

The Healing Power of Sound as Meditation

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As I witnessed the droning sounds of Tarek Atoui's hybrid sculpture performance *Organ Within* at the Solomon R. Guggenheim Museum in New York, I noticed a family of four—two young parents with two young children—sitting quietly on the floor pillows of the rotunda. The younger child, no older than two or three years old, was preternaturally calm and focused in his mother's lap. He looked on, captivated and mesmerized, as the musicians walked from station to station. The performers adjusted metal tubes, scattered balls, and bells onto a thin vibrating membrane, and reached inside different compartments of the modular instrument.



Tarek Atoui's *Organ Within* at the Guggenheim Museum, New York

Source: M Wei

Atoui's work understands sound as more than simply an experience of hearing and explores sound as a tactile and visual experience. As I slowly climbed the sloping levels of the rotunda noticing the acoustic changes, I was struck by another way to experience this piece—as a mindful, walking sound meditation.



In *How Music Works*, David Byrne describes the intimate relationship between architecture and music whose composition and experience is shaped by the space in which it is performed. Musicians write for the spaces in which they perform. The site-specific performance within the architecture of the spiral rotunda created a uniquely meditative experience of sound.

Sound has an ancient kinship with meditation and healing. Sound healing has ancient roots in cultures all over the world, including Australian aboriginal tribes who used the didgeridoo as a sound healing instrument for over 40,000 years to ancient such as Tibetan or Himalayan singing bowl spiritual ceremonies. Sound meditation is a form of focused awareness type of meditation. One kind that has become more popular is called “sound baths,” which uses

Tibetan singing bowls, quartz bowls, and bells to guide the listener. These practices highlight themes of how the experience of sound manifests not only through hearing but through tactile physical vibrations and frequencies.

Science is still catching up to understanding how sound heals, but the current research is promising. A review of 400 published scientific articles on music as medicine found strong evidence that music has mental and physical health benefits in improving mood and reducing stress. In fact, rhythm in particular (over melody) can provide physical pain relief.

One study published in the *Journal of Evidence-Based Integrative Medicine* found that an hourlong sound meditation helped people reduce tension, anger, fatigue, anxiety, and depression while increasing a sense of spiritual well-being. The sound meditation used a range of Tibetan singing bowls, crystal singing bowls, gongs, Ting-shas (tiny cymbals), dorges (bells), didgeridoos, and other small bells. The main instrument used was the singing bowls for 95% of the session. People who had never done sound meditation experienced significantly less tension and anxiety afterward, as well as those who had done it before.

There are many different theories that attempt to explain why sound experiences can be linked with deep relaxation and physical pain relief.

One theory is that sound works through the vibrational tactile effects on the whole body. Sound could stimulate touch fibers that affect pain perception. One study of people with fibromyalgia found that ten treatments (twice per week for five weeks) of low-frequency sound stimulation improved sleep and decreased pain, allowing nearly three-fourths of participants to reduce pain medication.

Sound-based vibration treatment has been shown to help people with pain from arthritis, menstrual pain, postoperative pain, knee replacement pain. Sound-based treatment has even been found to improve mobility, reduce muscle pain and stiffness, increase blood circulation, and lower blood pressure.

Another theory on the benefits of sound rests on the concept of “binaural beats” or “brain entrainment” which hypothesizes that listening to certain frequencies can synchronize and change one's brainwaves.

Electrical activity in the brain is displayed in the form of brainwaves, or rhythmic, repetitive frequencies. These rhythms can be measured using a device called electroencephalogram (EEG).

There are four categories of brainwaves, which range from frequencies that occur during the most activity (beta) to the least activity (delta). Different states of alertness and consciousness in different parts of the brain generate varying frequencies of brainwaves.

- Beta waves are the fastest type of brainwave and occur when the brain is active and engaged mentally.

- Alpha waves occur when the brain is in a state of non-arousal, such as when a person has finished a task and is resting or when one meditates.
- Theta brainwaves are associated with daydreaming and rapid eye movement (REM) dreaming phase of sleep. Theta brainwaves occur when you are in a state like driving on the freeway or are running for a long time. This kind of state often is associated with times when ideas and creativity flow.
- Delta brainwaves are the slowest and associated with deep dreamless sleep.

The premise of binaural beats is that the brain synchronizes its brainwave frequency to the difference in hertz between tones played in each ear, which, depending on the frequency, can lead one to states of deep relaxation associated with beta waves or meditative trance-like theta waves.

Researchers are still trying to determine the mechanism of the healing benefits of sound, but sound in the form of vibrational therapy or meditation offers potential therapeutic benefits with low to minimal side effects. Atoui's piece shows us the joy of being in the active presence of sound, perceived in its full totality, visually, tactilely, and acoustically.