deep states of meditation. The voice of the singer can effectively activate this brain functioning with these tones in the singer and the listener at the same time. Through singing these high frequency tones, brain training can be achieved and maintain self-resonance of these brain cells. This high pitch vibration has also shown to have positive effects on the limbic system, which is responsible for the emotions and primitive drives and instincts.

Dr. Karl Adamek, sociologist, psychologist, voice educationalist and researcher from Germany, conducted many empirical studies about how to use singing for your Self (not for an audience) as help for health and wellness. He determined that singing helps people to develop a profound perceptivity and to cope with problems, such as: sorting out basic personal questions, increasing concentration and learning processes, soothing depressive mood episodes, stimulating development, and especially, easing mental and emotional pain such as grief, loneliness, disappointment, sadness, desperation, world-weariness, trouble, yearning and homesickness. Singing through each emotional state creates a tangible, or audible, resonance or vibration which then has the potential for movement (flow) and release.

THE VOICE

The human voice is the earliest, most unique and most natural instrument for primary expression and communication with each other and our environment.

The voice as an active agent is always present within us, telling us who we are and how we feel, where we are coming from and how our physical and psychological conditions are at any particular moment. The voice as the speaker of our identity transverses the brain and body, connects emotions, thoughts and corporeality. It is almost impossible to hide feelings and thoughts in your voice, thus the expression: the voice "can work for you or against you". At least something of these personal expressions will be heard through talking, singing or making sound; your voice mirrors your own personality and life story.

In early and primitive cultures, human beings were imitating the sounds of animal voices to connect themselves with their natural environment. This connection made them feel safe and powerful and also bonded them strongly with the nature itself. This connection helped people to survive in joyful as well as dangerous situations. The voice had the role of a crucial instrument for personal and communal expression in moments of happiness and pleasure, of grief, sadness and fear.

I also personally experienced the power of the voice, through a fearful moment of an accident, when a screaming voice saved my life. The powerful voice of a woman screamed loudly and stopped a van that was about to run me over. Awesome moments like this are happening every day and were happening in ancient cultures too but perhaps in a more integral way. Today many of these powerful vocal expressions are going unnoticed; they are unconscious or have lost their significance as crucial and functional to human existence. I wrote more about the authentic use of the voice as a multicultural approach in my Master thesis.

The Universal Human Voice

The German physician and voice pioneer, Alfred Wolfsohn, discovered another example of the power of the voice. He became "horrified and fascinated" when he experienced the incredible sounds of the voices of wounded and dying soldiers in the trenches during the First World War. He was shocked to hear how a human voice could "utter such a sound, a voice in extremis" and he suffered terribly from aural hallucinations of the "pleading screams and groans of the dying". Wolfsohn cured himself by actually singing the sounds he had heard out loud:

In extending the range of his voice and holding in his mind the extreme emotive sounds he had heard in the trenches, he realized that his voice could express an extensive collage of emotions, moods and characters which embraced not only the dark and agonizing sounds of suffering but those of the utmost joy and pleasure. As a result of vocal catharsis, not only did he cure his illness but became convinced that "there exists a universal human voice of much broader circumference than has hitherto been imagined"(Newham).

Wolfsohn experienced his own individual shadow or dark side through singing out his emotional expressions. He realized that "the singer penetrates deeper and deeper into the depths of his body and so arrives at the new, unknown sound of his voice, to which he listens as to a strange voice". He used this personal experience to better understand his students and how to listen to what their voices could tell him about their physical and psychological state. Wolfsohn discovered when he was teaching singing, that the range of his students' voices were not limited by physical aspects but by their psychological and emotional limitations.

My own experience has taught me that broadening the range of affect through vocal expression promotes a more balanced and healthy life. Some of these vocal expressions, such as crying,

laughing and singing, are very closely linked and come from the same emotional source. The transition from one expression to the other is often made easily or, better, there is no existing border between them. It is possible to slide through these vocal expressions from one thought or emotion to another - from crying into singing or from laughing into crying. Sing-crying is an example of the body's built-in coping mechanism and shows the natural flow of weeping into whining or whimpering, a simple melodic or rhythmic pattern. Babies and mourning adults do it unconsciously as a natural expression to release tension and relax their bodies and souls.

The "universal human voice" has the ability to cry, laugh, scream, talk, sing, and so much more. These authentic emotional expressions make us more fully human, more aware of ourselves and our environment, more psychologically stable. Instinctively we are able to articulate and cope with emotionally touching and physically complex situations.

Cultural Voices

Where does the voice come from? Everybody is born with a voice and this voice becomes the most natural sign, signal and symbol of human development. Through the years, the voice changes from a childish voice to an adult voice, a young voice to an old voice, a natural voice to a trained or forced one, and a native speaking to a foreign speaking voice. "All civilized people in the world today have narrowed their vocal range for speaking, but within various cultures considerable differences have developed...Among Oriental peoples singing and speaking are distinctly separate functions...Singing is high, speaking is low", says Paul Moses, Professor of Speech and Voice at Stanford University School of Medicine, California. He discovered that there seems to be some geographical distinctions:

As we approach the Equator there is a greater frequency of high male and low female voices. Some languages, such as the Romance languages, permit greater vocal freedom than others. An Italian will use a wider range in everyday speech than a Scotsman. Even more interesting is the fact that there are great range variations within the dialects of any one language.

The identification, imitation, archetypes, and mannerisms of the singing and speaking voice clearly show patterns of cultural preference. For example, to be kind means not to raise one's voice in a civilized culture. A British accent is a perfect example of this kindness and of the restriction of any full, round or free vocal sounds. It indicates that one is educated and civilized but it restrains many individual colors and nuances of a person.

Female voices, in industrialized societies, for example, conformed their sounds through the last decades to affect a lower register. This change may have happened because of the assumption that they would be better accepted if they did not sound so feminine, high-pitched and sensitive, but rather more masculine in this male dominated society.

This cultural preference limited our most unique and emotional expressions. We can accept this for our social communications but what if these limitations create depression because of the silencing of these personal symbols? Also, these merely *preferred* low frequencies of voices are depriving the brain of important stimulation it needs for normal functioning.

ACOUSTIC SYMBOLS

The authentic human behavior of making natural sounds can be found everywhere in life today, but we are often not aware of it. People are making joyful and painful sounds, bright and dark sounds, and through this vocalization they are making a connection with their environment. Through these sounds they are creating acoustic symbols for pain, anger, grief or happiness - the deepest, most spontaneous form of their emotional expression. This expression is the indication of their feeling, spirit, and character at this moment, and a release occurs. It is the intonation of their most personal reaction, the quality and power of their emotion, clearly audible through the voice. The act of expressing these human sounds presents them as a symbol. This symbol has a complexity of associated meanings and inherent values, derived from authentic human signs.

Wolfsohn experienced many of these authentic signs in the First World War and understood the sound of them as meaningful symbols. And like him, I am confident that everybody is able to understand these human acoustic symbols naturally and interact with them as people have through the centuries.

Jung talked about the importance of symbols, their preservation, and the integration of them in society. Symbols have been used to express "eternal truths"... they have gone through many transformations and even a long process of more or less conscious development, and have thus become collective images accepted by civilized societies. Some "can evoke a deep emotional response in some individuals". If they are, as "eternal truths", neglected by civilized societies, then "their specific energy disappears into the unconscious with unaccountable consequences", according to Jung. He was concerned about the strong impact of rationalization and the loss of moral and spiritual traditions, the isolation of human beings, and their distance from nature. And he thought that symbols and their recognition and understanding were able to exert beneficial influences into the unconscious.

I would like to adapt his idea to acoustic symbols. The loss of integration and connection with nature makes us strangers to one another, strangers also to our own authentic voices, and to the sounds of our acoustic symbols. The sounds of acoustic symbols in the world seem to be similar everywhere: a painful groan in Africa sounds the same as in Europe; a happy cheer is the same for people in Asia as in America and in Africa - the words may be different but the sound is the same. There will be different codes for expressions, languages and enormous cultural distinctions between people of different continents but these pure acoustic symbols are not unique, instead they express the "eternal truths", as a form of acoustic tradition.

They are "trans-cultural and paralinguistic expressions of affect...revealing a common experiential root to all humanity" as Paul Newham, voice and movement therapist, director of the professional training in Voice Movement Therapy in the UK, says. Through these paralinguistic expressions we learn how uniform the original sounds are and we can see them as archetypes of human expression. Newham also talks about them as acoustic symbols and he inspired me to think more about them as symbols for all human beings:

These acoustic symbols of "vital consciousness", which, we may speculate, were once expressed through the spontaneous vocal sounds of early peoples and later formed the core of primitive song, compare to the preverbal musical babblings of the infant, as though each new born child in a matter of months traces the development of human beings played out over thousands of years.

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Baby & Female Sound Symbols

Following Newham's comparison of acoustic symbols to the sounds babies make, I conceive that the acoustic symbol of an adult cry of pain and the babbling of an infant are both healthy behaviors as authentic individual, paralinguistic expression. I, as a human being, can understand the sound of a baby even without being a mother. More difficult for me is to understand what the baby needs. But for the baby's mother even these sounds are discernable. An intense bond between baby and mother makes the communication easy. This communication is so intense because of their close connection; mother and baby originally had the same body and the baby is identified with the mother, with her sound, smell, movement and touch. Through their bodies and the well-known sounds of their voices, mother and baby experience intimate sensations as vital consciousness.

In very early research studies from the thirteen-century, experiments were conducted to discover the influence of the contact between mothers and their babies. In this study of the German Emperor Friedrich II, mothers were taken away from their newborn babies and replaced with deaf, non-verbal nannies. These nannies were told to cover their faces and to avoid any kind of social or emotional contact, sounds and gestures with the babies. The babies only received routine feeding and necessary changing activities. These babies died after short time of this treatment (Cramer). This research example would not be possible to repeat today but it is interesting to realize the intense vital relationship between mothers and babies.

Through the work of music therapists in Neonatal Intensive Care Units (NICU), we have learned that premature babies after birth will miss the sound of their mother's voice and the "rhythm that the fetus has become accustomed [to]" (Collins & Kuck). Many pioneers in this field came together in 2000 for a colloquium for Music Therapy in the NICU at Beth Israel Medical Center NY. Through music there exists an incredible possibility for growth in these babies; the newest research results about this were presented at this colloquium and have been compiled into a book. In some of these studies, premature babies were treated with singing by a female voice to improve oxygen saturation and stimulate the sucking reflex. Jayne M. Standley, Professor and Director of Music Therapy in the School of Music at Florida State University, is an internationally recognized pioneer in the use of music therapy in Neonatal Intensive Care Units. She explained at the Ninth World Congress for Music Therapy in 1999, that the singing female voice enormously stimulated the reflexes of premature babies around an age of 34 weeks. First the non-nutritive sucking reflex was activated and then babies learned how to suck in general. So they were stimulated to be active and later they even gained weight and could go home 3-5 days earlier.

Through exposure to soft singing, the researchers tried to bring babies from a hyper-position to a homeostasis and helped to decrease their level of stress. Standley wrote about the significance of the female voice in her article entitled, "The role of music in pacification/stimulation premature infants with low birth-weights". She says that an infant's "preferred auditory stimulus initially is the mother's voice, followed by other female voices, and then music. The male voice, including the father's, is not initially a preferred stimulus".

Kate Richards, music therapist in private practice in NYC, wrote in her MA thesis about pain and the importance of singing, toning and chanting in music therapy for pain management for children, that "singing with a child's cry engenders a give and take exchange, a musical internal and external mirror of human pain." Furthermore she quoted Rothenberg when she described the unity when two voices come together: "when one naked human howl meets another, the walls are gone" and I believe here is the entrée to a real therapeutic relationship.

In various research studies about songs for children, especially lullabies, the structure of a lullaby, for example, was found to be the same in nearly every culture: a slow $\frac{3}{4}$ rhythm and a simple repetitive pattern of the melody, small intervals, monotonous with no changes in the course of the song.

It may have its origin in onomatopoeia [¹] because it is easy to imagine a parent improvising a melody for a distressed child, or a sleepy one, uttering no more words than 'la-la-la' [...] Lullabies may be particularly effective, because, in general, they combine the benefits of the female voice in a simple orchestrated format (Schwartz & Ritchie).

Independent of the language, climate or other influences, the lullaby, sung by female voices with a primitive melody, has a soothing, relaxing effect and was/is used in early and contemporary cultures. These spontaneous vocal sounds show an aspect of the development of human beings as natural caregivers through the form of a primitive song.

Babbling Sounds & Primitive Symbols

Primitive forms of comfort and cure are very similar in various cultures. The repetitive, simple form of singing, as in the lullaby, is a significant feature in every culture. Newham quotes different sources from music history to describe the aspect of repetition and primitive music for different ethnic groups and draws a connection between the "babble songs" of infants and primitive music. The following is an example from New Guinea along with references to other researchers who have explored this:

The people of the Dim tribe in central New Guinea, for example, constantly repeat two notes with an interval of a fourth apart. Sachs further points to the appearance of very simple melodies and rhythms which are repeated successively in many forms of primitive music. Schneider has said that "primitive melody" is "scarcely more than a continually repeated and varied motive" ... Furthermore, in both infant composition and primitive vocal song, the timbre and emotionality of the vocal style is more suggestive of its meaning than the compositional structure of the melody.

In other comparable studies, the similarity was shown between the structure of original, primitive music and the babble sound of an infant. Cramer used an example of Klusen to show how both create a relaxing effect through a simple melody, made of as few tones as possible. This minimal melody, called a "centric melody", has been discovered all over the world, and everywhere structured in the same way: centered around one tone as melodic germ cell. The "centric melody" was used in ancient songs with a strong repetitive character in which the singer stabilized his intonation through bodily movement. The repetition was also needed to intensify the mental and physical experience to finally induce trance states.

I believe that these simple vocal melodies of primitive music and vocal expressions of infants are extremely important human sounds. The "property of repetition" in both helps us to understand their natural relaxing effect. It calls for an understanding of the incredibly meaningful messages of this trans-cultural phenomenon inherent in the human being, the environment, and society.

We can intensify what we have learned about the lullaby as a natural response to the infant's babble and apply it to other sounds such as the cry or the scream. Cynthia Briggs, Clinical Director of the Child Center of Our Lady in St. Louis, MO, presents supporting research about vocal/tonal development in studies of the recorded voices of infants, done by Fridman and Oswald. Fridman pointed out that the "newborn cry is made up of five to twelve contiguous sounds that are repeated. By 4 months, infants' voices are firmer and their range extends an octave more than at birth". Oswald "described the neonatal cry as a regular sequence of tones in a rising and falling pattern with the maximum loudness being around 60 decibels". Furthermore he "observed that pain and distress increase the duration and loudness and elevate the pitch of the cry".

¹onomatopoeia = formation of a word by imitation of a sound made by or associated with its referent (Stein, 1966)

In different research studies it was found that the structure of babies' vocal expressions is the same in every culture because of the presumably identical babble sounds infants create. Independent of the culture and language, babies generate the same language exercises to train all of the articulation zones for development of vowels and consonants. Every baby starts with "ah", "a-ba" or "pa-pa-pa" and "ma-ma-ma" sounds, articulated through the lips which are connected to the suck reflex. Babies have a universal language, Chomsky said, made up of structures that are inherent in their genes (Cramer). Parents in every culture and language are able to understand these archetypical expressions, independent of their own background, and can translate them into their language or dialects.

Could it be possible that people in every culture have intuitively adapted the simple structure of a lullaby to an infant's own repertoire of sound? Probably there is a unique interchange of emotions, information, and sound, with also an archetypical understanding of their environment. This interchange is intensely assuring, rooted in the tradition of human beings from South Pole to North Pole. And this interchange exists in every culture, language and oral, musical tradition – not only between babies and their environment. I view that this phenomenon exists also between grown-ups and their cultural environment.

In some primitive cultures we still can find many examples in which the vocal exchange of expression is a natural part of daily life, in the form of comforting sounds, songs or rituals. Through these vocalizations people are interacting with each other, adapting and integrating their acoustic symbols into a vital consciousness with the society. We can benefit from learning more about these cultures and their need for a healthy exchange of those individual and social expressions. And so it is reasonable to allow a mother to intervene to comfort her child -- even in a medical environment. And also we are historically justified to seek ways for adults to comfort each other with our natural voices.

Painful Voices

As a working music therapist in medical and psychiatric settings, in Europe as well in America, I have recurrently discovered that the doctors, nurses and therapists were rarely able to understand what to do with the sounds of an adult in pain, for example. I myself try to understand my clients' acoustic symbols as the roots to all humanity. Mostly we hear a cry and prescribe medicine or therapy and that is the end of the interchange. We are really not skilled in listening carefully to each other's verbal and especially non-verbal communication patterns.

The cry of pain from an adult in a medical setting is an acoustic symbol and needs the understanding response from the people around him/her - as a mother tends to her baby. Do we respect and understand this cry as a human howl, a natural acoustic symbol, and try to comfort this person emotionally and spiritually? Do we know how to find the right answer in a form of sound so that 'the walls' are going down? Do we use our own authentic vocal expression to soothe and relax this adult as primitive cultures do instinctively in their rituals? Or do we use our voice more rationally without emotional involvement to say that the pain will be over soon? Do we use more verbal explanations rather than emotional, personal, comforting sounds to understand and to treat the person?

I explained in the section about Baby & Female Sound Symbols that the babble sound of an infant is repetitive and relaxes the baby and, most of the time, also the mother and their environment. The mother knows exactly how to distinguish the relaxed from the pained sounds of her baby, and when she sings, she will use simple repetitive sound patterns. Her voice, untrained, smooth or rough, will be the most effective in soothing, relaxing and comforting her infant.

It is vital to learn that an adult in pain, like a baby, is hungering for the same comfort. I consider that every adult was once a baby, comforted by a female singing voice. In crisis situations, such as accidents, illnesses, and times of deep sorrow, we often regress and desire to be hugged and treated as a baby or a child. Also during extremely serious conditions such as comatose states,

adults are wishing somebody would softly sing to them, to feel that there is human life 'outside' of the confusing experience of the coma.

Dr. Dagmar Gustorff, a German music therapist, works with patients in an intensive care unit. Ansdell wrote an article about her work with comatose patients and the effect of the singing voice of the therapist on these extremely sensitive patients. In this article he explained that many coma patients "have indicated that they do want to be sung to". It seems that in a coma condition, this extremely sensitive human connection impacts the patient's choosing between the world of the death and the narrow path back to life. People in coma often live isolated in a "quasi-psychotic state" and the environment should be alerted to the patient's fearful and disorientated perception. The noisy intensive care unit and the loud voices of the staff, 'Open your eyes!' foster the opposite environment of the patient's need for softness and personal contact. One client awoke to tell that for a while he 'decided' not to come back to life because of these harsh sounds.

Gustorff experienced that these patients needed to be sung to in a soft way, and that the quality and potential of the vocal sound had to be carefully attuned to the condition of the patient. Singing without words was the only contact that reached one of the clients as a "call back to life", out of the isolation. While they are in a comatose condition, they report having extremely sensitive and interesting experiences with the vocal treatment they are receiving. The following is a quote of one client's experience of the impressive impact of the singing voice as a primary aspect of human contact:

The music was exquisite. The first time I didn't recognize it as a voice, but as some kind of medieval wind instrument. But the second time I knew it was a voice, that there was a person there, there was someone who didn't want to kill me (Ansdell).

This patient is well now and lives a normal life. He is still thankful for the incredible help; the vocal music gave him his life back. The vocal sounds Gustorff was using matched the rhythm of her client's breathing. The comfort of her soothing and relaxing voice reached his consciousness. A primitive melody, such as she used, provided acoustic symbols as a synchronal, natural answer to his need for a purely personal experience. It is possible to comfort the needs of adults through the development of a vocal music therapy technique in medical settings. We can wake up the potential of primitive forms of cure and care which we still carry with us. Simple and inexpensive, we can comfort our patient's howls through our own vocal human sounds and interact with them.

Isolated Voices

Isolation is becoming a 'normal' problem in our present society and many people are suffering from it in the form of depression, loneliness, and other psychological and physical handicaps. This sort of dis-integration in the society can make the distances between human beings and their environment seem irreconcilable. Many emotional expressions, when not connected to their surroundings, can create tensions and isolation. Through my work in psychiatric hospitals, I experienced the dis-integration of many personalities. Isolation manifested for some depressed clients because of early 'constipation' of their archaic wishes and impulses of life. These clients were not able to bring their emotions into a natural flow of energy of expression. When I worked through screaming, yelling or singing, I often was able to activate sound vibration flow and stimulate some movement and change in their isolated conditions. I used my voice as an interrelated vehicle for contact from one human being to another, from one natural source of emotional energy to another. My scream or singing was emotional and intended to bridge into their constipation. When it resonated in the right frequency between us and penetrated their surroundings, then, sometimes, my clients realized that they were not alone, isolated or split-off.

A former female client, with Multiple Personality Syndrome, in a Dutch Psychiatric Hospital, was not able to connect the different split-off parts of her personality into wholeness. Through singing songs and resonating with each of the split-off parts, she discovered them in a new way as parts

of herself; parts of her own body and mind, parts of her past and her life-story. It was important to bring these parts out of the silence, let them make sound and bring flow into their stagnation, allow them to be fearful as a toddler of 3, an angry infant of 5, a sexually abused girl of 8 with panic episodes, a mistrusting teenager of 13, and an intelligent, independent woman of 18. Through the songs, she expressed all of these parts, and looking at them, finally she started to connect them together.

During a pilot study I conducted in a medical rehabilitation setting in New York, the human voice was able to break the isolation of these clients. Some of them were stroke victims and totally dependent on nursing care. The singing voice, used at bedside, created a new dynamic environment for them, changed their mood and influenced the blood pressure of them. The blood pressure went down when my vocal treatment approach was soothing; and when my approach was more stimulating, often the response of the clients was revealed in a rise in blood pressure.

I would sing the client's name in 'Hello' improvisations, to comfort and build up feelings of trust. Through listening to my voice, one male client's value of his own name took on a new meaning for him and he choked with emotion. Later he commented that my voice was like silver, would calm him, take him out of his mood, and help him to relax.

But when this man was experiencing great pain, he panicked and thought that he was dying. He only could survive in bed with strong medication. No jokes or other intellectual conversation could calm him. In this condition, I would sing to him, no familiar songs but only improvising relaxing words. His fear was still so intense that he overreacted to every cognitive intervention. He buried his face in the pillows and was anxious about dying. I switched to non-verbal vocal soothing sounds, no words, no instruments, no diversion tactics, just vocal sound from one human being to another. After a few minutes of these soothing sounds, he stopped fussing and he started relaxing. While I was singing open vocal sounds, he fell asleep and with him went the pain.

Understanding these different kinds of acoustic symbols of babies and adults can decrease the individual, social and cultural thresholds between us. It also can increase the comprehension between our high technological world and primitive expressions such as a painful cry. In a multicultural society like New York City and especially in culturally concentrated places like hospitals, institutions, medical and psychiatric clinics, schools and community centers, where different mentalities, languages and behaviors merge, the need for every kind of increased understanding is indisputable.

My goal in professional and personal life is to explore and develop simple forms of healthy communication, of care and cure. I endeavor to revive our centuries-old, authentic voices with their self-healing capacity. I think that singing can enhance every day life, as an elementary understanding and coping strategy, independent of where it is used: at home, in hospitals, institutions or schools.

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