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R.I.L.K.O. - ARTICLES & INTERVIEWS



R.I.L.K.O. TOMATIS



 **Listening to the Universe**
 Mita Radhakrishnan on the work of Dr. Alfred Tomatis

An interview by Christine Rhone

Ancient traditions, East and West, identify the creative power of the universe with sound vibration – the AUM or the hum of the logos. From this divine Word, music and language emerge as sacred sciences. The primacy of sound finds analogy in the fact that the ear is the first sense organ to be fully formed in the development of the human fetus. In the inner ear, the vestibular apparatus gives the whole body a sense of equilibrium and of orientation - a sense of place and position. To the balance of all civilization, said Plato, music is a key.

Dr. Alfred Tomatis (1920-2001) was an internationally known French inventor and physician specializing in the ear, nose, and throat – an otolaryngologist. In his own words, “a doctor with a passion for psychology”, he opened up a new field in alternative medicine, which he named audio-psycho-phonology, devoting his life to exploring sound as a force for physical and psychological development. The entry point for his pioneering work was the interface between listening and speaking. The recipient of many professional awards and honours in later life, he was an indefatigable researcher, an author, and the unrecognized inventor of the ultrasound machine. His unique approach and method are applicable both to treating illness or disability, and to enhancing wellness and ability. Thus, Tomatis therapy aims to help people dealing with difficulties in behaviour, development, or speech and those wanting to learn a foreign language or improve their singing.

Mita Radhakrishnan is a certified practitioner in Audio Psycho Phonology. In 2004, she and Tapas Desrousseaux opened a Tomatis Research Centre, which they run under the auspices of the Auroville Language Laboratory, near Pondichery in south India. Recognized by UNESCO, Auroville is an international township spread over twenty square kilometres. Its 2,200 permanent residents, who come from some forty-five different countries, generally aspire to the ideals of human unity and the transformation of consciousness.

CR: We're here in the new Tomatis Research Centre that opened in Auroville in 2009 – it really looks great. Mita, there are almost two hundred Tomatis centres all over the world. Why do you think so few people know about his work?

MR: The fact that he did most of his writing in French is one reason. Very few of his books have been translated into English. There's his autobiography, which is *The Conscious Ear*, and recently there has been *The Ear and the Voice* and *The Ear and Language*. Another reason is that Tomatis gave a new or alternative theory about the transmission of sound. The theory that everybody accepts the world over is the one by Helmholtz and Békésy. Tomatis's theory is not accepted by the audiological profession – or not yet accepted - though parts of it are now. And I have noticed that many of his insights are now taken as givens, but they are not associated with his name. I talked to Mrs. Tomatis about this once and she said that the important thing is that the ideas are out there in the world.

CR: A key event in Tomatis's life happened when he was about eleven. He had always been a sickly child, but this time he had three different diseases at once. Several doctors were called in, but they were at a loss. To hide their ignorance, they simply said whatever came into their heads. But one doctor - Dr. Carcopino – said, "I don't know what the matter with him is. I must search for the answer." How did this event mark Tomatis?

MR: The entire Tomatis approach is about going deeper into the origins of life, the placement of the human being in the cosmos, the relation of the human being to the divine – and this is a search. This event was for him a starting point of realizing that knowledge comes when you say, "I don't know, I have to find out" - and then you start, and you search.

CR: Tomatis was a tireless worker...

MR: Indefatigable - he slept very few hours. When you're tuned into another dimension and you get your energies from there, you don't need so much sleep. He was constantly on a search. And this spirit of searching completely inspires our work. The basic diagnostic tool is the Listening Test. It's incredible the kind of information that it gives. But also, it's always a search, because the human being is not a two plus two equals four. The human being is this complex conglomeration of so many things, together with the mind-spirit connection.

CR: Tomatis was the son of one of the most highly paid singers of his generation in France. When Dr. Tomatis began to practise medicine, he treated some of his father's colleagues who had damaged or lost their voices. How did this lead him to his first discovery?



MR: This is simply the relation between the ear and the voice - Dr. Tomatis's first law. On the one side, there were the opera singers. At a certain point in their careers, they had difficulties attaining certain notes or pronouncing correctly. He found that their hearing displayed the same gaps - the same frequency ranges - as did their speaking voice. And then he went to work in factories where people were exposed to a very large amount of occupational noise. He was supposed to do audiometric testing on these workers, who thought that if they showed they had been damaged by the noise that their pensions would be increased. He found that false responses were coming in on the test, and that's what made him start exploring the relation between the psyche and listening. Tomatis went very deeply into it. He says very clearly that speech is a function of listening. It's the ear that controls speech, so by restoring compromised frequencies to the listening, you will restore them in the spoken voice as well.

CR: Yes, that law says, "The voice can only reproduce what the ear can distinguish". What is the Tomatis effect and how is it connected with the Tomatis method?

MR: The Tomatis effect is what we have just been speaking about and it's a fundamental aspect of the Tomatis method. The audiologists say, according to Békésy's theory, that sound comes into the pavilion of your outer ear and is directed to the ear canal. The tympanic membrane collects the sound. Three little bones in your middle ear transmit it through the stirrup, controlled by a tiny muscle. Dr. Tomatis said no! He said that the tympanic membrane does collect the sound, but the sound is transmitted to the inner ear through the bone structure. The function of the stirrup, the hammer, and the anvil is to work as shock absorbers. So if the sound is too loud, the stirrup muscle will pull back and reduce the pressure in the inner ear to prevent damage. The Tomatis method works by exercising the muscles of the middle ear. As soon as a person dons the headphones and is connected to the Electronic Ear, an ashtanga yoga, so to speak, happens with these two muscles. These are the tiniest muscles in the human body and, according to Tomatis, the most important.

CR: One of Tomatis' patented inventions is for the Electronic Ear. What is this?

MR: It's the apparatus that allows us to do our work. It's an electronic machine, which provides the possibility of getting the Tomatis effect into action. It has two channels. In the first, the ear is, as we say, at ease and in the second channel, it's awake. It's a regenerating exercise, so you may be sleeping and relaxing, but what's happening is a very solid exercise of those tiny little muscles. The machine encapsulates all of his discoveries. He worked with analogue in his day and now we have digital. Music is sent to the machine, which has different settings. We adapt the music and the settings according to the needs of the person and the program followed.

CR: How is the Electronic Ear used to facilitate learning foreign languages?

MR: You learn like a baby in the womb. Tomatis takes you, whether you do a therapeutic programme or a language programme, on a sonic journey into the womb. The human being's first introduction to language is in the womb. Tomatis found that the high frequency sounds, in

the language that the mother is speaking and that the fetus intermittently hears, give the impetus to the fetus to develop. The actual division of the zygote and its further – in particular neurological - development happen through sound. This process is replicated through the Electronic Ear. The sound is assimilated in the body - it bypasses the mind. There's a quotation by Mrs. Tomatis that I'd like to read: "To learn a foreign language, one must hear it and to know how to listen to it, that is, to be capable of enumerating it, appreciating it, analyzing it in all its parameters, its modulations, its inflections. One must be able to hear the stresses, the fading, the slackening of its sounds, the cadence of its phrases, its frequential sequences. To enter such a subtle linguistic universe, one must also enter into the psychology of the person who is invested in it, to resound to the accent of her or his soul." And that's what the Electronic Ear helps us to do. Each language has certain parameters. It has a sound picture - the frequencies of the language, the speeds at which sounds are emitted, and the time that the brain takes to prepare itself to receive sound. We program the machine with these parameters of the desired language, and this helps in language assimilation.

CR: Another area that Tomatis pioneered was the understanding of pre-natal hearing. When he started out, there were almost no studies on this. It was assumed that hearing began after the birth event. What did he mean by sonic return and sonic birth?

MR: He started with birds. He found that if an egg that contained a non-singing bird was hatched and taken care of by a singing bird, the little bird that came out would sing. So there is something to do with the relation with the mother, and somewhere that little embryo had to be listening for this to happen. Tomatis thought the same thing might happen for human fetuses. He did all kinds of research and was a pioneer in his field. He is, by the way, the inventor of the ultrasound machine. Everybody in the world uses ultrasound now. He lost his patent because you have to pay for your patent and at some point, he couldn't. Anyway, in the Tomatis programme, you go back to an intra-uterine listening. You listen like a baby to those high-frequency sounds, which made you a human being in the first place. That is called the sonic return. We do that step by step, and we manage it very delicately, based on the results of the Listening Test. It's also an interaction between the therapist and the client. With some people, we can go much quicker; with others it's very delicate. So that is the first sonic return. With the high frequencies, our resistances start to dissolve and healing happens, and when a person is ready, there is a re-integration. We re-create the process by which a baby is born, when it has to adjust from a liquid to an air environment. That is the sonic birth.

CR: In his autobiography, *The Conscious Ear*, Tomatis gives an example of sonic return and sonic birth used to treat cases of autism. Can you tell us more about that?

MR: According to Tomatis on autism, he's very clear that it's a search. Today there are lots of people who are researching the roots of autism. There are many different theories and no single answer has been found. Tomatis clearly said that each case of autism is specific and there are no generalizations to be made. Unfortunately, Tomatis has been often misunderstood and misread. He said that in autism, somewhere the desire to communicate has been affected. But he has been wrongly taken to blame the mother. That's very far from what he actually presented. He felt that in autism, one had to go back and spark the desire to listen. You go back to the very roots, painstakingly. This is why it's very important that the families also take part in the process.

CR: Why does Tomatis recommend that people – young or old - read aloud for half an hour a day?

MR: Let's say we have completed the first part of the programme. You have the sonic return and you have the sonic birth. Then you have pre-language and language. Pre-language - all babies do it - this mamamama, papapapapa. We recreate that process, and so when we come out from language into speech, we work with the audio-vocal connection. We read aloud with special headphones with settings to exercise the audio-vocal circuit. Once the programme is over, we recommend that you energize yourself through the sound you make with your own body by reading aloud, and for this, you must be in the listening posture.

CR: What is that?

MR: The listening posture is where you have your knees below your hips, your back is straight without tension, and your chin faces slightly downwards. In the inner ear, you have three semi-circular canals that are responsible for equilibrium. In this listening posture, one of those canals is parallel to the ground and one is exactly ninety degrees to the other – perpendicular. The listening posture is the best position for listening and for speech. When you do the reading technique, you energize yourself and work on this cybernetic circuit. You bring your right hand to your mouth. You get an incredible energy charge, if you do it the right way.

CR: Why does Dr. Tomatis recommend listening to Gregorian chant and to Mozart?

MR: Gregorian chant slows down the respiratory rate, so it's relaxing music, except in a few cases where people have a bad reaction to it because they associate it with a kind of Christianity that was forced on them as children. We use Gregorian chant in the Tomatis programme for calming and opening. As for Mozart, Tomatis made an immense number of spectrograms of all kinds of music. He analyzed music from all over the world and different composers, and he found that Mozart communicated to people across nationalities, and was universally accepted. And Mozart is full of the higher harmonics of sound, with lots of communication among the instruments.

CR: Mita, you have a good six years experience as a certified practitioner in Audio Psycho Phonology. You must have seen some changes in its level of acceptance and recognition. How do you see future developments?

MR: There's a long way to go. We're in the quote "proving" phase now, where increasingly Tomatis practitioners realize the need to have scientific proof. Tomatis was a great scientist. He was also an extremely intuitive and spiritual being, and it was that that animated him.

CR: An exceptional person...

MR: Yes, I remember when Tapas and I met him in hospital, just before he passed away, his aura was huge - it filled the room completely and went beyond. And the last time I visited Mrs. Tomatis, in 2007, she showed me some photos of Dr. Tomatis in incredible yogic postures, which you have to be a very advanced yogi to be able to do. I had no idea and the world doesn't know. I told her she must scan those pictures and people must know....

One reason for the scepticism about Tomatis is that people question how you can use the same thing to treat autism and developmental delay and to help a musician become a better musician. Also, Tomatis touches so many different fields, practitioners have to keep abreast in developments in a very wide variety of fields, and not all practitioners have done that. Here at the Tomatis Research Centre and the Auroville Language Lab, we are in touch with the leaders and the most dedicated Tomatis practitioners from all over the world.

CR: Thank you, Mita, for talking to us today.

Christine Rhone, 2010