

**THERAPEUTIC MUSIC AND SOUND
IN HEALTH CARE**

**By
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EVOLVING DIMENSIONS IN ENERGETIC MEDICINE

Therapeutic Music and Sound in Health Care, Part 2: The Tomatis Method—Frequency Medicine for the 21st Century

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Abstract: The author-composer draws on his research in the field of therapeutic music to explore the field of "intentional sound and music." In Part 2, he introduces the work of French physician and inventor, Alfred A. Tomatis, whose discoveries lead to development of a method for re-educating the way one listens, enhancing learning and language abilities, communication, creativity and social behavior. It has been used to help children with auditory processing problems (dyslexia, learning disabilities, ADD, autism, etc.) and to enable adults to fight depression, learn foreign languages faster, communicate better, and improve creativity and on-the-job performance.

Editor's Note: This is the second in a series of articles on a unique and often overlooked form of energetic medicine; specifically, the application of "therapeutic sound." Composer and record producer Joshua Leeds was introduced to the field of intentional music in 1986 while producing audio tapes for bestselling author Louise Hay. Inspired, he began research in the area of sound, healing and psychoacoustics. Recent releases include works for The Monroe Institute, *Eight Meditations for Optimum Health* and *Sound Body, Sound Mind*; *Music for Healing* with Andrew

Excerpted from and based on the author's books *Sonic Alchemy: Conversations with Leading Sound Practitioners* (InnerSong Press, Sausalito 1997) and *Sound Ally: A Guide for Healthcare Practitioners and Musicians* (in progress)

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Weil, MD¹ (Upaya Records) and the *Thinking Music Series* (Applied Sound).²

It is well accepted that patients undergoing acupuncture and related Oriental therapies often spend 30-90 minutes on the treatment table. In order to optimize treatment results, an understanding of the possibilities for simultaneously integrating appropriate sound therapy would seem to be a logical area for practitioners to explore. The series will include theory, applications, and orientation to resources and tools.

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DISCOVERIES by French physician Alfred A. Tomatis lead to development of a comprehensive theoretical basis that explains how music and sounds function as powerful healing forces. The Tomatis Method of sound therapy (or "audio-psycho-phonology") is credited with treating a wide variety of problems, many seemingly unrelated to the ear, such as learning disabilities, autism, dyslexia, stuttering, attention deficit disorders, sensory integration and motor-skill difficulties.³⁻⁸ Proponents maintain that it has helped adults fight depression, anxiety, learn foreign languages faster, develop better communication skills, and improve cre-

ativity and on-the-job performance.⁹ Many musicians, singers (including famous opera star Maria Callas^{10(p4)}), and actors have been able to fine-tune their skills. Participants commonly report experiencing "side effects" of positive psychological gains: improved self-confidence, higher levels of energy and motivation, greater clarity of mind, and a sense of well-being.

The Tomatis Method has gained acceptance in Europe, where over 250 centers use it successfully; and it was introduced in America just a few years ago.^{10(p1)}

Many consider Tomatis to be the "Einstein of the Ear." And like Einstein, the theories of Tomatis are not only brilliant, but controversial, challenging more traditional and accepted theories.¹¹ However, in a review of the research, Howard A. Stutt, chairman of the Department of Educational Psychology at McGill University concluded that "the amount of experimental evidence is growing and is positive."¹²

Turning the World on It's Ear

The son of an opera singer, Alfred Tomatis was born in Nice, France on New Year's Day in 1920. He received his MD from the University of Paris with specialization in otolaryngology. As early as 1947, he identified the relationship between the ear and the voice. His work was recognized in 1957 by the Academy of Science and Medicine in Paris.

Over the years, Tomatis has developed a rather complex theory that centers around the different functions of the ear. He posits that the initial purpose of the ear is to help "grow" the brain of the unborn child; that the psychological input of the mother's voice is as important as the physiological necessity of the umbilical cord; and that after birth, the ear's primary function is to charge the neo-cortex of the brain and, thereby, the entire nervous system. The idea that listening starts with the fetus in the womb was a highly innovative concept at the time.

According to Dr. Tomatis, there is a dis-

inction between "hearing" and "listening." The two are related, but distinct, processes. Hearing is passive; listening is active. This corresponds to the difference between "seeing" and "looking." Listening and looking are active focusing processes. In *About the Tomatis Method*,¹³ psychologist and researcher Timothy Gilmor writes, "This method provides a comprehensive approach to communication, language, and the learning process, which is based on *listening*."

Tomatis asserts that we can only make sounds that we can hear. If we cannot hear them, we cannot duplicate them vocally. This is known as the "Tomatis Effect." Therefore, if a person sings "off-key" or speaks in a flat monotone voice, chances are that they are unable to hear specific frequencies. (Dr. Tomatis is fond of saying that "one sings with one's ear.")

To Tomatis, sound is a nutrient. When we are unable to assimilate the full spectrum of sound frequency, the ramifications parallel the inability to digest food. According to his findings, the quality of our lives would be markedly different without this vital energy that creates focus, motivation and desire. Remove these elements, and we become fatigued, uninspired, directionless, and ultimately unhealthy. Sound is essentially a mind food.

The Ear In Utero

Tomatis discovered that the ear is functioning four months after conception and that listening is the first sense to develop. Intermixed with the organic sounds of a mother's heartbeat, circulation, gastrointestinal rumblings, and breath, the unborn child distinctly hears her voice. Researchers have since verified that long before an infant can speak, they recognize sounds heard prenatally.

Gilmor continues, "Tomatis has stated that while in the womb, the higher frequencies of the mother's voice literally nourish the fetus. A pattern establishes itself very early of waiting for this sound and being

gratified when it comes; waiting, being gratified, and so on—a process Tomatis calls the ‘uterine dialogue.’ It is with this process that listening begins, and carries on into childhood. The development of later communication skills, language acquisition, learning ability and social adjustment in particular, depends on the quality of this early listening. But for a variety of reasons, such listening can be obscured, impaired or shut down altogether. The Tomatis Method presents a means of retrieving the ‘open’ listening which is our birthright.”¹³ As Tomatis states, “I do not treat the children who are brought to me. I awaken them.”¹¹

Tomatis has devised a method that focuses upon the psychological and social factors that may impact the listening function including the family and emotional background. According to Gilmore, “a child with a reading problem very often presents myriad other difficulties such as short attention span, poor concentration, weakness in oral language, poorly articulated speech, poor vocabulary. Such children are also often immature, with a poor self-concept and sense of self-confidence. They have difficulty adjusting socially to their families and peer groups. Many of these problems affect adults as well.”¹³

The Tomatis Method

Fundamental to Tomatis’ theory is the idea that from conception forward, we psychologically block out those frequencies that correspond to displeasing or offensive occurrences or traumatic events, etc. This psychological damping is manifested physiologically as a relaxation of two tiny muscles of the middle ear.

Specifically, the *tensor tympani* muscle increases the tension in the eardrum (tympanic membrane). The *stapedius* muscle pulls the stapes ossicle outward. The effect of this counter-levering is to reduce the mobility of the auditory ossicles, thereby reducing the sound transmission through this middle chamber. This protects the inner ear from damage from very loud sounds. (An in-

teresting note, according to Dr. Tomatis: the stapedius muscle is the only muscle in the human body that never rests. It is constantly regulating the perception of sound from the 16th week *in utero* until the moment of death.¹³)

Paul Madaule, a Tomatis practitioner for over 20 years explains that if these muscles are inactive for too long, they will lose their tonicity, thus resulting in a diminution of the ability to hear specific frequency ranges corresponding to the sounds one has essentially blocked out. This survival mechanism is used unconsciously. The net effect is that “sounds are imprecisely perceived, and, as a result, incorrectly analyzed.”¹⁴

When one cannot hear certain frequencies, not only does hearing suffer, but according to Tomatis, it may also eliminate the potential “incoming stimulation to the nervous system.” Over a period of time, this deficiency may affect body chemistry, organs, etc. While the ongoing loss may be subtle in the short term, the chronic effect may be profound, possibly leading to disease.

The goal of the Tomatis Method of sound therapy is to retrain the muscles of the inner ear, so as to enable them to respond to the full spectrum of sound.

Restoration of the listening process is accomplished through the use of sound stimulation provided with the aid of the “Electronic Ear,” a device engineered to exercise the listening function. It utilizes highly specific filters and “gating mechanisms” to alter and output those frequencies shown to strengthen the muscles of the inner ear, thereby enhancing the process of focusing. These sounds are delivered through headsets modified to work via bone conduction, as well as through air (the ear).

The listening stimulation consists of music by Mozart, Gregorian chants, one’s own voice, and if possible, the recorded sound of the mother’s voice to re-open the listening process. According to Gilmore,

"After listening repeatedly to music and speech sounds modified in this way, the muscles of the inner ear are conditioned to attend to sound in an improved manner."¹³ The previously lazy muscles are tonified and returned to optimum performance.

Following a battery of diagnostic procedures, comprised of listening tests that measure the ability to hear eleven different frequencies between 125-8000Hz and interviews with certified Tomatis practitioners, an individual "sonic" prescription is determined.

The method typically consists of passive and active phases. The passive phases consist of listening to music and sound with increasing amounts of filtering and processing by the Electronic Ear and then a tapering off of the processing. The purpose is to help the listener gradually adjust to filtered sound, and to develop the focusing response.

In the active phases, the listener becomes more involved. The purpose is to introduce spoken language in the prelinguistic and linguistic stage. This is done by humming, singing, reading aloud, and repeating specific sentences through a microphone into the Electronic Ear, which are then fed back via earphones. These voice tones are filtered in the same manner as the music was in the passive phase. Additionally, increased stimulation is given to the right ear, in order to enhance its dominance, a preferred state for audio-vocal control.

The program is highly individualized with the length of each phase determined by the goals and progress of the individual. Both counseling and repeated listening tests monitor the changes in ear, psyche and body. A typical schedule consists of:

- Three weeks of listening (five days per week), two hours per day;
- Three weeks with no listening or center visits unless counseling is needed;
- Seven days of listening, 1-2 hrs/day;
- Four weeks with no listening;
- Seven days of listening, 1-2 hrs/day.

In the Tomatis Method, the lower 8000Hz of sound (all low-, mid- and most of the high-range) is gradually diminished. The net effect—at the 8000Hz range—is listening to the "ghost" of a musical phrase. Hearing no recognizable instrumental sound, one hears the rhythmic progression with only sibilant hiss replacing the full spectrum of harmonics. As the lower spectrum is gradually added back in, one begins to hear the harmonics that identify each musical sound.

Dr. Tomatis maintains that high frequency sounds (greater than 1000Hz) exert an energizing effect due to a preponderance of cilia (hair cells) in the organ of Corti in the inner ear membrane that respond to high tones by sending electrical impulses to the brain. In contrast, as these frequencies constitute "charging" sounds that energize the nervous system, other frequencies constitute "discharging" sounds (i.e., less than 1000Hz) that tend to weaken and fatigue. This is due the existence of far fewer cells that respond to the lower frequencies. Consequently, lower bass tones may actually have the effect of overwhelming the human system to the point of overload, causing mental and physical fatigue.

Additionally, a listening exercise known as the "sonic birth" utilizes frequencies to simulate the liquid prenatal sounds a fetus hears in utero and its transition to the postnatal air acoustic environment. According to Dr. Tomatis, "It is as if by being plunged into one's own past, one were being offered a better way of mastering the future ...By bringing the ear back to its earliest influences, the filtered sound treatment enables it—in this roundabout way—to achieve the most advanced stage of its evolution, that of 'human listening.'"¹¹

Brain/Mind Enhancement

Amazing changes occur through the retraining of the ear. Charging the nervous system with high frequency sounds "imparts a greater dynamism."¹⁴ These frequencies aid breathing, enhance memory, increase

concentration and attention, lower the susceptibility to fatigue, generate greater motivation and decrease required sleep. Madaule states, "All of these factors, but particularly the increased abilities of concentration and of memory, can help the person considerably."¹⁴

The Tomatis Method is a highly unorthodox, yet a powerfully effective process for change. Learning disabilities, depression and immune disorders are the most common reasons people seek treatment. Yet, as public awareness of the Tomatis concepts grow, many are using this sonic process for brain/mind enhancement, consciousness exploration, increased musicality, and even "inner healing."

As we move through life, it's not uncommon to see patterns of behavior that remain with us through different situations, relationships, and vocations. Many of us have come to realize that we are not living the potential to which we aspire.

This has been my experience. Like so many, I've mind-altered, mind-expanded, meditated, therapized, denied, and "twelve stepped." Even though I've gained deep insights, intellectual comprehension does not seem to reach deeply enough to effect significant lasting change.

As a musician and composer, it made a great deal of sense to me that what we hear affects us greatly; so much sense, in fact, that I decided to experience this method myself.

Dr. Ron Minson—A Healer for the Future

I was lucky enough to locate and meet Dr. Ron Minson in Denver, Colorado.¹⁵ A board certified psychiatrist, Dr. Minson had spent 25 years directing behavioral and therapeutic activities for major medical institutions, consulting for mental health organizations, and maintaining a large private practice. But when his adopted daughter became deeply despondent over the burden of learning disabilities and lifelong depressions, Minson found his tools unable to stop her rapid and life-threatening decline.

In a quest for effective treatment, Dr. Minson came across the Tomatis Method. He and his daughter were simultaneously treated and both experienced dramatic positive results. So much so, that Minson shuttered his practice and ceased all other professional activities. He hurriedly learned French and went to Paris to study directly with Tomatis. Returning to Denver, Minson set up a Tomatis Center in 1991.

As word spread of the success of their treatment programs, Dr. Minson's Tomatis Center began to thrive. A more gentle and respectful environment would be hard to find. Minson's marriage of traditional Western medicine with breakthrough technologies—such as the Tomatis Method—is not only effective, but exemplary.¹⁶

A Personal Experience with the Tomatis Method—Letting the Sonic Waters Soothe

I came to the Tomatis program, ostensibly out of professional curiosity. Truthfully, I was looking to see if this cutting-edge concept would help me break "tired" patterns. After 75 hours on the Electronic Ear, I came out a changed person. Something had inextricably been altered.

Everybody responds differently. However, I have gained greatly increased concentration, better memory, stronger language skills and improved dexterity. But for me, the real benefits lie deeper. It is now 3½ years since completing the program, and I am still attempting to fathom the depth to which the "effect" penetrates.

The most profound value is not how I hear the outside world, or even my newfound awareness of the sounds "inside the notes of music," but most importantly, how I listen to myself and others. I am not speaking about increased intuition, awareness of long buried feelings or receptivity to "channeled beings" from Mars. Rather, and so simply, just how I "listen."

My ears are now so attuned, that I can "hear" the energy behind words, feelings and

sounds. I have always been sensitive, but this is a "quantum leap" in perception. The power of the subtlety is immense.

An inherent difficulty now arises, however, in "translating" what I hear with the words and sounds. Often times, it creates awkward situations because I react more to the essence of the sounds—or language—than the topical expression itself. Blunt honesty can sometimes be very disconcerting—be it from what I hear or my often unbridled reaction. Therefore, I must learn to harness this new "sense." It requires a different social etiquette, for the rules of perception have now changed. The beauty of the process of a "deeper" listening is that the more I hear myself, the easier it is to identify deep psychological patterns that have tremendously impacted life choices. It appears that once I had access to my inner personality-shaping truths, I don't have to hold on to these issues in the same way. This sonic energy somehow allows a painless detachment to take place. Many of the things that used to be terribly painful for me, no longer hold that charge. This does not mean that my slate is wiped clean; rather, like peeling the layers of an onion, I now delve even deeper.

Upon describing my responses to Dr. Minson, he confirmed that these changes were a common experience among those undergoing the Tomatis therapy. As a psychiatrist, he revealed his particular amazement that this was often the case with victims of childhood abuse and incest who spoke of how the sonic waters seem to cleanse and soothe, quietly, gently "...releasing the pain...and letting it go." In this process one experiences the silent healing of Tomatis vibrational alchemy.

When I started the Tomatis Method, I sincerely (and naively) hoped that it would magically erase all my "problems." Years later, I see that this method has actually accelerated my ability to consciously descend into subconscious realms.

How is it that such changes can occur as a result of improving one's perception of a fuller spectrum of sound? Perhaps our ability to perceive the psyche—in all of its light and darkness—corresponds to our ability to imbibe external sonic frequency. Perhaps when we speak of sound as a nutrient for the nervous system we could add that our ability to perceive sound is directly proportional to our ability to hear ourselves at a core level. What is this interrelationship with sound and psyche? I don't know... However, following my experience of the Tomatis Method and the time since passed, I have no qualms in characterizing this audio re-training process as evolutionary.

Vibration, Frequency and Sound

All physical matter resonates. Therefore, using sound to reharmonize our systems is at the same time logical and magical. Some refer to Dr. Tomatis as an ear specialist; to me he is a frequency doctor, working in the subtle, yet powerful domain of vibrational medicine. An example of the health practitioner of the future, Tomatis prescribes sound frequencies in lieu of pharmaceuticals.

Causing us to reconsider the monumental power and beauty of music and sound, the brilliant concepts of Dr. Tomatis form the theoretical foundation upon which the emerging field of "soundwork" will inevitably build.

Endnotes

1. *Sound Body, Sound Mind: Music for Healing* (Upaya Records: available January 20, 1998). A potent sonic tool, this 2-album set utilizes the expertise of Andrew Weil, MD (*Spontaneous Healing, Eight Days to Optimum Health*, etc.), brainwave expert Anna Wise (*The High Performance Mind*), producer Joshua Leeds (*Sonic Alchemy*), and composer/violinist, Richard Lawrence. Together they combine forces to create a sonic journey into theta/delta brainwave states. *Sound Body, Sound Mind* is designed to facilitate self-directed healing or to aid those following trauma. A beautiful symphonic score complements the underlying brainwave frequency schematic. (To order, see Appendix)
2. The *Thinking Music Series* (Applied Sound) contains two compact discs of re-arranged baroque

Appendix: Resources

Recordings and books by Joshua Leeds and others are available from:

The Sound Remedies Catalog

1001 Bridgeway #716

Sausalito, California 94965 U.S.A.

Tel: 1-800-788-0949; (415) 458-3170

www.appliedmusic.com; e-mail: nusound@well.com

Tomatis method information:

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Tel: (510) 284-8431

Ron Minson, MD

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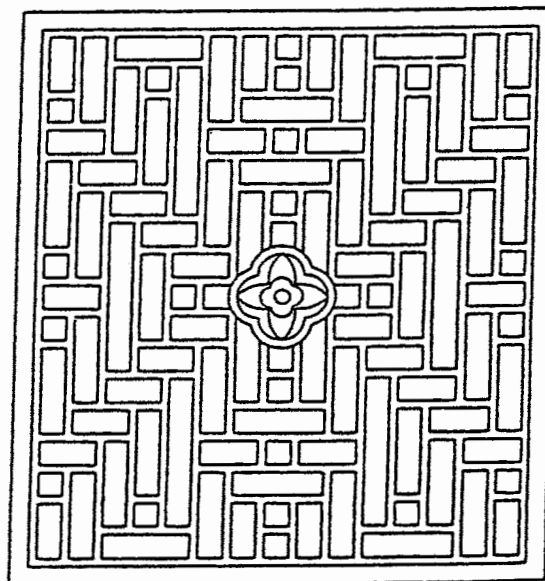
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□

- music. These new recordings of Bach, Vivaldi, Corelli, and Albinoni adhere to psychoacoustic principles conducive to increased focus and concentration. Originally intended as a mental productivity tool, this series has been adopted by numerous children's learning programs (included at many Tomatis Centers) as an adjunct to sound therapy programs. Additionally, many healthcare practitioners use this series in treatment rooms as a deep relaxation device. (See Appendix)
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 7. Gilmore TM, Mould P: An evaluation of dyslexic boys' response to the Tomatis Listening Training Programme: Final Report. Brickwall House, Northam, East Sussex, England, 1994.
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 11. Tomatis AA: *L'Oreille et le langage*. Editions de Seuil, Paris, 1963.
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 13. Gilmore TM, Madaule P, Thompson B: *About the Tomatis Method*. The Listening Centre Press, Toronto, 1989.
 14. Madaule P: *When Listening Comes Alive: A Guide to Effective Learning and Communication*. Moulin Publishing, Norval, Ontario, 1993.
 15. Ron Minson, MD. See Appendix below.
 16. Dr. Minson's center is administered by his partner and wife, Kate O'Brien-Minson. The gentle, safe environment that they have created should be emulated by all practitioners. Vibrational frequencies occur in colors, fabrics and light, as well as through headphones.

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