

Keynote Address

*The First ASEAN Music & Creative Arts
Therapy Summit –*

From Music to Mirror Neurons, Empathy, and Peace

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For a long period of time, we have known that music has many beneficial impacts in the society and human well being. Unfortunately, there was not enough precise scientific evidence to support these. That is why for so many years, music has not been the intervention of choice in dealing with the improvement of human and social quality.

After the discovery of mirror neurons circa 1990s, together with other neuro-scientific discoveries, music has been found to have a major effect on neural plasticity, human empathy, learning and motor-sensory functions. However, we are still struggling to fuse music and the recent scientific findings.

The author would like to use this as a form of persuasion to musicians, scientists, physicians, and teachers, to join and use music as a way to improve the general humanity and well-being.

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In the ancient times, the bodies of knowledge were not separated as Science, Art or Medicine. It was just entirely known as the knowledge of life and nature. And anyone who wanted to empower themselves had to learn everything that has a direct involvement in their lives: language, farming, calculation, or even health care. On the evolution of knowledge, the bodies of knowledge were separated into distinguished disciplines; Science, Music, Mathematics, Medicine, and so on. Every discipline had its own progressions which later on, made gaps among them too. Unfortunately, those gaps took its toll on mankind's understanding of knowledge and nature holistically because there is not one discipline that can give a complete answer to the human life. The 'convergence of disciplines' is one, if not the only 'great answer' to human life in this ever changing world.

Our World Needs Empathy

Right now, our world is facing different problems. From various environmental problems such as the destruction of natural resources, proper waste disposal, nuclear energy threats, carbon emissions, to the dreaded global warming. We seem so divided by ethnic and cultural backgrounds, beliefs, religion, and sexual orientation. We foresee a "big bomb" of aged population in the near future yet we do not act on making more programs for the benefit of our elderly; people still experience discrimination (Contri, 2011), epidemic diseases, famine, children dying malnutrition and preventable diseases; the disabled not being given access to proper medical and social welfare services. We have social and political conflicts, war rages between countries and within countries (Robertson, 2010).

These are certainly not new, of course. And humans demonstrated a willingness to kill each other throughout history (www.empathysymbol.com). And it's safe to say that most of us are well aware of these issues the humanity is facing now. Each of us alone may feel helpless to do much of anything about these. Some may even feel that their negative attitudes toward others outside their group are justifiable.

Truth is, these problems cannot be solved all at once, but there is a first step we can all take, the pathway to love and understand our fellow humans, the way that may eventually lead to world peace, and that is empathy.

We know that we need close-cooperation to address humanity's issues. We know we need to empathize. But, why can't we? Why do we have a hard time empathizing? Do we understand empathy enough to carry it out?

Scholastically speaking, the lack of empathy may stem from multiple sources within the intra and interpersonal contexts (de Wied, 2009).

"Empathy is more than just awareness and concern. It is about cultural sensitivity and conflict resolution. It's about the ability to communicate effectively and understand the motivations of others. Empathy is about standing up, not standing by, uncovering what's below the surface by active listening and putting words into action" (Ashoka Changemakers). Simply put, empathy can be defined as the ability to see through the eyes of someone else (Gordon, 2007).

Most people believe that empathy is mainly just about the cognitive component. But did you know there are two kinds of empathy (Decety and Ickes, 2009)? Yes, there is *Cognitive empathy* where a person perceives what another person is thinking: “She must be *telling* herself this was a mistake.” Then, there is also what we call *Affective empathy* which is the ability to sense what another person is experiencing emotionally: “She must be *feeling* upset about this mistake.”

Of course, there’s much more to the process of empathy. But should you want to stretch your ability to feel for another person, try these tips:

- 1) Ask yourself *what must this person be thinking?* This will broaden your cognitive empathy.
- 2) Same goes for affective empathy - imagine what feelings and emotions might be stirring within another person.
- 3) If it’s hard for you to “be in another person’s shoes”, ask yourself what **YOU** might be thinking or feeling if you were in a similar situation.

We must be aware that emotions shape how we perceive ourselves, others, and the world. Thus, tapping on the affective component of empathy will give us a better understanding of others’ feelings.

There are a lot of ways to increase one’s empathy: (www.empathysymbol.com/EmpathySymbol.htm)

- Dialogues
- Literature (Story Telling)
- Theatrical Drama
- Films

Although the ways mentioned above can boost a person’s ability to empathize, and if empathizing is all about effective communication, then we are still faced with a challenge to a better understanding: language barrier. Language barrier serves a constant reminder of how different we are from each other. Ever wonder why you feel sad whenever you hear a melancholic song (Voukoski, Thompson, McIlwain, & Eerola, 2011)? Have you ever danced to pumped-up beats even if you’ve never heard the tune before? That is empathy through music taking over (Krista, 2012). Some people may underestimate the power of music but we do experience and encounter it in our everyday lives.

Music as an Effective Tool

Every known society has music. Music can be considered the most universal form of language (Cohen, 2008). It reaches even the illiterate and uneducated. It breaks the language barriers and cultural differences. It can calm the senses and heal the spirit. It can bring hope to the distressed and joy to the depressed. Music has been long identified as a universal language (Mauro, 2003). It has the ability to build

up feelings of affinity and cohesion. I want to quote these powerful words of the Cape Verde Ambassador, His Excellency, António Pedro Monteiro Lima in one of his speeches in support to using music as a powerful tool for peace (Lima, 2010):

“During war, Music brings serenity, happiness and hope. After war it brings dynamism and energy for reconstruction, galvanize juvenile minds for action and make happiness an object of desire. During peace, it brings comfort of mind, awareness on love and motivation for the future. In front of different cultures or ideologies it brings cooperativeness, understanding and create unperceived ties among people. Even in front of different languages, songs become understandable for everyone and appreciated when your mind is touch. Music has the power to comfort us, heal us and make us feel at ease during the most difficult times of our lives.”

In most parts of the world, music is still perceived as a simple form of entertainment. But recent studies show that music is much more than that. There are actually scientific bases linking music to therapeutic and holistic developments in different parts of the world (Nayak, Wheeler, Shifflet, & Agostinelli, 2000). A couple of pilot studies, projects, therapy and for trauma survivors have been done and are still ongoing around the globe (Skylstad, 2005) including South Africa, Chile, China, Germany, Lebanon, Israel, UK, and the United States. (Compendium of Music as a Natural Resource, 2010)

In terms of using music for sustainable peace, there is a project in Greece called the Music Village where they practice ethnic and social differences as creative incentives rather than obstacles; the project offers a model for social coexistence, in which the global language of music becomes the common bond. A similar program in Israel called Live Music Encounters (LME) focuses tolerance and mutual respect, and serves all schools of diversified beliefs and teachings such as Jewish, Christians and Muslims.

In the realms of the medical field, studies and interventions using music have involved trauma survivors of natural disasters, political conflicts, psychologically disturbed men, abused women, and soldiers suffering from stress, victims of terrorism, torture and political conflicts (Robertson, 2010).

For instance, In response to the terrorist attacks on the World Trade Center in New York City on September 11, 2001, the “New York City Music Therapy Relief Project” was created in which 33 professional music therapists provided direct client services in 20 locations throughout NYC, together facilitating over 7,000 music therapy interventions for children, adults, and families of the victims. The goal was to help those struggling with the aftermath of the attacks to reduce stress and cope with trauma through the focused use of music and music therapy interventions.

The Iraqi refugee population in Amman, Jordan also underwent music therapy. All clients that participated in the project were registered refugees with the Office of the United Nations High Commissioner for Refugees (UNHCR). Many clients had experienced trauma, either first-hand or second-hand and some were torture

survivors. Clients suffered from a range of issues such as sexual abuse, suicidal feelings, multiple disabilities, emotional trauma, fractured family situations, and behavioral problems. The populations treated included entire family units, children, and adults and the techniques used include instrumental and vocal improvisation, songwriting, lyrics analysis, music and imagery, music and art and music-assisted relaxation.

More and more organizations are using music as a form of therapy. One of the biggest and most universal that is focused on global crisis intervention is the World Federation of Music Therapy (WFMT); it is an international organization bringing together music therapy associations and individuals interested and active in developing and promoting music therapy globally through professional exchange, collaboration, and action. WFMT is an international body, with officers, commissioners, and regional liaisons in Africa, Argentina, Australia, Brazil, Canada, China, Finland, India, Ireland, Korea, Spain, United Arab Emirates, and the United States of America.

Being long been identified as a universal, innate language, we can say that music has no natural boundaries. It has the ability to build up feelings of affinity and cohesion. It is an essential remedy to cure souls and minds, to create harmony and put foundations for reconciliation, or simply to do things better in a time of tremendous challenges for the world and for humanity (Titulaer, 2012).

Aside from various interventions and treatments mentioned above, music is also already being used for peace-building (Urbain, 2007).

In Greece, they operate a Music Village where they create a learning community by overcoming ethnic and social differences (www.music-village.co.uk/). Israel's Live Music Encounters targets young children, teaching tolerance, social inclusion and mutual respect through music in Jewish, Muslim, and Christian schools (<http://sites.levinsky.ac.il/livemusic/>). Proving once again that music can greatly help, if not solve, humanity's greatest dilemmas.

A reading online suggests that a sustainable peace should include at least these three elements: respect and protection of the environment, social justice, and global awareness of our common humanity (www.world-of-empathy.org/).

If environmental destruction is not halted, if global warming continues unabated, if climate change becomes more and more chaotic, whatever measure of peace we have now will be obliterated. Indeed, there can be no peace without the basic human security. The same goes for social justice. People who are exploited and oppressed are bound to revolt one way or another, destroying whatever superficial stability had been reached. Global awareness of our common humanity involves a better understanding and practice of empathy. We need to realize that no matter how different the colors of our skins are, no matter what economic status we came from, no matter what educational background we have; we share a common world and a common humanity. And despite our differences in beliefs and culture,

we have an intrinsic capability to understand each other through empathy braced by the music we share.

Empathy through music can strengthen these three elements for sustainable peace. Using music as a tool of communication, the message we are trying to get across, will not just be better understood, but more importantly, better felt.

Progressions in Cognitive Neuroscience Supporting the Use of Music

The discovery of mirror neurons a decade ago and other findings in cognitive neuroscience gave us a deeper understanding in music and its effect on humans. With this knowledge, we can use music in a more specific and effective purpose especially towards medical development.

Music affects mirror neurons in our brain and brings us to the state of EMPATHY (Molnar-Szakacs & Overy, 2006; Overy & Molnar-Szakacs, 2009).

Knowing the link between mirror neurons, music and autism, there is a possibility that we may be able to treat autism by using music in the near future (Molnar-Szakacs, 2009; Oechslin et al, 2010; Wan et al, 2010; Wan & Schlaug, 2010; Wan et al, 2011).

And with the medical information showing the connection between brain reward circuit, music and depressive disorders in human, we can now use music as an intervention method for depression. We also know that brain reward circuit has linkage with drug and game addiction. And this information will serve as the next step for us to find more facts that may lead us to a new treatment modality for drug and game addiction with the use of music (Menon & Levitin, 2005).

Music is such a powerful thing, and can be used in a variety of purpose. But the most important thing is that music can build up empathy between all of us. Only EMPATHY can keep our society, our world from conflict, violence, and even war.

Being a musician, teacher, or physician who is interested in music, we are carrying a powerful peace-making instrument in our hands, why don't we use it to help humanity reach a more peaceful and sustainable future. We need close cooperation from each other. We need to share experiences, knowledge and expertise in our own disciplines to make music a tangible and acceptable tool of Peace for All.

Conclusion

The diversification of disciplines had undeniably given us benefits. But everything has its cost; we can't completely deny that so many problems emerged as result from it too. It's about time we reconsider about this rather controversial topic, and look into a different perspective. The world in the 21st century requires not only single distinguished discipline but all disciplines that can make a peaceful world for all of us. Now is the time for discipline integration. It is the time to merge Music to Medicine, to Education, and Human & Natural Science for a better quality of life.

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Appendix

What the World Needs Now Is Empathy, True Empathy. <http://www.empathysymbol.com/EmpathySymbol.htm>.

Musical Village. <http://www.musicvillage.co.uk>.

Live Music Encounters for Kindergartens, Elementary and Secondary Schools. <http://sites.levinsky.ac.il/livemusic>.

What is empathy?. <http://www.world-of-empathy.org>.