

ARTICLES

Communicative Musicality and Its Relevance to Psychotherapy and Counselling

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Adult psychotherapy and counselling are often described as “talking therapies”, yet much of what is communicated occurs non-verbally. Reviewing literature from the domains of music, neuroscience, infant studies, psychotherapy, and counselling, this paper explores the implicit musicality that is embedded within and constitutes human communication, and how this informs the therapeutic encounter. The paper draws on the concept of communicative musicality (CM) as a framework for understanding verbal communication in therapy, as this has been under-explored. Two interrelated elements are discussed: the musicality of speech and the rhythms of relational exchange (entitled “rhythm in relating”). These two dimensions of communication may offer a medium for connection, attunement, and co-regulation, in addition to providing insight into the client’s relational and developmental history. Psychotherapy and counselling are presented as fundamentally musical, embodied, and temporal, where meaning is co-created not only through words, but through the musicality of communication. This paper explores elements of music, vocal timbre, dynamics and melodic contours, dissonance and consonance, along with the embodied rhythms of sharing time, repetition, and improvisation, and rhythm in relating that express and constitute affective and interpersonal life. The study highlights how a sensitivity to the musical dimensions of therapeutic dialogue can deepen attunement to the client’s inner world, support relational repair, and enhance therapeutic presence. It proposes that psychotherapy and counselling education would benefit from including a CM-informed approach, enabling practitioners to listen not only to the lexical channel, but also to the musicality and rhythm of communication.

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The human had heard the young whale's distress and had come into the sea, playing a flute. The sound was plangent and sad as he tried to communicate his oneness with the young whale's mourning. Quite without the musician knowing it, the melodic patterns of the flute's phrases imitated the whalesong of comfort. The young whale drew nearer to the human, who cradled him and pressed noses with the orphan in greeting.

—Witi Ihimaera, *The Whale Rider*

Witi Ihimaera (2005), a prominent New Zealand Māori author and librettist, illustrated the power of music to communicate what cannot be spoken but can be expressed through music and embodied contact. Although psychotherapy and counselling are often undertaken through the mode of “talking therapy”, it is well recognised across a range of modalities that non-verbal, bodily communication is central to therapeutic process. Reik (1948) proposed that it was the therapist's ability to pay attention to the “pianissimo”¹ of interactions, to hear beneath the words, that allowed the uncovering of the unspoken expressions of the mind. This notion of delicate sensitivity resonates with the concept of communicative musicality (CM), which highlights the innate and implicit musicality of human interaction. CM emphasises the intersubjective nature of non-verbal emotional interactions, which are crucial in forming the earliest attachment relationship (S. Malloch & Trevarthen, 2009; A. N. Schore, 1994). The concept of CM has been applied in a number of areas of practice, including health care (McLean, 2016; Monaci et al., 2021), education (Johnson et al., 2022; Nome, 2018), music therapy (Daniel, 2019; Holck, 2015; S. Malloch et al., 2012; Roginsky & Elefant, 2019), working with group dynamics (Wotton, 2017), use of listening to music in psychotherapy (Butterton, 2007), and relational and couples' psychoanalysis (Pickering, 2015, 2020). Although there is an extensive body of literature on music therapy, the exploration of CM pertaining to adult talking psychotherapy has been under-researched. In this article, we examine the question: How is the framework of CM relevant for adult psychotherapy and counselling?

Language and music are often considered two separate forms of communication. Historically, in ancient Greece, music and poetry were inseparable; the Greek word “melos” encompassed both poetry and music, serving as the origin of the word “melody” (Storr, 1992). This contrasts to our modern culture, which has valued cognition and rationality, and encouraged listening to the “what” (i.e., content and declarative language) of communication, often eclipsing the “how” of communication (i.e., the non-verbal, non-declarative mode). This way of hearing, Grier (2019) argued, provides intellectual understanding but neglects the musical elements of

¹ A musical dynamic that means to play very softly.

speech that can reveal the underlying emotionality of communications. Neuroscience research has highlighted that the infant brain can sense musical-emotional meanings many months before it begins to process language (Panksepp & Trevarthen, 2009). The earliest intersubjective relationship is thus based on interactions of emotion rather than exchange of information (Dissanayake, 1990).

In the 1970s, infant studies characterised preverbal interactions as conversation, dialogue, and proto-conversation (Anderson et al., 1977; Bateson, 1971; Beebe et al., 1979; Field, 1978; Goldberg, 1977; Jaffe et al., 2001; D. Stern, 1974; Tronick, 1980). These studies became more descriptive and detailed in their relational depth as researchers began to make sense of human interactions through observing musical features. Research exploring a mother keeping time and rhythm with her infant found correlation between this and the development of attachment, social awareness, and regulation of affect (D. N. Stern, 1977). This highlighted the significance of musical dynamics in human interaction and development. Later research into the intricate dynamics of vocal and facial interactions highlighted the role of melodic contours, expressive gestures, and prosody (patterns of stress and intonation in language) in human communication (Papousek & Papousek, 1989). Musical terms and concepts have been applied to make sense of early life non-verbal interactions and the impact of these interactions on attachment, thereby contributing to an understanding that infants are born with an intersubjective instinct and a mind ready to engage with others (Grotstein, 2008). The application of musical understandings, phenomena, and processes contributed to understanding relational phenomena. The unique expressive quality of music and how it evolves over time give language to interactions that are beyond words.

With the progression of neuroscience research, understanding of the function and structural differences between the left and right brain hemispheres emerged. These two hemispheres pay attention differently and therefore produce different versions of experience (McGilchrist, 2012). The left hemisphere can be characterised as rational, linguistic, analytical, explicit, and conscious, in contrast to the right hemisphere, which is characterised as emotional, social, intuitive, implicit, and unconscious (A. Schore, 2022). This emergent understanding led to a paradigm shift in psychotherapy and counselling, moving away from left-brained, language-based interpretations towards a focus on right-to-right brain connection that facilitates emotional, embodied, and unconscious communication (A. Schore, 2022). In relation to the former, Paddock (2023) argued that psychoanalysis historically had over-prioritised verbal interpretation and neglected non-verbal and prosodic channels of communication. In this regard, psychoanalysis had historically focused on the lexical channel of therapeutic communication at the expense of the rhythm and musicality that are now understood as inherent to human relating.

Research has suggested that specific musical elements such as melody, timbre, creative improvisation, and dynamics are associated with the right hemisphere (Brancucci et al., 2005; Tachibana et al., 2024; Warren, 2008). Emotion and intuition are both aspects associated with the right hemisphere, and Jung suggested that music expresses the movement of feelings that are attached to unconscious processes (as cited in Jacobi, 1979). Since right-brain emotional processes happen unconsciously, exploring the musicality of verbal and embodied expressions may be central to deepening understanding of emotional and unconscious communication (A. Schore, 2022). As McGuinness and Overy (2011) suggested, music provides an intimate, embodied experience that does not communicate an explicit message but facilitates a shared experience of communion.

Coining of the term communicative musicality (CM) resulted from observations that the earliest interactions in human life are anchored in a musical style of non-verbal communication (S. Malloch & Trevarthen, 2009). CM is defined as a form of musical dialogue and the vehicle that carries emotion from one individual to another. It is the innate ability of being able to move sympathetically with another through gestural, vocal, and emotional channels of communication (S. N. Malloch, 1999). Use of the term differs from that of *musicality*, which refers only to musical ability or sensitivity (Waite, 2012). CM highlights the relational nature of musicality, which has been revealed through recognising musical patterns in social human interaction. These patterns include timing, pulse, vocal timbre, and gesture, all of which parallel musical performance elements such as rhythm, tone, and timing (Blackburn & Axtell, 2016). Occurring during a crucial period of human neurological development, CM advances mental processes such as emotional regulation and mindful, reflective behaviour (Siegel, 1999; Siegel & Drulis, 2023), thus highlighting the centrality of non-verbal, musical communication and its relationship to healthy psychological development.

In 1999, researchers on CM identified melodic and rhythmic co-creativity in human communications and proposed that it was constituted by three parameters: pulse, quality, and narrative (S. N. Malloch, 1999). *Pulse* refers to vocal and gestural expressions that occur as a succession of events through time, created and perceived in a process in which two or more people may coordinate their communications, share time, and predict what might happen and when (S. Malloch & Trevarthen, 2009). *Quality* refers to the modulated contours of expression moving through time. These contours can be made up of vocalisations, which include timbre,² pitch, volume, and the direction and intensity of movement of the body (S. Malloch & Trevarthen, 2009). Often, expression of the body and vocalisations will occur in concert. *Narrative* is

2 The character or quality of a musical sound or voice.

the combination of pulse and quality that forms an expression and intention, allowing each participant to share a sense of feeling and meaning in time together (S. Malloch & Trevarthen, 2009).

Reviewing the literature from the domains of music, neuroscience, neurobiology, infant studies, and psychoanalysis, we discuss the concept of CM in relation to the adult psychotherapy and counselling process. The first area of exploration focuses on “the musicality of speech”, where we examine (a) the musical elements of speech, (b) vocal timbre and attunement, (c) musical dynamics and melodic contours in speech, and (d) melodic dissonance and consonance in dialogue. The second area focuses on “rhythm in relating”; here, we discuss (a) sharing time together, (b) repetition and improvisation, and (c) rhythm in intersubjective relationship.

The Musicality of Speech

Once you find the melody, then you connect immediately with the heart.

—Santana (as cited in Golio & Gutierrez, 2018)

The Musical Elements of Speech

In reviewing the literature on the musical elements of speech, we identified the following musical concepts as key constituents of communicative process in psychotherapy and counselling: melody, pitch, rhythm, and dynamics.

Melody is a recognisable sequential series of notes. These vary in pitch and are often organised into a form (Kennedy, 2007). The notes are played or sung one after the other. It denotes a specific musical entity, which is often considered close to the idea of a tune (Randel, 2003). This may be a complete piece on its own, such as a song, or in a longer piece of classical music, for example, the melody is used as a theme.

The *pitch* of a note is defined by its speed of vibration: fast vibrations create what the ear perceives as high notes, and slow vibrations create low notes (Kennedy, 2007). The rate of vibration per second is the note’s frequency. Schellenberg et al. (2000) found that melodies played at higher pitches were perceived as upbeat and bright; in contrast, the same melody at a lower pitch was interpreted as sad. In psychotherapy and counselling, the pitch of a client’s voice can reveal emotional states which are beyond conscious control, and this is also relevant to the voice of the therapist.

Rhythm is characterised by the placement of notes across time regarding their speed and regularity (Carter, 2018). Speech, like melody, also contains rhythm. Closely connected to rhythm is *tempo*, an Italian word used in western musical tradition that is rooted in the Latin word *tempus*, denoting time (Harnum, 2013). In relation to therapeutic process, the speech of the client may follow different tempos, sometimes racing ahead and other times moving very slowly. Tempo is akin to the pulse of music that one taps one’s foot to or nods one’s head to. Tempo is the pulse on which rhythms are

composed. In the context of psychotherapy and counselling, spoken rhythms can be choppy, fragmented, smooth, slow, erratic or predictable. Research on the emotional perception of rhythm reveals that tempo modulates arousal of emotion, because faster tempos are experienced as more upbeat, and slower tempos more melancholy (Fernández-Sotos et al., 2016).

Dynamics in music refers to the volume of a sound and how that volume is expressed. Dynamics may be loud or soft, and may add a sense of drama and tension, while also creating musical movement. Musicians who experiment with dynamics often call this “playing with feel” (Carter, 2018). This reveals how musicians communicate and connect feeling and emotion with the production of sound and the dynamics of performance. In musical terms, a voice could be deadly quiet, nearly inaudible, or it could be overpoweringly loud and frightening.

These musical elements of melody, pitch, rhythm, and dynamics form part of spoken communication, and Pickering (2015) suggested various combinations of these elements reflect different internal states. For example, depression is marked by a slower tempo and lower pitch, conveying a subdued tone. In contrast, anger features a fast tempo, higher pitch, and louder dynamics, thereby intensifying its expression. Passive emotions like sadness exhibit a slower rhythm and softer dynamics, while anxiety is characterised by a rapid rhythm and higher pitch.

Attending to the musical elements of speech and their accompanying feeling states may thus be central during therapeutic process as this enables the therapist to listen beyond the words. Paddock referred to this in psychotherapy as the vocalics of interpersonal interaction (Paddock, 2023). These elements assist in emotionally attuning to and accurately intervening with clients (Pickering, 2015; A. N. Schore, 2019; Siegel, 1999). Pickering (2015), a Jungian psychoanalyst, suggested a relationship exists between the musical elements of speech and the emotional state of the speaker. She proposed that the musical aspects of verbal and embodied communication are central to the expression of emotional meaning and that a musically attuned interaction facilitates the integration of the right and left hemispheres of the brain by linking implicit and explicit processes. The melody of speech thus becomes clearly significant to understanding the adult psychotherapy and counselling process, since listening to the “how” of communication reveals insights into the psychic life of the client (Pickering, 2015). This has been supported by Peebles (2023), who suggested that psychotherapists be aware of their own musical shaping of their words and gestures because this will support understanding of the relational dynamics that unfold. It is also important to note, however, that although the concept of CM captures essential elements of interaction, there may be constraints on framing all therapeutic communication in this way. For example, cognitive restructuring in cognitive behavioural therapy may rely more on logical analysis (left-brain functioning) than on the musical dimensions (right-brain functioning) of communication.

Vocal Timbre and Attunement

Vocal timbre is a crucial aspect of musicality that communicates emotionality. Timbre is also called vocal colour and is expressive of the unique and distinctive character of the voice (Kennedy, 2007). Kennedy (2007) highlighted how a range of different musical instruments can play the same music in unison, using the same pitches, rhythms, tempo, and dynamics, but that variations in timbre can enable differentiation of the various voices from one another. Imagine a single note being held on a distorted electric guitar and that same note on a nylon classical guitar. Although both instruments are guitars, one has an electrified signal and a solid body incorporating effects processing that distorts the tone and allows for more sustainment and fullness of sound. This tonal quality could be described as aggressive and edgy. The other guitar is hollow and produces a more natural acoustic sound that is rounded and decays quickly. This timbral sound may be perceived as intimate, sensitive, and delicate. Both instruments can also be played in ways in which their timbral qualities are manipulated to produce different colours and musical atmospheres. Wallmark et al. (2018) extended this understanding by suggesting that timbre is experienced at an embodied level and can provoke strong affective and unconscious responses. Each timbre not only has its own unique sonic quality but also provokes a unique feeling state in the listener.

The musical concept of timbre finds expression in A. N. Schore's (2019) work. He suggested that during infancy, a parent's finely attuned timbre of voice, which instinctively mirrors the inner state of the infant, plays a crucial role in regulating affect. A responsive vocal timbre is understood to support the forming and maintaining of interpersonal relationships, which ultimately contribute to the development of purposeful behaviour (Marwick & Murray, 2009).

The human voice has a wide spectrum of timbral possibilities, which are demonstrated across various musical genres. Consider the low guttural screams of a post-hardcore singer or the smooth, glissando-sprinkled turns of a classical jazz singer. It is notable that when discussing beloved musical artists, individuals often declare "I love their voice", revealing a deep connection that transcends specific lyrics or songs. Here, there are parallels to early infancy, during which the voice forms a crucial body-to-body communication, creating a dialogue between the somatic and emotional states of caretaker and baby (Wallin, 2007). The infant's internal states are the subject of this interaction, and as this dialogue unfolds, like an individual listening to music, the infant learns more about themselves (Wallin, 2007). Through this process, a deep bond is formed. The voice can be thought of as a human musical instrument, capable of co-regulating the affective and embodied states of the other. In psychotherapy and counselling, the timbre of the client's voice is a communicator to the therapist of internal states,

and similarly, therapists may reflect on their own vocal timbre and how the instrument of the voice resonates and vibrates in co-influencing the client's state and the transference experience.

Musical Dynamics and Melodic Contours in Speech

Stern's (2010) term *vitality affect* helps to explain the way experience can be contoured as it changes over time. He proposed that dynamic musical elements such as crescendo, diminuendo, and pitch contours reflect how the experience of an emotion changes from moment to moment. *Crescendo* signifies a gradual increase in volume and *diminuendo* indicates a gradual decrease in volume (Harnum, 2013). Each of these dynamics reflects how a feeling may grow or decrease in intensity through time. As a baby smiles, a parent may match the contour of the infant's smile by saying "yee-ah" and reflecting in their vocal pitch contour a rise and a fall, accompanied also by a crescendo and diminuendo (D. N. Stern, 1993). The melody of speech reflects attunement to how it felt for the baby to open her face up to a peak of expression and then smoothly close it down (D. N. Stern, 1993). This reflects how musical attunement to body-based expression can create a sense of sharing and understanding between two subjectivities.

Interestingly, CM research on depressed mothers found that they spoke with a creaky vocal timbre that felt sorrowful; the pitch of speech often had downwards contours (moving from high to low) and more frequent repetition of melodic patterns (Marwick & Murray, 2009). Infants living in this acoustic world developed insecure attachment styles, became more sensitive to emotions in others' voices, and developed a pronounced ability to attune to others in distress. Musically, it is as though the infant gives up singing its own song and instead becomes the accompanist to (preoccupied with) the melody of the other.

Vitality affects can be shaped in relationship to coordinate, share or mutually regulate emotion (D. N. Stern, 1993). Stern's (2004) writings reveal how the ability to attune through vocalising and embodiment to the contours of feeling can result in moments of meeting in which there is a felt sense of being together. Panksepp and Trevarthen (2009) similarly suggested for humans that, in earliest development, emotional experiences of awe, desire, joy, pride, and fear are interwoven into precious combinations of melodic contours and rhythm. Musicality provides a language that helps frame the experience of feeling through time and may assist in attuning and providing sensitive company to another—a task that is fundamental to the psychotherapy and counselling process.

Melodic Dissonance and Consonance in Dialogue

Two notions in the musical literature that assist in understanding misattunement/ruptures and mutuality/contact are melodic dissonance and consonance. *Dissonance* is a combination of pitches or frequencies that are experienced as unpleasant and often described as containing a roughness (Bolger & Griffith, 2003; Terhardt, 1984). *Consonance* is described as the lack

of unpleasant factors and a sense of harmony (Terhardt, 1984). In the context of intersubjective interactions, it seems that these ideas may be relevant and applicable. The melody of a communication and of speech between people may be experienced as consonant or dissonant.

In a study by Zentner and Kagan (1998), two versions of a melody were played to children. The melodies were identical regarding tempo, rhythm, timbre, and contour, but the dissonant version was composed of dissonant pitches. The infants looked for longer at the consonant source of sound compared with the dissonant version. During the dissonant version, infants were more likely to turn away. This study might suggest that melodies that are consonant are more engaging as they evoke a relational response of turning towards, rather than away. In contrast, dissonant melodies provoke a response of avoidance and appear to be affectively unsettling.

Turning to the notion of consonance in music, this typically occurs when the pitches or notes played belong together in a musical key. In the canon of western musical literature, musical keys are groupings of notes arranged into scales (Williams, 1992). Communication with others through speech, which has intrinsic musicality, may be thought of as composing a piece of intersubjective music in a particular key. The ability to respond in the key of the music, by using pitches that belong together, communicates a sense of understanding. Through this attunement, individuals are on the same frequency or wavelength. When one moves outside the key of the relational music, the tune becomes dissonant; it has a roughness. In a therapeutic context, Westcott (2011) suggested that dissonance may reveal suppressed feelings, a rupture in the relationship or having “missed” the client. Identifying this in the context of psychotherapy and counselling may open an opportunity to explore and, when appropriate, repair.

Rhythm in Relating

In this section, we examine the theme of rhythm in relating. Subthemes of (a) sharing time together, (b) repetition and improvisation, and (c) rhythm in intersubjective relationship are presented.

Sharing Time Together

It has been argued that sharing time through rhythmic interactions plays a crucial role in the development of infants’ sense of continuity and identity (Gratier & Apter-Danon, 2009). Malloch and Trevarthen (2009) suggested that, from the moment of birth, infants possess intersubjective qualities that predispose them to engaging with others in rhythmic co-creation and sharing. Early interactions have been described as having a musical and dance-like quality, allowing both caregiver and infant to share time together and perform mutually beneficial behaviours (S. Malloch & Trevarthen, 2009). Indeed, research indicates that individuals with borderline personality disorder diagnoses often struggle with a fragmented sense of inner time, making it difficult to establish a stable pulse for creative interaction (Gratier & Apter-Danon, 2009). Shared rhythmic patterns essential to daily life and its routines

are unable to be constructed and maintained. In the infant–mother dyad, mothers with borderline personality disorder display a lack of turn-taking and, consequently, of co-creativity. Turn-taking is a way of sharing time, and it appears symbolic of more complex forms of sharing dialogue that develop later in life. In an Australian Broadcasting Corporation News article, “The Songs We Sing to Babies and Why We Sing Them” (Salleh & Qadar, 2023), there is an audio file that exemplifies early turn-taking. The file, called “Daphne Reacting to Mike’s Song”, features a father and infant each singing their part. The father leads the way, taking the main lead of the song, with the baby filling in the spaces. There is a sense of being in time together, as father and daughter carefully perform their individual part at exactly the right time. Communication experts Wiemann and Knapp (1975) suggested that turn-taking helps to define relationships; how one person uses their turn affects how the other person perceives them. From this perspective, turn-taking forms a non-verbal dialogue and carries implicit messages that contribute to the quality of the interaction (Wiemann & Knapp, 1975).

Turn-taking has synergies with the concept of *call and response* in music. Call and response occurs when one musician plays a phrase and another musician responds by repeating the same phrase or creating a commentary on the original phrase. Over time, musicians can use this style of interaction to build upon each other’s ideas in a mutually collaborative and individually creative way. A YouTube video shows two musicians co-creatively using call and response (Sunraarkansas, 2010). The drummer repeats the rhythm of the pianist’s melodies, then later in the piece introduces his own variations of the rhythm. There is a sense of attunement in the mirroring the drummer provides, while his own creative variations add flair and excitement to the interaction. In part two of the video, a more fluid and lively musical dialogue unfolds in which both pianist and drummer have more freedom in their repetitions and variations of each other’s musical performances. Their interplay reveals how they can share time together, playing to the pulse of the music and riffing off each other, while maintaining their own unique identities.

Gratier and Apter-Danon (2009) proposed that our earliest sense of belonging comes from synchronising and then embodying interactive motifs in relationship to others. This notion brings to mind the compositional technique of melodic motifs, which are short melodic or rhythmic figures (Kennedy, 2007) that recur. Perhaps adult communication might repeat melodic motifs that were developed in early relational dynamics. This would expand on the idea of implicit relational knowing—that humans carry a procedural knowledge of how to interact with others (Lyons-Ruth et al., 1998). By bringing attention to the repetition of melodic motifs in the present, it may be possible to discover a musical inheritance from the acoustic environment of early relational life.

In therapeutic process, a sensitivity to how time is shared together—that is, the CM of call and response between therapist and client—may provide insight into a client’s attachment history and their capacities or limitations for flexibility and mutuality. Indeed, some psychotherapists and counsellors consciously and intentionally adjust their speech rhythm to match the client’s emotional state to regulate emotion (Hegarty, 2020). For example, therapists working with trauma (e.g., drawing on polyvagal theory) focus on slow, rhythmic speaking patterns to activate the client’s parasympathetic nervous system (calming response). An awareness of the rhythmic patterns of sharing time may require therapists to reflect on their own flexibility or rigidity of responses and consider how this might be influenced by their own histories and co-create transference dynamics in the work.

Repetition and Improvisation

Connections between the musical concepts of repetition and improvisation, and attachment theory have been discussed in the literature (Gratier & Apter-Danon, 2009; S. Malloch & Trevarthen, 2009; Wiemann & Knapp, 1975). Jazz is a genre of music that often features improvisation. Jazz musicians coordinate through sharing a pulse and other temporal structures such as rhythmic feels and harmonic patterns. These repeating forms become the foundations upon which creative explorations can be developed. This relates to the concept of the secure base in attachment theory. In this regard, when a trusted attachment figure is present, a child feels free to explore, knowing it can always return to safety (Wallin, 2007). In the context of jazz music and attachment relationships, repetition creates a foundation in which a sense of familiarity allows for exploration.

Mazokopaki and Kugiumutazakis (2009) wrote about how infants encounter a song like a “musical other” that guides them into a process of creativity and exploration. The process is heightened in the presence of a real person, which can further excite the infant into exploring their musicality and self-expression. This co-creativity, which leads to an expansion of one’s individual capacities, was present between Lennon and McCartney, the prolific songwriting duo at the heart of The Beatles. In 1969, Lennon stated, “I wouldn’t write like I write now if it weren’t for Paul, and he wouldn’t write like he does if it weren’t for me” (as cited in Fallon, 1969).

In a psychotherapeutic framing of these ideas, intersubjectivity and mutual co-influence are understood as constituting the unfolding therapeutic relationship (Stolorow & Atwood, 1996). This is captured in the idea of psychotherapy as a mutually transformative process, such that when therapist and client bring themselves fully to the work, they are both changed (Jung, 1933).

Psychotherapy and counselling, which have the potential for mutuality and co-creativity, can open the possibility of both therapist and client engaging in a dance together, with its repetitions and variations. These rhythmic patterns may include verbal, non-verbal, and somatic modes of communication, including body movement, eye contact, and facial expression (Grassi, 2021). J.

R. Schore and Schore (2008) suggested an attuned therapist brings sensitivity to the rhythmic structures of the client's internal world. This is achieved through tracking the moment-to-moment non-verbal states of the client and synchronising with these. These elements of rhythmic attunement may provide a reparative sense of being together in time.

Rhythm in Intersubjective Relationship

Pickering (2020), a psychoanalytic couples therapist with training in musicology, suggested that when couples are in a state of intersubjective intimacy, their interaction is more melodious and includes improvised aspects of imitation, theme, and variation. Here the terms imitation, theme, and variation are similar to the concept of call and response, discussed earlier in the section on sharing time together. They refer to an ability for each person to mirror the other while also creatively developing the dialogue. Pickering (2020) contrasted this mode of relatedness with one in which traumatic material has been activated. In this state, the partners become "out of time" with each other, as the turn-taking breaks down and feelings of alienation grow (Pickering, 2020).

These two states of connection and conflict have their own accompanying rhythm. When there is a sense of relatedness, there is a *moderato* ambulant rhythm. *Moderato* is an Italian word for a tempo that is at walking pace (Kennedy, 2007). This is a rhythm of relating that is steady and companionable, in which there is a sense of playfulness, trust, and vulnerability (Pickering, 2020). When the couple is in conflict, Pickering noted, the vocal rhythm becomes fragmented, there is a repetition of well-worn verbal scripts, and the pitch becomes monotonous. Quantitative research has revealed direct connections between the tempo and rhythm of music, and corresponding states of physiological arousal (Gomez & Danuser, 2007). Variations in tempo are found in the human body, and changes in speed reflect a shift in levels of energy and excitement, such as moving from walking to running (Osbourne, 2009). As mentioned in the section titled Musical Dynamics and Melodic Contours in Speech, strong links seem to exist between rhythmic states that are reflected in speech, the body, tempo, and rhythm, and psychological states. These communicative and psychic states can be divided into two general types: those of playful relatedness and those of fragmented conflict.

A study involving mothers who had recently immigrated revealed that those experiencing a sense of cultural disorientation may lose confidence in their parenting abilities (Gratier & Apter-Danon, 2009). It was found that, in the absence of support from their home culture and its unique acoustic qualities, the mothers often became more rigid and predictable in their rhythmic expressions (Gratier & Apter-Danon, 2009). Consequently, the infants often exhibited reduced adventurousness and creativity in their own rhythmic responses (Gratier & Apter-Danon, 2009). Here, the mother and child are like musical improvisers, each creating rhythms together. If a mother can provide a steady, companionable, and flexible rhythm, the child

can respond in an equally creative, playful, and adventurous way. A culture's specific acoustic soundscape, which includes implicit rhythms of speech and communication, and the ambient soundscape of a land and place, may create resonances and sonic worlds that implicitly shape the musicality of interactive and affective life.

Bringing awareness to the rhythmic patterns in relating may allow a therapist to become more finely attuned to the psychic world and conflicts of the client and simultaneously become conscious of their own psyche-soma. However, viewing therapy primarily through the lens of musical exchange might have limitations; for instance, it might shift focus from authentic dialogue towards over-emphasis on performance-like dynamics, potentially creating pressure for psychotherapists and counsellors to synchronise rather than deeply listen.

In our exploration of rhythm in relating, we have explored its centrality to embodied, relational, and interactive patterns in human relationship and in psychotherapy. CM, including rhythmic sensitivity, is born of and co-influences the development of attachment, emotional attunement, co-creativity, and repertoire of relational responsiveness.

Discussion

Reviewing the literature from the domains of music, neuroscience, neurobiology, infant studies, psychoanalysis, psychotherapy, and counselling, this paper explored the implicit musicality that is embedded within and constitutes human communication, and how this informs the therapeutic encounter. Two interrelated elements were discussed: the musicality of speech, and the rhythms of relational exchange (titled "rhythm in relating"). Drawing on the concept of CM, the paper foregrounds how these two elements offer a medium for connection, attunement, and co-regulation with the client, and a deeper understanding of the client's relational developmental history.

The musical elements such as melody, pitch, rhythm, and dynamics were explored as conveyors of emotional meaning and connection, revealing more than the content of words themselves. This aligns with McGuinness and Overy's (2011) suggestion that music provides an intimate, embodied experience that does not carry an explicit message, but rather facilitates a shared experience of communion. The role of vocal timbre in emotional attunement revealed that the voice can be thought of as a musical instrument, with the capacity to affect others on a psychobiological level. This aligns with Siegel (1999) who suggested that affect is expressed through modulations of tone and other musical aspects of vocal expression. These expressions form right-to-right hemisphere communication and allow for emotional states to be shared through non-verbal signals (Siegel, 1999). The therapist's voice, much like the maternal voice in infancy (Marwick & Murray, 2009), can modulate client states, facilitate affective resonance, and foster secure relational bonds through careful modulation of tone, pitch, and dynamic expression. In exploration of the dynamic contours of speech, these were

found to reflect how feelings evolve in real time, and offer an audio map of emotional movement. In psychotherapy and counselling, tracking dynamic contours allows the practitioner to follow the client's internal landscape closely, rather than focusing on the lexical channel. Indeed, Paddock (2023) argued that the latter has been over-prioritised in psychoanalysis. The interplay of melodic consonance and dissonance in vocal exchange provided a valuable metaphor for understanding relational connection, rupture, and repair. Recognising moments of harmony and consonance, or dissonance and discord, provides a practitioner with the opportunity to enhance awareness of subtle relational shifts and become responsive to opportunities for relational repair. This is reflected in the notion that music offers a means not only of expressing emotion but of constituting the formation and maintenance of relational bonds (S. Malloch & Trevarthen, 2009).

Exploration of rhythm in relating revealed that rhythm is foundational to the coordination of movement of bodies and voices in time (S. Malloch & Trevarthen, 2009). Similar to improvised musical exchange, therapeutic dialogue involves an implicit relational negotiation of pacing, pauses, and turn-taking, which form part of sharing time together. This temporal dimension of human interaction is present from early life and co-creates relational connection or disruption. As Malloch and Trevarthen (2009) suggest, infants are born ready to interact co-creatively with others around them. Rhythm forms a central element of creative interaction; infant studies reveal that patterns of repetition and variation contribute to a sense of belonging and emerging individuality (Gratier & Apter-Danon, 2009). This interplay of repetition and improvisation is an emergent dynamic in therapeutic process. There recurrent themes, verbal phrases, and implicit gestures create continuity and implicit relational expectation, and an improvisatory therapeutic relational response may challenge the client's unconscious implicit relational knowing. These moments have the potential for new relational affective insights. As such, the therapeutic encounter can be framed as a co-created composition.

We also highlighted that relational rhythms and musical qualities are shaped by culture, history, and embodied memory. The acoustic environments of early life and cultural soundscapes seem to shape how individuals speak, listen, and engage. Attuning to these nuanced, culturally-inflected rhythms could assist therapists in deepening understanding of the client's embodied relational history and the ways in which cultural displacement, transition, and identity are present in the CM of therapeutic space.

Using the framework of CM in psychotherapy and counselling prioritises the value of listening to the music of the voice, the body, and rhythmic patterns to deepen the therapy process. Neurobiological research revealed how infants focus on the prosody of the mother's voice, and that it is the quality of voice that regulates the affective experience of the infant through right-to-right hemisphere, non-verbal communication. These affective

dialogues of CM build implicit models of attachment relationship, stored in the right hemisphere of the brain, which create lifelong strategies of affect regulation and interpersonal behaviour (A. N. Schore, 1994). This highlights the significance of CM in the formation of attachment and lifelong patterns of relating to self and other, and therefore its centrality in the psychotherapy and counselling process.

The perspectives explored in this article suggest that therapists may benefit from developing awareness of the musicality of their own communicative repertoire. Despite conscious intention, the therapist is likely to reveal their own psychic conflicts through discrepancies or dissonances that are communicated through the musicality of communication (Wallin, 2007). Siegel (1999) suggested the right brain is constantly transmitting non-verbal messages through prosody, tone, gesture, and facial expressions, which are then perceived by the other's right brain. The non-verbal, non-declarative, and intrinsically emotional nature of musicality stimulates right hemisphere communication that is central to the processing of emotional, relational, and unconscious interactions (McGilchrist, 2012).

There currently exists a wide range of literature that concerns non-verbal communication in psychotherapy and counselling (Hall et al., 2019; A. Schore, 2022; Siegel, 1999), including that of body language and facial expressions. Applying a framework of CM to psychotherapy and counselling foregrounds how the musical dimensions of speech and the rhythms of relating convey affective and relational information that extend beyond the semantic content of words. In doing so, it aligns with and extends existing literature on affective communication, intersubjectivity, and non-verbal processes in psychotherapy.

This framework applied to adult psychotherapy and counselling may be valuable for therapists whose methodological practice prioritises the declarative, spoken word of clients' narratives. It can highlight how CM both communicates and constitutes intrapersonal and interpersonal interactive communication in therapy. This is perhaps more relevant to some modes of therapy than others, for example, cognitive behavioural therapy, which tends towards prioritising linguistic declarative content of client communications over interpersonal, non-verbal, and embodied rhythms of relational process between client and therapist, moment to moment (Leahy, 2008). The integration and development of CM into psychotherapy and counselling, including practitioner education, may bring greater attention to the embodied, verbal, and non-verbal, and intuitive emotional nature of human interaction. This notion is strongly supported in research on neurobiology (McGilchrist, 2012; A. N. Schore, 2019; Siegel, 1999), trauma (Herman, 1992; Kalsched, 2013), and psychotherapy (Greenberg, 2008; Knox, 2013). Clinicians may benefit from reflexively considering the musicality of their own voice and rhythmic patterns, as co-influencers of therapeutic dynamics. Therapist musicality can also be used intentionally to support affect regulation with clients who are experiencing high states of arousal and

dysregulation. Camlin (2021) proposed that caring for the musicality of another may create feelings of love, as this mode of being with another can provoke a sense of being deeply understood by the other.

Integration of the lens of CM, and of embodied practices such as movement, music, and dance in psychotherapy and counselling education, may enhance therapists' sensitivity to the music or vocalics of the process. Some modes of psychotherapy and counselling already prioritise these modes of communicating and learning, for example, integrative arts psychotherapy and counselling (Vaculik & Nash, 2022). Further possibilities of application in psychotherapy and counselling education or supervision include observation of video recordings of clinical practice in which the spoken content of sessions is de-prioritised, and students or supervisees are trained to focus on CM in therapeutic process. Overemphasising musicality can, however, be problematic, for example, when working with neurodiversity, since musical elements of communication may vary.

Limitations

This paper was co-authored by two registered psychotherapists who have a lifelong engagement with music and are both from western European backgrounds. The primary author is a professionally trained musician with a Bachelor in Popular Music and worked as a contemporary composer, performer, and music teacher before qualifying as a psychotherapist. The second author is a psychotherapy educator and academic and trained as an integrative arts psychotherapist, undertaking doctoral research on teacher–student relating in conservatoire vocal studies education. This article is thus co-constructed from biographical histories involving music, psychotherapy, and the arts, and this constitutes the interpretive lens through which we engaged with the literature. We acknowledge that many readers may not have extensive or any musical training; therefore, we have offered insights from the world of music in the context of psychotherapy and counselling that aimed to be accessible for readers of all levels of engagement or relationship with music. A key limitation of the paper is the western European canon of literature that was reviewed, including western musical knowledge (e.g., musical performance, theory, expression, and interaction) and western psychotherapy, counselling, psychology, and neuroscience literature. Moreover, the western-centric framework of CM, while potentially accounting for the way that cultural differences shape how people embody and perceive prosody in communication, may not resonate across other cultural contexts.

Further Research

While existing research has examined vocal prosody and tone in the context of communication and emotional attunement, the musical concept of timbre has received limited attention. This study illuminated the significance of timbre in conveying and co-creating implicit emotional understanding of others. Future research might explore therapist timbre of voice and its

influence on therapeutic outcomes or investigate its effects on emotional and embodied responses of clients. An exploration of non-western traditions and knowledge constructions of music and CM in psychotherapy and counselling would be valuable. While there is neuroscientific and observational support for CM, quantifying its role in psychotherapy and counselling remains complex. This would require research to measure the therapeutic impact of prosodic patterns or micro-rhythmic synchrony in adult psychotherapy and counselling.

Conclusion

This article positions psychotherapy and counselling as fundamentally musical, embodied, and temporal, where meaning is co-created not only through words, but through the musical qualities of speech and the rhythmic patterns of relating. The paper suggests that beyond the semantic content of language, it is the elements of music, vocal timbre, dynamics and melodic contours, dissonance and consonance, along with the embodied rhythms of sharing time, repetition, and improvisation, and rhythm in intersubjective relating that are expressive of and constitute affective and relational life. The communicative musicality of therapeutic process offers a window into attachment histories and relational patterns, and it also provides opportunities for mutual attunement and transformation. The article revealed that a modern, neuroscience-informed approach recognises that all therapy is musical to some degree because language and verbal communication are inherently musical. In this regard, the traditional division between talking therapies and expressive therapies or music therapy can be questioned. We hope that the findings presented in this article may support integration of CM into training in order to cultivate an empathic and creative workforce (Spiro et al., 2023).

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