-

Music Therapy as Mindfulness and Metaphor

Christopher Eriksson, PhD
christophereriksson3@hotmail.com

Go directly to the text of the paper

Abstract

In this paper, mindfulness and metaphors in psychotherapy with their ability to alter the brain and regulate emotion are reviewed, along with music that shapes brain structure and function with its ability to awaken musical memory in seniors with dementia. The mathematical principles of musical harmony and rhythm are seen as part of nature's laws, hard-wired into the human brain as internal sounding boards of neural oscillators, referred to by William Shakespeare, Albert Einstein, and others as the "music of the spheres." Adlerian psychology's "lifestyle"—the characteristic pattern of how an individual acts, thinks, and perceives—is viewed as a theme in a musical melody following Arthur Schopenhauer's ideas. Consistent with modern neuroscience, it is theorized that listening to music and its rhythms reshapes this recurring private logic into its feeling-toned essence that can awaken the musical memory of self in seniors with dementia. This is one of many examples of how music has been used to help heal listeners throughout the ages.

Keywords: music, rhythm, mindfulness, metaphor, dementia, Adlerian Psychology, neuroscience, Shakespeare, Schopenhauer, Cognitive Diffusion Therapy, neuroplasticity, music therapy, emotional resonance, the "Mozart Effect"

La musicothérapie en tant que pleine conscience et métaphore

Résumé

Dans cet article sont examinées la pleine conscience et les métaphores en psychothérapie, avec leur capacité à modifier le cerveau et à réguler les émotions, ainsi que la musique qui façonne la structure et la fonction du cerveau avec sa capacité à éveiller la mémoire musicale chez des personnes âgées atteintes de démence sénile. Les principes mathématiques de l'harmonie et du rythme sont considérés comme faisant partie des lois de la nature, bien ancrées dans le cerveau humain en tant que caisses de résonance internes des oscillateurs neuronaux, que William Shakespeare, Albert Einstein et d'autres ont nommé « musique des sphères ». Le « style de vie » de la psychologie adlérienne - le modèle caractéristique de la façon dont un individu agit, pense et perçoit - est considéré ici comme un thème dans une mélodie musicale, en accord avec la pensée d'Arthur Schopenhauer. Comme l'énoncent les neurosciences modernes, la théorie veut que l'écoute de la musique et de ses rythmes remodèle cette logique privée récurrente pour en faire l'essence d'un sentiment qui peut réveiller la mémoire musicale de soi chez les personnes âgées atteintes de démence. C'est l'un des nombreux exemples de la façon dont la musique a été utilisée¸ à travers les âges, comme aide à la guérison.

-

Mots-clés : musique, rythme, pleine conscience, métaphore, démence, psychologie adlérienne, neuroscience, Shakespeare, Schopenhauer, thérapie par diffusion cognitive, neuroplasticité, musicothérapie, résonance émotionnelle, « effet Mozart ».

La Musicoterapia como Atención Plena y Metáfora

Resumen

En este artículo se analizan la atención plena y las metáforas en la psicoterapia y su capacidad para alterar el cerebro y regular las emociones, junto con la música que moldea la estructura y el funcionamiento del cerebro y su capacidad para despertar la memoria musical en personas mayores con demencia. Los principios matemáticos de la armonía y el ritmo musicales se consideran parte de las leyes de la naturaleza, incorporadas al cerebro humano como cajas de resonancia internas de osciladores neuronales, a las que William Shakespeare, Albert Einstein y otros se refieren como la "música de las esferas". El "estilo de vida" de la psicología Adleriana (el patrón característico de cómo actúa, piensa y percibe un individuo) se considera un tema en una melodía musical siguiendo las ideas de Arthur Schopenhauer. Consistente con la neurociencia moderna, se ha planteado la teoría de que escuchar música y sus ritmos transforma esta lógica privada recurrente en su esencia emocional que puede despertar la memoria musical del yo en personas mayores con demencia. Este es uno de los muchos ejemplos de cómo se ha utilizado la música a través de los tiempos para ayudar a sanar a quienes la escuchan.

Palabras clave: música, ritmo, atención plena, metáfora, demencia, Psicología Adleriana, neurociencia, Shakespeare, Schopenhauer, terapia de difusión cognitiva, neuroplasticidad, musicoterapia, resonancia emocional, el “efecto Mozart”

Musicoterapia como Atenção Plena e Metáfora

Resumo

Neste artigo, são analisadas a atenção plena e as metáforas em psicoterapia, com sua capacidade de alterar o cérebro e regular a emoção, juntamente com a música, que molda a estrutura e a função do cérebro com sua capacidade de despertar a memória musical em idosos com demência. Os princípios matemáticos da harmonia musical e do ritmo são vistos como parte das leis da natureza, conectados ao cérebro humano como caixas de ressonância internas de osciladores neurais, referidos por William Shakespeare, Albert Einstein e outros como a “música das esferas”. O “estilo de vida” da psicologia Adleriana - o padrão característico de como um indivíduo age, pensa e percebe - é visto como um tema em uma melodia musical, seguindo as ideias de Arthur Schopenhauer. De modo consistente com a neurociência moderna, teoriza-se que ouvir música e seus ritmos remodela essa lógica privada recorrente em sua essência emocional, podendo despertar a memória musical de si mesmo em idosos com demência. Este é um dos muitos exemplos de como a música tem sido usada, ao longo dos tempos, para ajudar a curar quem a ouve.

-

Palavras-chave: música, ritmo, atenção plena, metáfora, demência, Psicologia Adleriana, neurociência, Shakespeare, Schopenhauer, Terapia de Difusão Cognitiva, neuroplasticidade, musicoterapia, ressonância emocional, “Efeito Mozart”

Musiktherapie gleichwie Achtsamkeit und Metapher

Zusammenfassung

In diesem Beitrag wird überprüft wie in der Psychotherapie Achtsamkeit und Metapher, die das Gehirn umwandeln und Emotionen regulieren können, zusammen mit Musik, die Gehirnstrukturen zu gestalten vermögen und somit bei dementen Senioren die Fähigkeit erwecken können, um sich Musik zu erinnern. Die mathematischen Prinzipien von Harmonie und Rhythmus werden als ein Teil der Naturgesetze betrachtet, die fest im menschlichen Gehirn integriert sind, ähnlich wie ein interner Resonanzboden für neurale Oszillatoren. William Shakespeare, Einstein und andere nennen diese Musik „Sphärenmusik“. Die Individualpsychologie von Adler – nl. das typische Muster für individuelles Handeln, Denken und Wahrnehmen – wird gemäß Arthur Schopenhauers Ideen als Thema eines Musikstücks betrachtet.

So kann man, im Einklang mit den modernen Wissenschaften, die Theorie in Betracht nehmen, dass Musikstücke und ihre Rhythmen die persönliche Logik in einer gemütsbetonten Essenz umwandeln können, die das musikalische Gedächtnis des Ichs bei Senioren mit Demenz erweckt. Dies ist eines von vielen Beispielen, wie über die Jahren Musik angewandt wurde mit dem Ziel, die Hörer heilend zu helfen.

Schlüsselworte: Musik, Rhythmus, Achtsamkeit, Metapher, Demenz, Psychologie von Adler, Neurowissenschaft, Shakespeare, Schopenhauer, kognitive Diffusionstherapie, Neuroplastizität, Musiktherapie, emotionale Resonanz, das „Mozart Effekt“

An Introduction to Mindfulness and Music Therapy

Mindfulness is a process of self-enquiry in which imagery helps anchor one’s understanding of current circumstances (Graham and Lewis 2020).

It is the practice of cultivating awareness of thoughts and feelings while remaining focused in the present moment. Common mindfulness techniques include meditation, breathwork, and other intentional habits that promote non-judgment and conscious observation of one’s thoughts and feelings.

A recent meta-analysis has provided evidence for the effectiveness of mindfulness-based initiatives (MBIs) in promoting athletic performance, mindfulness level, and mindfulness-related psychological components among athletes (Yan Wang et al. 2023).

-

An example of mindfulness in sports is the play of great tennis players on the court. They may have lost several previous points, but intentionally and purposefully they refocus their attitude and awareness in the new moment, requiring themselves to let go of their previous play with a new winning image in mind. Their awareness and then action grounded in the body and on the court produces a new winning shot.

Mindfulness techniques have been shown to have a positive impact on mental health and wellness and can be practiced in individual and group counselling (Brown and Ryan 2003; Ruiz-Fernandez et al. 2020; Hick and Bien 2010; Trautwein et al. 2016).

Music therapy is likewise used to treat a range of medical conditions, including rehabilitation after stroke, and it can also be facilitated in groups or individually. It is used to improve mental health and social integration, including the neurologically impaired such as those seniors with dementia as recently reported in a Canadian retirement home (Wheeler 2015; Eriksson 2017, 2024).

Mindfulness has been defined by some in psychotherapy as: "the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally. Its goal in therapy is to cultivate focus and attention on the body and mind as it is, from moment to moment, without judgement, to help alleviate physical and psychological pain" (Bluvshtein et al. 2021, 413-415).

Bluvshtein is describing here mindfulness in traditional psychotherapy where no music is involved. But the same words above could be used for the awareness developed in "the music-centred expressive arts therapy," described below by Margareta Wärja in *Music Therapy Handbook* (Wheeler 2015, 246-251):

> It is essential to be aware of the body when working with existential psychotherapy through the arts. Clients are encouraged to be aware of bodily sensations, the breath, and the grounding of the body. The body holds memories, assumptions, and stories of the past. An experience must be lived in the moment with feelings and actions.

This description of the body-mind connection indicates that music therapy may be viewed as a form of mindfulness. Neurologist Oliver Sacks (2007, 148) said that perception is never purely in the present since it must draw on the experience of the past. He cited biologist Gerald Edelman as supporting this idea, when Edelman said: "Every act of perception is to some degree an act of creation, and every act of memory is to some degree an act of imagination."

Symbol, Metaphor, and Image-Making

The human psyche is recognized for having an active image-making propensity to clothe even abstract ideas, relationships, and situations. A light bulb turning on, a lightning strike, a flash of brilliance are all common images used to convey having an inspiring idea. The subconscious mind which makes up by far most of the human psyche communicates largely through symbols and imagery. This stands out in Jungian psychology where symbols have been described as metaphors for the eternal in the forms of the transient, the two being thrown together and fused into a unity of meaning, a symbol or metaphor:

-

> The symbol or metaphor awakens intimations, speech can only explain . . . . The symbol strikes its roots in the most secret depths of the soul, language skims over the surface of the understanding like a soft breeze. . . . Words make the infinite finite, symbols and metaphors carry the mind beyond the finite world of becoming, into the realm of infinite being. . . . In a sense, the symbol can make even the divine visible. (Jacobi 1959, 776)

The use of metaphors to expand awareness and convey the reader towards a profound state of harmony is beautifully illustrated in William Shakespeare's *The Merchant of Venice*, Act 5, Scene 1, in a dialogue between Jessica and Lorenzo in which Lorenzo hints at the concept of "the music of the spheres," an idea regarding internal harmony that was popular in Shakespeare's era:

> How sweet the moonlight sleeps upon this bank!
> Here will we sit and let the sounds of music
> Creep in our ears; soft stillness and the night
> Become the touches of sweet harmony.
> Sit, Jessica. Look how the floor of heaven
> Is thick inlaid with patines of bright gold:
> There's not the smallest orb which thou behold'st
> But in his motion like an angel sings,
> Still quiring to the young-eyed cherubins;
> Such harmony is in immortal souls;
> But whilst this muddy vesture of decay
> Doth grossly close it in, we cannot hear it.

Marina Bluvshtein (2021) describes how to foster this awareness of the present moment using metaphors, figures of speech, phrases, or images denoting one kind of object or idea in place of another to suggest a likeness or analogy between them. The word *metaphor* comes from the Greek word *metapherein* meaning "to carry" or "transfer between places or settings" (Krout 2015, 406). Bluyshtein explains what is called Cognitive Diffusion Therapy, a form of mindfulness this way: "If we imagine our thoughts resting on leaves that are floating through a stream, this visual imagery can externalize any negative thoughts, beliefs, and constructs of self, making it easier to observe them from a distance, and then let go of them to adopt new thinking." Music therapy in grief and loss work is a useful example. The transfer is seen as happening between the images in the songs and the feelings of the bereaved toward their loved one who has died. As such, songs may create a safe, shared musical space for this transfer (Krout 2015, 406).

Much like metaphors, mindfulness techniques are known to promote long-term functional and structural changes in the brain (Wheeler et al. 2017; Fox et al. 2014).

Findings from emotion regulation show activation in the anterior cingulate cortex, insulate cortex, and prefrontal cortex with lesser activation of the amygdala. Similar areas have been suggested to be involved in mindfulness processing (Wheeler et al. 2017).

-

These authors suggest that the neurologic correlates of mindfulness may support the psychologically healthy mindfulness skills developed in psychotherapy where the focus is on the present moment (Bluvshtein 2021, 422).

The use of these mindfulness skills in Adlerian psychotherapy has been reported to be able to bring about a full transformation or metamorphosis (Bluvshtein et al. 2021, 422). Music possesses the same inherent ability as the next section illustrates.

Memory and Music

This inherent connection to musical expression is deeply intertwined with human identity and experience (Toader et al. 2023, 1390). T.S. Eliot wrote about this idea in *Four Quartets*: "you are the music while the music lasts." Humans are a musical species, there being no human culture in which it is not developed and highly esteemed (Sacks 2007, 347; Wheeler et al. 2017, 1471). Modern neuroscience research has shown that music is inherently a complex phenomenon that utilizes a myriad of brain resources and neural connections. Its ability to move and shape the brain's structure and function has been described as a cognitive crescendo (Toader et al. 2023, 1390). Music listening has long been recognized to improve cognitive functions such as memory recall, attention span, and behavioural augmentation, with potential to enhance linguistic and cognitive skills in both children and adults (Sacks 2007, 95; Lange-Kuettner 2020). Johan Sebastian Bach's *Goldberg Variations* (BWV 988) are reported to have been composed to alleviate a count's insomnia (Toader et al. 2023, 2; Sihvonen et al. 2017, 648-660). Using sonograms and spectrograms, Lange-Kuettner reported that Mozart's music is full of self-contained and bounded phrases that are similar to the typical structures of words and sentences. This was seen as contributing to the positive effects that his music has on word recall, with the music being played in the delay period and not to set the mood. Gustav Mahler's music was shown to flow quite differently, in a way similar to how we hear a foreign language that we do not yet understand. The authors concluded that the clearly delineated phrase structure in the Mozart piece likely supported word memory trace, while the flowing stream of the Mahler music would have blurred it (Lange-Kuettner 2020).

Music-based therapies have been successful in treating depression and anxiety as well as neurological disorders such as regaining body integrity after a stroke (Wheeler et al. 2017, 1390; Sihvonen et al. 2017). For seniors with dementia, music has been called a necessity and not a luxury (Sacks 2007, 347; Eriksson 2024).

Music as Human Communication

The physician, musician, and Adlerian therapist Rudolf Dreikurs (1953, 19), cofounder of the National Association for Music Therapy, writes:

> Wherever verbal communication has ceased, music can still establish communication. It does not induce the antagonism so often created by the use of certain words. Communication through music does not provoke defense mechanisms. It eliminates any references to areas of friction which are almost automatically touched as soon as words

-

> are used; the question of being right, of knowing more, of agreeing or disagreeing, all these controversial potentialities of verbal communication are absent in musical communication. Music links and does not divide. These qualities inherent in music make it an ideal medium for social integration. The musical effect is twofold: it unites the group, integrating each individual into the whole; and it sets an emotional tonus for the particular purpose of group activity. The net result of both aspects is not only a feeling of belonging in each member, but also, what is more important, a feeling of being alike. Music eliminates individual distinctions; it levels off inequalities in status. It has an equalizing effect on all those in its spell.

With the advent of brain imaging in the 1990s, the brains of musicians have been compared with those of non-musicians. Music was shown to occupy more areas of the brain than language:

> Anatomists today would be hard put to identify the brain of a visual artist, a writer, or a mathematician, but they could recognize the brain of a professional musician without a moment's hesitation. . . . The anatomical changes they observed with musicians' brains are strongly correlated with the age at which musical training began and with the intensity of practice and rehearsal. (Sacks 2007, 94)

Involvement in active music making or listening, along with social engagement and communication is known to be important to older adults who like music, are motivated by it, and desire a social life (Theorell and Kreutz 2012). This response to music is preserved in seniors even when dementia is very advanced. The aim of music therapy in dementia is broader than it is with motor or speech disorders:

> It seeks to address the emotions, cognitive powers, thoughts, and memories, the surviving "self" of the patient with dementia, to stimulate these and bring them to the fore. It aims to enrich and enlarge existence, to give freedom, stability, organization, and focus. This might seem a very tall order—nearly impossible, one would think, seeing patients with advanced dementia, who may sit in a seemingly mindless, vacant torpor or scream agitatedly in incommunicable distress**.** But music therapy with such patients is possible because musical perception, musical sensibility, musical emotion, and musical memory can survive long after other forms of memory have disappeared. (Sacks 2007, 336)

These aims and results of musical perception, musical sensibility, musical emotion, and musical memory have been observed in seniors with dementia in a Canadian retirement home as reported (Eriksson 2024) and continue to be seen in this ongoing study.

Sacks (2007, 338) described the extraordinary neural robustness of music in the case of an 88-year-old pianist who had lost all language but played music and Mozart every day on his piano: "Especially moving here is not merely the preservation but the apparent heightening of musical powers and sensitivity, as other powers wane. . . . He transcends the disease with music."
In another case the same author tells the story of a baritone singer where almost every memory of his life had gone, except for the music. He had no conscious idea what he had done for a living for forty years, nor what he did even ten minutes ago. He got lost on the way to

-

performing on stage and could not tie his tie the same evening. But the musical performance was perfect. He performed beautifully and remembered all the baritone parts and words.

Sacks concluded that musicality is innate in nearly everyone:

> We humans are a musical species no less than a linguistic one. This takes many different forms. All of us, with very few exceptions, can perceive music, perceive tones, timbre, pitch intervals, melodic contours, harmony, and perhaps most elementally, rhythm. We integrate all of these and "construct" music in our minds using many different parts of the brain. And to this largely unconscious structural appreciation of music is added an often intense and profound emotional reaction to music. . . .
>
> Listening to music is not just auditory and emotional, it is motoric as well: "We listen to music with our muscles," as Nietzsche wrote. We keep time to music, involuntarily, even if we are not consciously attending to it, and our faces and postures mirror the "narrative" of the melody, and the thoughts and feelings it provokes. . . . Underlying this is the extraordinary tenacity of musical memory, so that much of what is heard during one's early years may be "engraved" on the brain for the rest of one's life. (Sacks, 2007, xi)

Music has also been known for thousands of years and across different cultures for its ability to transform human emotions (Wheeler 2015; Wärja 2015, 246).

The power of music and its ability to literally move us emotionally and change our way of being is exemplified in the *Music Therapy Handbook*, where the biographer André Maurois is quoted discussing Beethoven's nine symphonies: "Everything that I had thought and been unable to express was sung in the wordless phrases of these symphonies. When that mighty river of sound began to flow, I let myself be carried on its waters. My soul was bathed and purified. Beethoven called me back to kindness, charity, and love" (Wheeler 2015, 126).

According to the German philosopher Arthur Schopenhauer, music connects to a place deep inside us: "The inexpressible depth of music, so easy to understand and yet so inexplicable, is due to the fact that it reproduces all the emotions of our innermost being, but without the physical reality and remote from its pain. Music expresses only the quintessence of life and of its events, never these events themselves" (Schopenhauer 1969, Ch. 52).

Albert Einstein believed that music played a crucial role leading him to his own intuitive creativity regarding the theory of relativity: "It occurred to me by intuition, and music was the driving force behind that intuition. My discovery was the result of musical perception" (quoted by Katie McCormick 2025).

Very similar comments have been made by music therapists, especially those who have adopted the "music-in-expressive-arts-therapy" approach, such as Wärja. They see music as a way of self-inquiry, a natural form of mindfulness, a part of us and integrated with Nature: "Experiencing music as a form of sensing intuitive knowledge that brings us to the body is the foundation of this kind of work. One vital function of music is to open us up to worlds of

-

imagination and connect us with feelings that often are carried in the content of the imagery" (*Music Therapy Handbook* 2015, 252).

Einstein said of Mozart: "The music of Mozart is of such purity and beauty that one feels he merely found it—that it has always existed as part of the inner beauty of the universe waiting to be revealed" (quoted by Walter Isaacson 2018). Those comments raise the question of what constitutes humankind's inner self and source of creativity, and how this musical self is related to the universe in which we live. In Western civilization this question goes back to the Greek philosopher Pythagoras (560-480 BCE) who theorized that music is a microcosm of the cosmos and ruled by the same mathematical laws of harmony that operate throughout the universe and in humans too (Greenberg 2007, 106).

Physics and Music as Vibratory

Superstring theory in modern physics has been viewed as a modern scientific version of the Pythagorean theory since it sees the physical universe as composed of an enormous number of identical, extremely small strings, vibrating in different vibrational patterns and frequencies like different pitches on a keyboard. As physicist Brian Greene (2005, 143-146) writes: "These vibrating strings are akin to a cosmic symphony."

Plotinus, the Neo-Platonist of the third century CE, named three broad ways to the awareness of the Infinite or that state of wholeness and completeness described by Carl Jung as the archetype of the self (Jung 1959, 70). These are the way of the poet and artist, the way of science, and the way of moral purity toward perfection (Russell 1965, 289; Bucke 2011, 146). In other words, musical perception, along with science, is one of the ways that has been experienced throughout history to lead to profound inspiration, creativity, and enlightenment, as Einstein experienced and expressed.

This brings to mind the piano or modern keyboard where a particular melody can be recognized as such when played in any audible octave. Some believe that an Infinite Spirit or the Divine is to be looked for in the highest octaves and frequencies, which are the most energetic.
The corollary is that a musical theme played or sung in an audible octave is then able, through resonance, to arouse a similar theme in a higher octave. However, this may be experienced quite differently, for example as a powerful archetypal image (Jacobi 1959), or as intuitive creativity as Einstein experienced and as music therapists have observed.

Music Is Rhythmic Energy in Motion

Dreikurs (1953, 18) writes, "Music is a language of its own, immanent, with no words, yet precise, based on mathematical ratios and harmonics. Music links people together yet resonates emotionally with each person individually."

To reinforce his point that music is a language of its own, non-verbal, but precise, Dreikurs writes about a personal musical incident at a party:

-

> A small episode may demonstrate this point. Amongst friends I sometimes try to describe one of the persons present through improvisation on the piano. On one occasion, at a party, I was induced by the hostess to do so without knowing many of the people; they were not too interested in this kind of "game," anyhow. After I played, I met open opposition. How can one recognize a person from what I had played? It happened that a professional musician, the guitarist Richard Pick of the Chicago School of Music, was present. I did not know him, and he did not know the person I had in mind. But in the confusion after my playing, he stepped in and explained the person as he could see him from my playing. Whereupon a number of people immediately recognized the person I had in mind. Mr. Pick "understood" my musical jargon; the others did not. It is probably this nonverbal communication, inherent in music, which not only explains its emotional significance, but its influence on interpersonal relationships.

Rudolf Dreikurs was a musician and physician who understood how music could be used to portray an individual's characteristic way of behaving and thinking as a recurring theme in a melody. He knew how to compose a person's character on the piano, as did the Russian composer Sergei Prokofiev, who gave a musical exposition of this in his symphonic tale for children where different instruments are used to represent different animals and behaviours to tell a story. The Chicago musician who was present recognized from the music played the human character and theme being expressed. He put it into words so that others in the room who could not fathom the musical jargon could put a face to the individual who had been described with music.

This personal narrative or recurring life theme is an important concept in Alfred Adler's psychology of use and is referred to as an individual's cognitive lifestyle. It is the individual's private logic, the characteristic way or pattern of how each person has decided to act, think, and perceive in life to achieve significance. It becomes finalized in childhood generally before the ages of seven or eight (Adler 1964).

Typical examples revealed to the client by the therapist could be: "I am small and weak, life is dangerous, therefore others must protect me" (the lifestyle of a "weak baby"), or "I am the rightful heir to my father's power. Life is here to appreciate me and serve me. Therefore, I have to be the centre of attention" (the lifestyle of a "crown prince") (Shulman 1973).
Not so easy to discern when the individual's life is going well, this cognitive life path or rule of rules is more readily observable when the person or client is struggling or challenged (Adler 1964).

Ralph Waldo Emerson had a similar concept: "The key to every man [all persons] is his [their] thought. Sturdy and defying though he [they] look, he has [they have] a helm which he obeys [they obey], which is the idea after which all his [their] facts are classified. He [They] can only be reformed by showing him [them] a new idea which commands his [their] own."

According to modern neuroscience, our inherent connection to musical expression is deeply intertwined with our identity and how we see ourselves. Music is seen to share neural resources with language processing (Toader et al. 2023). In other words, the processing in the brain of an

-

individual's chosen life path, the recurring pattern of thinking and acting, Adler's concept of lifestyle, is intimately related to our musical brain through shared neural oscillators.

It has already been noted that the German philosopher Arthur Schopenhauer remarked that music reproduces all the emotions of our inner being, but never with the physical events that gave rise to them, just the emotional essence of these events. This is compatible with the view of modern neuroscience that the way music's energy shapes the brain's structure is equivalent to a cognitive crescendo (Toader et al. 2023).

Schopenhauer also realized the inherent connections between music and language processing before the findings of modern neuroscience. He is quoted as perceiving a musical melody as having "significant and intentional connection from beginning to end," and as "one thought from beginning to end" (Sacks 2007, 211). Schopenhauer may have come to this conclusion after listening to Mozart's music since his comments above have been confirmed in a recent study of Mozart's *Eine Kleine Nachtmusik*. Modern sonograms and spectrograms show that Mozart's music has self-contained and bounded phrases, structures that are similar to the typical structures of words and sentences (Lange-Kuettner and Rohloff 2020).

The theory that listening to Mozart's music can improve cognitive performance, especially on spatial reasoning tasks (known in the public domain as the Mozart Effect), remains controversial. A study performed by Frances Rauscher, Gordon Shaw, and Katherine Ky in *Nature* (1993) investigated this effect and found that spatial-temporal reasoning was indeed enhanced, if only temporarily, while later researchers have claimed that the Mozart Effect is non-existent, like Sandra Oberleiter and Jakob Pierschnig (2023) in their literature review focused on epilepsy. Others, like Robert A. Duke (2000), argue that there are "other, substantial effects that happen because of music and the music-making process" (Bonillas 2022).

It is therefore theorized that listening to music reshapes one's personal logic and identity into its musical or feeling-toned essence, making it livelier, which as musical memory, can then awaken the personal sense of identity and purpose in seniors with dementia, as reported (Sacks 2007, 346; Eriksson 2024). Sacks writes: "Dementia is no bar to emotional depth. Once one has seen such responses, one knows that there is still a Self to be called upon, even if music, and only music, can do the calling."

The therapeutic value of music appears in the philosophy of Francis Bacon (1561 – 1626), who promoted the scientific method and who lived in the same era as Shakespeare. Bacon (*The Oxford Francis Bacon IV*) states: "The poets did well to conjoin music and medicine in Apollo: because the office of medicine is but to tune this curious harp of man's [the human] body and to reduce it to harmony." In this case, Apollo means "the light of the Divine."

This idea of a musical tune-up to restore order and harmony to a neuroplastic brain and body is found in modern mystical practice. Former Imperator H. Spencer Lewis (*Rosicrucian Digest*, Nov. 1931) wrote that one can practice this tune-up through the singing of musical vowel sounds on specific pitches to promote experiencing the rhythm of the music of the spheres that flows through us. This equates with experiencing Alfred Adler's holistic feeling of belonging and having one's place in life, *gemeinschaftsgefühl* in German. This is itself a metaphor for mind-

-

body harmony and "self-world harmony" (Bluvshtein et al. 2021; Eriksson 2022; Adler 1964). The "music of the spheres" can be seen as a metaphor for this mind-body and self-world harmony. Recent research in psychology and neuroscience reveals this interconnectedness between "self and other" that is facilitated in practice by meditation techniques such as mindfulness and loving-kindness meditation (Adler 1964; Fynn-Mathis Trautwein et al. 2013; Bluvshtein et al. 2021; Eriksson 2022).

Conclusion

Rhythm is the basis of all vital and artistic phenomena and produces the element of order. Lack of rhythm leads to loss and disease (Dreikurs 1961, 10).

Listening to music may reshape this personal logic and identity into its musical or feeling-toned essence, making it livelier and more creative, which, as musical memory, can awaken the personal sense of identity and purpose in seniors with dementia as recently confirmed for those with memory loss in a Canadian retirement home (Eriksson 2024).

Conducting further studies would constitute additional evidence that music therapy is essential for seniors' well-being, quality of life, and ongoing sense of self and purpose. Further studies could include using Mozart's music to determine if "the Mozart Effect" extends to seniors with memory loss.

Finally, as this paper demonstrates, music therapy as a form of mindfulness aids in reshaping brain function that could well provide a greater sense of emotional belonging and connectedness among those who need it most, with broader applications to other institutional settings beyond seniors' homes, like hospitals, prisons, group homes, and cancer clinics.

Conflict of Interest

The author declares no conflict of interest.

Bibliography

Adler, Alfred. 1964. *The Individual Psychology of Alfred Adler: A Systematic Presentation in Selections from his Writings*. Edited by Heinz. L. Ansbacher and Rowena R. Ansbacher. New York NY: Harper Torchbooks.

Adler, Alfred. 1979. *Superiority and Social Interest.* New York, NY: W.W. Norton and Company.

Alizadeh, Hamid, Francis X. Walton, and Fariba Soheili. 2016. "Social Interest in Children with and without Attention-deficit/hyperactivity Disorder." *Journal of Individual Psychology* 72: 290–307.

Ansbacher, Heinz L. 1968. "The Concept of Social Interest." *Journal of Individual Psychology* 2 (24): 131-149.

Bacon, Francis. 1852. *The Moral and Historical Works of Lord Bacon*. (J. Devey Ed.). Henry G. Bohn.

-

Bluvshtein, Marina, S. Saeedi, N. DeBruyn, and K. L. Gillespie. 2021. "Mindfulness, Therapeutic Metaphors, and Brain Functioning in Adlerian Therapy: *Gemeinschaftsgefuhl* at Work." *Journal of Individual Psychology,* 77 (4): 409-426.

Bonillas, Joshua. 2022. "The 'Mozart Effect'." Musicology and Ethnomusicology: Student Scholarship. University of Denver. November 2022. https://digitalcommons.du.edu/musicology_student/?utm_source=digitalcommons.du.edu%2Fmusicology_student%2F136&utm_medium=PDF&utm_campaign=PDFCoverPages.

Brown, Kirk Warren and Richard M. Ryan. 2023. "The Benefits of Being Present: Mindfulness and its Role in Psychological Well-being." *Journal of Personality and Social Psychology,* 84 (4): 822.

Crowest, Frederick J. 1899. *Beethoven from the Master Musician* series edited by Frederick J. Crowest. London: Dent.

Dreikurs, Rudolf. 1953. "The Dynamics of Music Therapy." *The Music Therapy Handbook*. 15-23.

Dreikurs, Rudolf. 1961. "The Psychological and Philosophical Significance of Rhythm." *Bulletin of National Alliance of Musical Theatre* 10 (4): 8-17.

Duke, Robert A. 2000. "The Other Mozart Effect: An Open Letter to Music Educators." *Update: Applications of Research in Music Education* 19, no. 1 (Fall-Winter 2000): 9-16. https://doi.org/10.1177/875512330001900103.

Edelman, Gerald M. 1989. *The Remembered Present: A Biological Theory of Consciousness*. New York: Basic Books.

Edelman, Gerald M. 2006. *Second Nature: Brain Science and Human Knowledge*. New Haven: Yale University Press.

Einstein, Albert. 1915. Quoted by Katie McCormick in "Quantum Music." *Aeon* 2025. https://aeon.co/essays/uniting-the-mysterious-worlds-of-quantum-physics-and-music.

Eriksson, Christopher. 1992. "Social Interest/Social Feeling and the Evolution of Consciousness." *Individual Psychology* 48 (1): 277-287.

Eriksson, Christopher. 2017. "Adlerian Psychology and Music Therapy: The Harmony of Sound and Matter and Community Feeling." *The Journal of Individual Psychology* 73 (3): 243-264.

Eriksson, Christopher. 2022. "Music as a Social Harmonizer - A Tribute to Rudolf Dreikurs." *The Journal of Individual Psychology* 78 (3): 373-376.

Eriksson, Christopher. 2024. "Awakening the Musical Memory of Seniors with Dementia in a Retirement Home." *Rose-Croix Journal*. 18: 142.

Fox, Kieran C.R., et al. 2014. "Is Meditation Associated with Altered Brain Structure? A Systematic Review and Meta-analysis of Morphometric Neuroimaging in Meditation Practitioners." *Neuroscience and Biobehavioral Reviews*. 43: 48-73. https://pubmed.ncbi.nlm.nih.gov/24705269/.

Graham, Mark A. and Rebecca Lewis. 2020. "Mindfulness, Self-inquiry, and Artmaking." *British Journal of Educational Studies*: 1-22. https://www.researchgate.net/publication/346466591_MINDFULNESS_SELF-INQUIRY_AND_ARTMAKING.

Hanser, Suzanne B. 2015. "Cognitive-Behavioural Approaches." In *The Music Therapy Handbook*. Edited by Barbara L. Wheeler. New York, NY: The Guildford Press.

Hanser, Suzanne B. 1999. *The New Music Therapist's Handbook*. Boston: Berklee Press.

-

Hick, Steven F., and Thomas Bien. 2010. *Mindfulness and the Therapeutic Relationship*. Guildford Press.
Isaacson, Walter. 2017. *Leonardo da Vinci*. New York, NY: Simon and Schuster Paperbacks.
Isaacson, Walter. 2018. *Einstein – The Man, The Genius, and the Theory of Relativity*. London: André Deutsch.
Jacobi, Jolande. 1959. *Complex, Archetype, Symbol in the Psychology of C.G. Jung*. Bollingen Series, Princeton.
Jung, Carl Gustav. 1959. *Aion - Researches into the Phenomenology of the Self.* Bollingen Series, Princeton.
Krout, Robert E., 2015. "*Music Therapy for Grief and Loss*." In *Music Therapy Handbook* edited by Barbara Wheeler. New York and London: The Guilford Press.
Lange-Kuettner, Christiane and Stella Rohloff. 2020. "Mozart Sharpens, and Mahler Degrades the Word Memory Trace." *Advanced Research in Psychology* 1 (1). ISSN 2708-4884.
Marenbon, John. 2003. *Boethius*. New York, NY: Oxford University Press.
Oberleiter, Sandra, and Jakob Pietschnig. 2023. "Unfounded Authority, Underpowered Studies, and Non-transparent Reporting Perpetuate the Mozart Effect Myth: A Multiverse Meta-analysis." *Nature: Scientific Reports* 13: 3175. https://doi.org/10.1038/s41598-023-30206-w.
Rauscher, Frances H., Gordon L. Shaw, and Katherine N. Ky. 1993. "Listening to Mozart Enhances Spatial-Temporal Reasoning: Towards a Neurophysiological Basis." *Nature* 365 (6447): 611.
Rauscher, Frances H., Gordon L. Shaw, and Katherine N. Ky. 1995. "Listening to Mozart Enhances Spatial-Temporal Reasoning: Towards a Neurophysiological Basis." *Neuroscience Letters* 185 (1): 44-47.
Ruiz-Fernandez, Maria Dolores, Rocío Ortíz-Amo, Ángela María Ortega-Galán, Olivia Ibáñez-Masero, María Del Mar Rodríguez-Salvador, and Juan Diego Ramos-Pichardo. 2020. "Mindfulness Therapies on Health Professionals." *International Journal of Mental Health Nursing* 29 (2): 127-140.
Sacks, Oliver. 2007. *Musicophilia: Tales of Music and the Brain*. New York: Knopf.
Shakespeare, William. 2005. *The Oxford Shakespeare: The Complete Works*. 2nd edition, edited by Stanley Wells and Gary Taylor. Oxford: Clarendon Press.
Schopenhauer, Arthur. 1819/1969. *The World as Will and Representation* (esp. Vol. 1., Chapter 52). Translated by E.J. Payne. New York, NY: Dover.
Sihvonen, Aleksi J., Teppo Särkämö , Vera Leo, Mari Tervaniemi, Eckart Altenmüller, Seppo Soinila. 2017. "Music-based Interventions in Neurological Rehabilitation." *Lancet Neurology* 16: 648-660.
Spencer Lewis, H. 1994. "Tuning Health with the Cosmic." *Rosicrucian Digest* 72 (1): 11.
Spencer Lewis, H. 1931. "The Thought of The Month – Love and Thanksgiving." *Rosicrucian Digest* 9 (10): 674.
Toader, Corneliu, et al. 2023. "Cognitive Crescendo: How Music Shapes the Brain's Structure and Function." *Brain Science* 13 (10): 1390. https://doi.org/10.3390/brainsci13101390.
Trautwein, Fynn-Mathis, José Raul Naranjo, and Stefan Schmidt. 2016. "Decentering the Self? Preliminary Evidence for Changes in Self-vs Other Related Processing as a Long-term Outcome of Loving-kindness Meditation." *Frontiers in Psychology* 7: 1785.
Wärja, Margareta. 2015. "Music Therapy in Expressive Arts." In *Music Therapy Handbook* edited by Barbara L. Wheeler. New York, NY: The Guildford Press, 246-259.

-

Wheeler, Barbara L., ed. 2015. *Music Therapy Handbook*. New York: The Guildford Press.

Wheeler, Megan S., Diane B. Arnkoff and Carol R. Glass. 2017. "The Neuroscience of Mindfulness: How Mindfulness Alters the Brain and Facilitates Emotion Regulation." *Mindfulness* 8 (6): 1471-1487. https://doi.org/10.1007/s12671-017-0742-x.

Yan Wang, Yan Wang, Si-Man Lei, and Jingjing Fan. 2023. "Effects of Mindfulness-Based Interventions on Promoting Athletic Performance and Related Factors among Athletes: A Systematic Review and Meta-Analysis of Randomized Controlled Trial." *International Journal of Environmental Research and Public Health* 20 (3): 2038. https://www.mdpi.com/1660-4601/20/3/2038.