

The Eighth Wonder: Music and Its Effects on People

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One cannot deny the fact that music affects people. As Ludwig Van Beethoven once said, “Music can change the world.” Music changes the world in many diverse ways. From being played to calm people for surgery, to pumping people up for a big game, music can even change people’s lives. Music is evocative of emotion. It brings up in people what nothing else has the power to do; people cannot help but feel their emotions when listening to music that touches them. There are some kinds of music that don’t touch some, but there is rarely a person who is not touched by some style of music (Riley 36).

There is no doubt of the power of music. When people listen to music actively rather than passively, it is processed in the same area of the brain as language is. So in a way, music is a language, and the way that language is expressed can affect the body, mind, and spiritual feelings. Some types of music produce feelings of sadness, happiness, madness, the want to dance, and other emotions.

Music is becoming the common tongue of today. People spend more money, time, and energy on music. Most of the well known people are the singers and vocalists. The world is inherently musical.

In Don Campbell's book *The Mozart Effect* he says, "Music speaks to everyone and to every species. Birds make it, snakes are charmed by it, and whales and dolphins serenade one another with it" (Campbell 10).

People in the Stone Age had music, the ancient Egyptians thought that their gods gave them music so they could heal and purify their souls and the ancient Greeks connected music with the power to heal the body. Like the Greeks, therapists today use music to rehabilitate people and to ease their minds. They also have the ability to use music to get the desired movements out of patients. For instance, if a patient has problems opening and closing their hands, a therapist will try to get that individual

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interested in playing instruments, like the guitar. Another example is if a surgeon thinks that it would be better for a patient not to have an anesthetic injected during surgery, the surgeon will have a therapist select comforting music to be played into the subject's ears to put them into a calm trance. (*The Fourth Essential of Life-The Physical Effects of Music.*)

In *The Mozart Effect*, Don Campbell shares an experience he had with the power of music. Campbell had a blood clot that had formed because of a hemorrhage in his skull. The doctor had given him three options when he found out about the clot. One was to have an operation as soon as possible, with no guarantees it would work. The clot was positioned behind so much bone that the surgery would involve removing a third of his skull on the right side. The second option was to stay at the hospital for six or eight weeks to be monitored hourly. The third was simply to wait for a few days and see what would transpire. He felt that there was a good chance that his body, in its own natural way, knew how to heal itself. So he went with the third option.

When he was at home he began to hum. "Intuitively I knew I had to be very careful and not generate too powerful a sound, lest the blood clot disengage from the walls of the artery and bring about a stroke... You may have seen a soprano shatter a crystal glass by merely holding a high note. I needed to use tone to gently massage away the blood clot from within: otherwise, I might cause it to be abruptly-and fatally-released into the bloodstream." (Campbell 7)

He also did what his friend Jean suggested some years back. She asked him what images he could sense in that part of his head. He first responded water but she immediately told

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him, "That is not a correct image. It might create a stroke. See if you can exhale and go deeper.

Campbell then concentrated harder. He then sensed a new and unusual sound, only soundless. It was a small vibration in his ears, and then a warm hand that he said passed through his body. Then a picture appeared in his head; sitting next to a window on a

wooden chair with lace curtains blowing lightly from the breeze of the ocean. The breeze and the curtain very gently brushed his head at the right temple.

Three weeks later, he went back to the doctor. The results of the tests came back saying that the clot had decreased from being over an inch to less than an eighth of an inch. Usually it takes four to five months for that type of shrinkage so of course, the doctor was astounded. The greatest danger was gone.

Campbell went on to say, "The doctor was intrigued by my spontaneous remission but responded to my account of using sound to heal with the comment, 'We know so little of this kind of medical miracle'"(Campbell 9).

People respond to music in several different ways, be it a health change, a mood change, or a physical change. The brain connects the slower and softer pieces of music to slow and fluid motions. The faster and louder the music is, the more likely the brain will connect it with fast movements. Only the right side of the brain is connecting these movements with these different types of music.

Attracting the brain's attention with pleasurable music will induce the patient's brain to produce serotonin, which causes pleasure, and melatonin, which affects sleep. This is the main reason as to why patients will either react with body movements to music, or will fall into calm trance-like states when they undergo surgery. (*The Fourth Essential of Life-The Physical Effects of Music*)

Music also has an effect on memory and learning. Activities which engage both sides of the brain at the same time, such as playing an instrument or singing causes the

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brain to be more capable of processing information. (O'Donnell 10)

As some students were doing homework, background music was perceived as having a slightly enhancing effect on performance on paper-and-pencil assignments. Two teachers wanted to see if background music had an effect on the on-task-performance on their fifth grade science students. They reported the observations of on-task-performance (OTP) of children in the classroom over 42 class sessions, with data recorded every three minutes (10 times) per session.

The results showed that students were more on task with background music. All there was was the constant music quietly playing so there were no distractions. The music was also relaxing and made the children less tense and more able focus (Levy).

Music can also speed up the learning process. A Bulgarian psychologist designed a way to teach foreign languages in a fraction of the normal learning time. He used classical pieces from the baroque period. These pieces have a 60 beats per minute pattern. He proved that foreign languages can be learned with 85-100% efficiency in only thirty days by using these baroque pieces (O'Donnell).

Playing the music is a way to develop good memory. When one remembers music, they recall huge amounts of technical data about that music in their brain: it's possible to play back a complete mental recording of it with a very high accuracy. Musicians are

trained to be very adept at using these skills, and they develop a stronger sensitivity than most to pitches, accents, and phrasing that manes when they recall a piece of music, they can focus on individual instruments and even sounds of their mental recordings (Sheppard 75).

Phillip Sheppard tells in his book *Music Makes Your Child Smarter*:

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“In 2001, I was working with players from the Academy of St. Martin in the Fields. We spend a week writing a mini-opera with a group of young special-needs students at a London School. One of the children, a nineyear-old autistic child, was uncommunicative at school – but he appeared to be stimulated by what was going on. By the end of the week-long project, he was able to respond to questions if they were sung to him. To everyone’s surprise, he was able to respond by singing back. He went on to take a pivotal role in the final performance. This was a dramatic display of just how powerfully music can act as a catalyst for communication. As well as developing our linguistic coordination, it also appears that music is able to unlock elements of our intellect where language alone sometimes fails” (Sheppard 79).

Music affects the amplitude and frequency of brain waves and the body. Classical music from the Baroque period causes the heartbeat and the pulse rate to relax to the beat of the music. As the body becomes relaxed and alert, the mind is able to concentrate more easily. Music also affects breathing rate and electrical resistance of the skin. It has been observed to cause the pupils to dilate, increase blood pressure, and increase the heart rate (O’Donnell 17).

Rhythm is another important aspect of music to study when looking at responses to music. An autistic boy couldn’t tie his shoes. He learned how on the second try when the task of tying his shoes was put to a song. The rhythm helped organize his physical movements in time (O’Donnell).

One of the first sensory experiences people have, even before birth, is the rushing sound of a mother’s heartbeat. This is a rhythmic sound

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everyone carries all throughout life, imitating and transforming as they grow and change. Some families choose to let newborns listen to recordings that stimulate those rhythmic sounds which makes the transition from womb to world less traumatic.

The slow steady defined sounds are calming and soothing. Mothers even use slow, steady motions to help a child go to sleep. Even the mother gets relaxed. Lullabies were created to calm and relax a child, and to prepare for a restful sleep (Sale 6).

Even before the child is born it’s useful to introduce the child to music. The unborn baby is exposed to a huge range of sounds and beatings in the womb. The amniotic fluid surrounding the baby transfers the mother’s bodily sounds extremely well. The heartbeats, the sound of the blood running through, the breathing, the tone of the breaths, there is a lot of sound in the womb.

For an unborn child, one sound rules them all: the sound of their mother's voice. To a baby the mother's voice is comforting, interesting, stimulating, and a crucial future reference point.

The rhythm of everything is comforting also. Rhythm is honestly everywhere. Rhythm is the single most influential musical element. Everything from the cycle of our brain waves to the pumping of our heart all work in rhythms. Humans are a mass of cycles piled one on top of another. Clearly organized to both generate and respond to rhythmic phenomena. Rhythm and tempo have a strong physiological influence on the body.

Melkinov wrote that a certain composition of Domenico Modugno, which has a fast tempo, raised the heart rate of the listeners by 4.7 beats per minute. It is a commonly acknowledged fact that many people listen to music, especially rock and its related styles, for the "beat"; in other words, they listen to it for its rhythm and tempo.

A good example of the effect of tempo on a person is when a slow song is played a person sways back and

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forth, but when a fast song is played, that same person wants to jump up and down (Severance).

Here is an example from John Rink's experience that he talked about in his book *An Introduction to Music Studies*. He was looking at a score on a train, trying to hear the music in his "mind's ear" – but his aural imagination could not grasp a harmonically complex passage within the piece. He then tried "playing" the passage on the table in front of him, and found that through the simulated physical enactment of the music – the moving of his fingers as if on a keyboard – he suddenly could hear the sounds in his mind. This breakthrough was attributable to years of training as a pianist, which had created a deep-seated link between physical motion and sound – in this case, between an imaginary performance and imagined sounds. (J.P.E. Harper-Scott and Jim Samson 44)

There are certain moods to music as well. Preschoolers and infants as young as eight months are able to reliably discriminate the difference between "happy" and "sad" music.

Because of the power music has to create a desired feeling, when adolescents want to be in a certain mood, are lonely, or when they seek distraction from their troubles, music tends to be the medium of choice to accomplish the task.

Many heavy metal fans say they listen to angry music when they are angry. In one study, a heavy metal fan said he sought out "full-blown thrashing metal" when he was "mad at the world."

Most college students reported listening to music to "make me feel less alone when I am by myself." It is usually the sound of the music that attracts, not the lyrics (Roberts).

The music over the years has changed and become more aggressive and edgy. Articles have been written with the headlines like "Hard Rock Music Creates Killer Mice!" based on high school science fair experiments in which groups of mice were

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trained to run mazes. Groups of mice listened to classical music, hard rock, or no music. The classical mice became faster in running the maze, whereas the hard rock mice became slower. The student performing the study stated, "I had to cut my project short because all the hard rock mice killed each other...none of the classical mice did that" (Roberts).

This experiment is a lot like an experiment a subway did. They decided to play classical music instead of the normal radio station that is usually playing and when they did, passengers were more pleasant, and the crime rate was lower (Roberts).

Another experiment done was with plants. This experiment had different varieties of music playing for the plants. Hard rock had the worst effect of the four (Patrick).

A high uncomfortable pitch or something disharmonic can actually be bad for a person. One study that compared two different types of music demonstrated that some music can have a negative impact upon the cardiovascular system. For example with Bruckner's Ninth Symphony, which is considered disharmonic, while Bach's Brandenburg Concerto Number Three, which is harmonic, had a positive effect on the listener.

Torres and Torres did a study on mice with harmonic music, and disharmonic music and proved that disharmonic music can cause brain nerve damage and behavior degradation.

Several forms of disharmonic music, rock being one of them, seem to be addictive. In an interview, an avid popular music listener, said that he is depressed if he goes too long without his preferred style of music.

When some people have changed from disharmonic music to harmonic music, they report feeling better overall after initial withdrawal symptoms (Severance).

It is proven that music can make a person feel better. Music therapy is a new intervention that uses music and musical activities for the purposes of altering behavior

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and enhancing the everyday existence of people with various types of emotional disturbance.

People have been using forms of music therapy since the earliest recorded history. Hebrews and Greeks treated physical and mental illness with the playing of music. Zenocrates, Sarpander, and Arien, all of whom were Greeks, were the first to use music therapy as a regular practice. They used a harp to ease the outbursts of people with mental illnesses (Kirkweg).

There are music therapists today who use music to help people in various ways. Nursing homes often hire music therapists. People are likely to feel depressed and grief-stricken when moved away from their homes and families into a facility with strangers taking care of them. Music therapy helps to relieve grief and improve emotions and feelings.

Therapists can also help residents that suffer from Alzheimer's and dementia, because studies have found that music can improve their memory. This improvement is partly due to the effect that music has on increasing the release of certain hormones in the body. People with Alzheimer's are greatly improved when they listened to Mozart. They recalled shapes and patterns better.

Music therapy is also used in hospice houses to comfort the people who are dying. They are holding anxiety and fear and the music helps relieve the stress (Kirkweg).

Music therapists do a lot. They assess emotional well-being, physical health, social functioning, communication abilities, and cognitive skills through musical responses. They also design music sessions for individuals and groups based on their needs using music improvisation, receptive music listening, song writing, lyric discussion, music and imagery, music performance, and learning through music. Having this job

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would be interesting. There's a chance to see something as simple as music change someone's life. (Palmer).

Here is an example where music has changed someone's life. Trevor Gibbons had had a stroke and fallen from a ladder. He damaged his spine and his vocal chords and had difficulty talking. He was very lonely in his hospital room. He found an outlet through listening to church music. His music therapist encouraged him in this area.

Soon, Trevor began singing and writing his own music. During one improvisation he was sitting at the window watching all the cars go by, wondering why he felt so empty inside, which became the first words to his very first song. He says later, "Music is my inspiration, my escape from sadness and loneliness and pain. When I start to sing it opens up my mind and I think there's nothing I can't do" (*Music Has Power*).

There are many success stories with music therapy out there. Holly Miller is a musical therapist and helps many people. "I have children who can sing to me what they can't say. A lot of children I work with have autism. And a common feature of autism is difficulty with language and communication. Language and singing occupy two different parts of the brain, although some of it overlaps. But it gives me a different inroad to help them learn language. And these kids really learn how to speak using music." (Miller).

People are looking for techniques and programs that can be used to maintain their health, stabilize their emotions, and relieve common ailments. They are tired of the invasive cruel methods that are supposed to help but the remedy is worse than the disease. The methods are also costly.

Don Campbell says that you don't have to look very far for

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a good remedy, "Your own inner sound system-your ears, voice, and choice of music or self generated sounds- is the most powerful healing medium available" (Campbell 11).

This combination of sound, vibration, and rhythm has more power than most people realize: powers such as relaxing, healing, and inspiring people. It is a miracle worker and affects almost everything around us.

Things that no one has thought possible have happened because of music. The effects of music are shown by the geniuses of the past and present, and through the people whose lives are helped by music. Music is in its own way a miracle remedy.

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