

I'd like to teach the world to sing in perfect harmony

Since ancient times people have invested significant time and effort to create music. Today people spend enormous amounts of time and money to engage with music in all sorts of ways. Music is always around us. It makes our lives complete. Everyone can express one's emotion with music and everyone is born with one instrument: a voice to sing. So why does music, and especially singing, hold such potentially enormous intrinsic value? And since singing is an innate ability, how does it affect us?

The simple explanation is that music and singing brings a unique pleasure to humans. Of course, that still leaves the question of why. And for that, neuroscience is starting to provide some answers.

Singing is primitive and tribal. Before written language emerged, critical stories were passed on with the oral tradition of song. The Hebrew Torah and the Greek myths of the Iliad and the Odyssey, were all sung long before they were first written down. When we sing, we tap into something that is not only one of the most ancient of human practices, but we also tap into the activity that modern neuroscience is showing to be profoundly healthy.

Who silenced our voices?

There was a time when everyone used to sing. We sang our stories and our dreams. We sat around salons and campfires and we celebrated our diversity and our unity. We sang at sporting games and at parties and churches and schools. We sang alone and together.

Nowadays not many of us sing. We think we can't because someone at some time has told us not to sing, because we are not good enough. We worry that we will be judged and not as good as the celebrities we idolise. We worry that people will think we are strange if we sing, or that they will not like us. Or they might think we cannot sing. That we won't fit in.

Our voices have been silenced, and it's not doing us any good. We use our voices in the shower or the car, places where no one else can hear in us and share in the unique expression of our spirits.

And yet think of those times when we see a free spirit singing and expressing themselves creatively in public. People are moved and start smiling and connecting with one another. Within each of us a light gets turned on, a light that reminds us that we can be free to be ourselves. That spark of hope that can change our own and others' lives.

A Case Study: *With One Voice*

At Creativity Australia we have developed an acclaimed choirs program called *With One Voice* which inspires people to find their voice. The organisation uses creative and inclusive programs that result in positive social and economic outcomes for individuals, organisations and communities.

The choir programs are unique. They bring together people of all ages and from all walks of life, cutting across socioeconomic, cultural, religious, generational and linguistic barriers in the pursuit of harmony. Participants are aged from 9 to 90 years and come from over 40 nations. They include migrants, the unemployed, those with disabilities and disadvantage, retirees, students, and general

citizens and workers seeking to unlock their creative potential and make a difference. The programs build bridges of understanding across all areas of society...from asylum seekers to CEOs of organisations.

The choirs provide important opportunities to develop networks for friendship, belonging and employment. Participants develop leadership potential, build self esteem, communication and creative skills. They also learn how to work as a team. When many diverse voices come together as "one voice" on a regular basis, the outcomes are transformational. This has already led to members gaining employment through improved self esteem, contacts and skills developed through the programs.

In just over four years fourteen *With One Voice* choir programs have been developed involving hundreds of participants in Victoria and NSW. These diversity choirs have in turn reached out to thousands of people with their moving stories and inspirational performances.

Finding our unique voice

When Melbourne Sings or any of our Creativity Australia *With One Voice* choirs sing "We are the World" or "That's what friends are for" I am instantly reminded of the fact that we are all one, no matter what our background, culture or religion. We each have a unique voice and long to connect more deeply to one another in this super-connected global world. We can find our own sense of self, our place, our home and our source through our voice and our songs... if we start to share understanding and build trust between us.

Singing is a powerful tool of transformation. It connects us and reminds us of diversity, unity and harmony. It can bring us together and allow us to express ourselves in ways we may have forgotten about. It enables us to listen and be heard. To share our stories and our songs with a broader audience.

Even when we sing to ourselves it can be a moment of reflection, gratitude, sadness or joy. A chance for us to communicate with ourselves and find new parts of what make us human.

So often we are afraid to be ourselves for fear of failure, rejection and dismissal. I know so many people who would love to sing with others in choir or karaoke, or even at church, but dare not do it in front of other people. Singing is indeed a lost art and we need to teach the whole world to sing again.

The right brain and singing

"The intuitive mind is a sacred gift. The rational mind is a faithful servant. We have created a society that honours the servant and has forgotten the gift."

- Albert Einstein

One of the other great benefits of singing is that it helps us tap into the right brain. The right hemisphere of our brain is in charge of our imagination, sleep (dreams), memory, intuition and all of our creative functions. We absorb with the left side and create with our right side. Our right brain enables possibilities and connects us to everything that is. The brain is like battery - the right side

charges it and the left side uses the energy and empties it. Our goal is always keep our mental battery charged.

85% of the time we function using our left brain and this hemisphere functions like a sequential receiver and processor. We make sense of things, think of sequences, analyze language and meaning, interpret information and communication and absorb new facts from all around us. Although these functions are necessary to our life, the left side of our brain has its limits and uses pressure to signal that we need to let go and switch to using our right brain.

Happiness and connection to others depends a lot on which side of the brain we use. If you feel under pressure, your brain is telling you that you have been using your left brain to its maximum capacity.

In this highly complex world we are overloaded with too much information...too much analysis, thinking and talking. Our brain reaches pressure point too often and we suffer increased anxiety, heartbeat and cold sweat. When we are under pressure, the body releases adrenaline and cortisol, making it harder for us to fall asleep or relax. When facing a stressful situation, these hormones block our thinking and prevent us from finding even simple solutions.

The best way to change the balance and turn off the warning signs is to use the right brain more. Laughing, dancing, listening to music, singing, doing art, swimming in the ocean, walking in nature and playing with animals can make a huge shift in our level of stress.

The use of the right brain releases endorphins, making us feel good. Endorphins are "feel good" chemicals that trigger fun, enjoyment, happiness and relaxation. These chemicals also fight illness very well, help us boost our immune system and handle pain better.

We consistently see and hear of people who discover singing and immediately feel better: conquering anxiety and depression, chronic physical illness and so on.

And to top it off, singing makes you smarter. Vanderbilt University psychologists have found that professionally trained musicians more effectively use a creative technique called divergent thinking. And much international research on singing has shown that singing changes our brain chemistry and the way we think.

The Science of Singing

Researchers can measure brain function in real time with magnetic imaging technology. New findings about the role of neurotransmitters, neural networks and brain systems are accelerating at an amazing rate, ushering in a new era of understanding about how we think.

Daniel Levitin, Professor of Neurochemistry at McGill University has written two books: "This is Your Brain on Music" and "The World in Six Songs. Levitin previously worked as a music producer, producing numerous gold records. His insights into the effects of singing on the brain are very informative, and have confirmed what we observe through our *With One Voice* programs: people

who sing are more likely to be happy. And when they are happy, they learn more, connect better and give more.

Levitin sites a number of studies that show that singing elevates the levels of neurotransmitters which are associated with pleasure and wellbeing. In one example, people's levels of oxytocin, the transmitter associated with pleasure, love and bonding, were measured before and after singing sessions. The levels increased significantly for both amateur and professional singers. Another German study in the Journal of Behavioural Medicine showed that singing with others leads to far greater positive affect in mood and increases the levels of secretory immunoglobulin A (S-IgA), which is helpful to the immune system.

Other international research continues to illustrate the benefits of singing for a range of purposes – from healing those with strokes and other neurological disorders, speech abnormalities and depression to enhancing learning, language and other skills.

Indeed, it is known that long-term music making (and especially singing) can induce plastic changes in the brain (e.g. Gaser & Schlaug, 2003; Kleber, Veit, Birbaumer, Gruzeliier, & Lotze, 2009; Schlaug, 2001). There are numerous examples of pronounced structural difference in the size of a right hemispheric fibre tract that connects auditory with motor regions (the arcuate fasciculus) in a professional singer compared to a healthy control participant who may only occasionally sing.

Music making activities (and, in particular, singing) have also been shown to facilitate the establishment of alternative neural pathways, which could have the ability to circumvent dysfunctional brain regions caused by focal lesions and neurodevelopmental/neurodegenerative disorders.

So why does our brain shower us with positive feelings after singing? Levitin makes the case that our brains developed along with singing and music as a survival mechanism. Before there were governments or nations, tribes and groups used songs and dance to build loyalty to the group, transmit vital information, and ward off enemies. Those who sang well survived.

The benefits are endless

Singing can help us to break free of our self-limiting beliefs and find a new sense of wellbeing, hope and joy. Why not try actively starting to sing whenever you feel like it: at the shops, in the public toilets, in the carpark and at the gym in the showers? You might just make someone's day! And who knows perhaps they will even sing along with you and be reminded of their love of singing.

Singing is not about being a star or knowing how to do it well. It's about enjoying the gift of our voices, our music and our songs and sharing them with others. It's about passion, inspiration and spirit. About unlocking parts of yourself which are longing to come out to play and helping inspire others to do the same. And the more you do it the better you will get. We were born to sing.

So if you love to sing and haven't found your voice yet, now is the time. Life is too short. What are you waiting for?

Tania de Jong AM is a leading Australian soprano, social entrepreneur, speaker and expert on leadership, creativity and innovation. She founded Creativity Australia and Creative Universe and works with diverse communities through the 'With One Voice' choir social inclusion programs. Tania performs internationally with her group Pot-Pourri touring overseas on over 40 occasions and releasing 7 CDs. She is Founder of MTA Entertainment & Events and Creative Innovation Global presenting the Ci2010-Ci2013 conferences.

Tania has a Bachelor of Law (Honours) from the University of Melbourne and is a graduate of VCA in Opera/Voice. She was appointed a Member of the Order of Australia in June 2008 for service to the Arts as a performer and entrepreneur and through the establishment and development of music and arts enrichment programs for schools and communities.

Her numerous awards include Ernst and Young Australian Social Entrepreneur of the Year as Founder of The Song Room, Churchill Fellowship, Brainlink Woman of Achievement and she was inducted into the Entrepreneurs Hall of Fame at Swinburne University.

(Trivia: She attended college in the USA on a tennis scholarship and her grandmother Slawa Duldig invented the first foldable umbrella in Vienna in 1929.)

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