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GROUP SINGING AND COLLECTIVE IDENTITY¹

Abstract

Group singing creates a shared emotional, social, and cognitive experience. It was a crucial factor of early hominid physical survival because the survival needs of the group exceed the instincts of individual survival. Humans used group singing to make strong social bonds, express their identity, and attract a mate. Group singing of our ancestors was probably in unison and in-tune because they had the capability to store absolute pitch information for signals and sound patterns that were necessary for communication and survival. Group singing of modern humans at sports events and music concerts express national, social, and cultural identity, creating a sense of collective consciousness and the state of collective musical identity. This synchronous public singing could be very accurate, because everyone possesses absolute memory for pitch in melodies, while these emotionally engaged “neo-tribe” sing-along choruses point to group singing as a manifestation of the collective unconscious. Group singing provides physical, psychological, social, musical, and educational benefits for an individual’s well-being. It increases empathy and pro-social behaviors in children, which is of the utmost importance for music education.

Key words: group singing, collective identity, in-tune, neo-tribe, sing-along, well-being

SKUPINSKO PETJE IN KOLEKTIVNA IDENTITETA

Izveček

Skupinsko petje omogoča deljenje čustvenih, socialnih in kognitivnih doživetij. Predstavljalo je ključni dejavnik evolucijskega obstoja človeka, saj so preživetvene potrebe skupine prevladale nad instinkti individualnega preživetja. Naši predniki so skupinsko petje uporabljali z namenom ustvarjanja močnih socialnih povezav, za izražanje lastne identitete in da bi privlačili posameznike nasprotnega spola. Skupinsko petje naših prednikov je bilo verjetno v unisonu in uglašeno, saj naj bi posedovali sposobnost absolutnega posluha za zvočne dražljaje, ki so jim omogočali sporazumevanje in preživetje. Skupinsko petje sodobnega človeka na športnih dogodkih in glasbenih koncertih izraža narodnostno, družbeno in kulturno identiteto s tem, da ustvarja občutek kolektivne zavesti in stanja kolektivne glasbene identitete. To sinhrono javno petjo je precej uglašeno, saj naj bi bila univerzalna sposobnost človeka, da ima vrojene sposobnosti absolutnega posluha za tonske višine v melodijah, kadar pride do čustveno zavzetega “neo-plemenskega” skupinskega petja kot manifestacije kolektivnega nezavednega. Skupinsko petje prinaša fiziološke, psihološke, socialne, glasbeni in izobraževalne pozitivne učinke na posameznikovo blagostanje. Povečuje empatijo in prosocialno vedenje pri otrocih, kar predstavlja pomemben vidik glasbenega izobraževanja.

¹ This is an extended and revised version of a preliminary conference report that was presented at the 20th International Pedagogical Forum of Performing Arts, Belgrade, Serbia, September 29 - October 1, 2017.

Ključne besede: skupinsko petje, kolektivno nezavedno, uglašenos, neo-pleme, pripevanje, blagostanje

Introduction

The article gives an insight into the group singing experience, which is of great interest to evolutionary theorists, psychologists, sociologists, and musicologists. It is organized into five chapters. In the first, named “The origins of group singing”, we present group singing as a means of humans’ physical survival. We shall discuss group singing that was first found in human evolution. Humans sang together for different ritual and religious purposes, to attract a mate or in a hunt.

The idea of the second chapter, “The wisdom of crowds”, is that large groups of people are collectively smarter than individuals, so that could be a reason why crowds might sing in tune. Whereas the average individual is not necessarily a gifted performer, a large group of these imperfect singers performs in unison, surprisingly tuned. Another reason could be a collective unconsciousness of group singing that unites revelers in temporary “neo-tribe” choruses singing familiar songs in tune. Singing in tune is linked to the memory for absolute pitch in a melody, which is actually widespread.

The third chapter, “Football chants”, discusses group sing-along behavior at football matches. These chants remind us of “war-cry” tradition, when music was used to motivate a group of people to sing in unison. The same way of thinking extends to the next, fourth chapter, “Singing along in concerts”, which discusses the cultural phenomenon of group singing along at popular music concerts. Group singing interacts with the socio-cultural context where individual expresses self-identity within the social activity of group singing. Social bonding and identity expression could motivate audiences to sing along to music in a leisure context.

The final, fifth chapter, “The benefits of group singing”, polemicizes about the positive effects that group singing, whether formal or informal, can provide to an individual, improving his social, physical, and psychological well-being.

The origins of group singing

Many scientific theories have significantly contributed to our knowledge about the origins of group singing in the context of human evolution. It is claimed that group-singing behavior existed at the very beginnings of music (Brown, 2007), in the form of choral singing (Richman, 1993). Humans’ ability to sing together in harmony was a part of the first universal rituals (Jordania, 2011). Polyphonic singing existed in early human evolution, and the historical development of human musical culture went from polyphony to monophony (Jordania, 2011), from group to individual musical activity (Miron, 1972).

Through singing, humans were connected, because music establishes cohesion in human society (Blacking, 1973) and serves as an aid of social bonding (Dunbar, 1996). In ancient times, group singing and body movement put our ancestors into a battle trance and created a powerful mental network between individuals (Jordania, 2011). Group movement synchronization and cooperation was necessary for hunting (Kogan, 1997). Just like some

animal species (crickets or frogs) synchronize with each other in producing periodic rhythmic chorusing in courtship displays (Patel, 2008), humans' multi-male synchronous chorusing presented the competing groups of males inviting females for mating (Merker, 2000). Music served as a powerful aid of sexual attraction (Huron, 2003). Even Neanderthals sang to attract females, and their musical abilities were subject to sexual selection (Mithen, 2005). Interesting enough is the evidence showing that Neanderthals possessed the absolute pitch (AP) ability (Mithen, 2005). It was probably their capability to store AP information for signals or sound patterns that were necessary for communication.

Group singing is a communication of a basic emotional state (Welch, 2012) and a form of group identification, identity expression, and social bonding (Pawley & Mullensiefen, 2012). It allows people to feel like a part of a community, and therefore, it is central in forming a collective identity (Melucci, 1989; Eyerman & Jamison, 1998). Group singing evokes emotions, raises morale, strengthens solidarity, fosters hope, and unifies members against a common opponent (Bensimon, 2012). Therefore, group singing can be considered a social phenomenon, social ritual, and shared experience that Durkheim called *collective effervescence* (Durkheim, 1912).

The wisdom of crowds

With this theory, Durkheim wanted to explain the role emotions play within mass gathering (Durkheim, 1912). During these social rituals, through bodily processes of rhythmic entrainment, participants become synchronized with each other's motion and emotions, due to a special relationship between auditory temporal intervals (auditory input) and patterned movement (motor output) (Patel, 2008). There is neurological evidence showing that rhythmic entrainment is a basis for collective effervescence (Heinskou&Liebst, 2016) and that interpersonal synchrony increases social bonding and positive affect (Mogan, Fischer & Bulbulia, 2017). Collins's Interaction Ritual Theory (Collins, 1981) and the Theory of collective effervescence lead to the formation of *collective consciousness* or *collective mind* (Durkheim, 1912).

This fundamental sociological concept refers to the set of shared values, beliefs, attitudes, or knowledge that are common to a social group or society (Durkheim, 1893). The collective consciousness awakens our sense of belonging and identity, because individuals feel a sense of solidarity with each other, as collective identity presents the shared sense of belonging to a group (Melucci, 1989). The ritual outcomes are the building up of emotional energy in the individual, combined with the growth of group solidarity, morality, and membership symbols. In mass collective singing (at sports events or music concerts), pitch and rhythmic accuracy is recognized due to the emotional engagement, when synchronized movement creates a sense of connectedness and a state of collective musical identity (Jordania, 2011).

Contrary to Durkheim's *collective consciousness*, a Swiss psychiatrist and psychoanalyst Carl Jung, introduced the term *collective unconscious* that first appeared in his essay "The structure of the unconscious". Jung proposed that we are all born with a *collective unconscious*, which presents a set of memories and ideas that are shared amongst all of

humanity (Jung, 1981). Jung described this shared concept as *archetypes*, such as themes and characters emerging in our dreams or our culture (mother figure, for example). Music archetypes are a way of understanding deeper interactions in the collective consciousness of a performing group, due to a group experience that takes place on a lower level of consciousness than the experience of an individual (Jung, 1981).

Being a part of a group certainly influences the individual's feelings and behavior. Group memberships can have a positive impact on a person's mental health (Tajfel & Turner, 1986) and belonging to a number of different social groups can help us cope with life changes and can be an important predictor of health outcomes (Haslam et al., 2009). Before the members of a crowd of people can constitute a group, these individuals must have a common interest in an object, a similar emotional bias, and some degree of reciprocal influence (McDougall, 1920).

The idea of the wisdom of crowds can be traced back to Aristotle's theory of collective judgment (Aristotle, 1988). In his book "The Crowd: A Study of the Popular Mind", Le Bon wrote that when people become a part of a crowd, they lose almost all of their individuality, autonomy, personal judgment, and morality, by becoming caught up in the crowd's collective and often irrational influence (Le Bon, 1895). To unlock the unconscious mind, one should become a member of a crowd (Freud, 1922). In the book "The Wisdom of Crowds", Surowiecki explains that *collective wisdom* best solves: 1) cognitive problems, 2) coordination problems, and 3) cooperation problems. The example of the US navy that lost one of its submarines in 1968 shows how a group can be smarter than any individual. A naval officer asked a wide group of individuals to guess the submarine's location. The group's average guess was just 220 yards from the location where the submarine was found. The other example is the "Ask the Audience" as part of the quiz *Who Wants to Be a Millionaire*, where the studio audience gives the correct answer 91% of the time. It proves that groups should not be made up of exceptionally intelligent, well-informed, or rational people, in order to be smart and reach a wise decision collectively.

Therefore, groups do not need to be dominated by exceptionally musical people to be in tune. Everyone possesses absolute memory for pitch in melodies (Levitin, 1994), even adults with little formal musical training (Schellenberg & Trehub, 2003). If most of the people within a group are not particularly musical or talented for singing, they can still reach a collectively good intonation, because, in a large group, close enough is good enough. There do not have to be too many good singers in a crowd, but they should be evenly distributed. Off-key singers will then tend to tune up with their surroundings if there are some other persons with better intonation in their close neighborhood. Regardless of the intonation of each singer, the collective tone will be perceived to be in tune. When several harmonics are played together, the perceived pitch corresponds to a frequency that is not physically present due to its psychoacoustic properties (Lacasa, 2016). It means that a group reinforces the natural harmonics of a tone, creating the fuller and richer sound, and the average pitch, which is somewhere in the middle.

Off-key singers tend to find one of those strong harmonics and match it, which doesn't happen when they are singing solo, because of the fear of solo singing in public and confidence when singing in a group (Whidden, 2008). When a large group of people sings

in unison, the pitches that match both what the performers are doing and what we expect are achieved. Huron proposes the psychological theory of expectation, showing how emotions evoked by expectation involve predicted responses (Huron, 2006). It means that while listening to music, our brain tells us what will happen next. When listening to a pop song, we pretty much know what is going to happen next. The more “traditional” the harmony, the more accurate the singing will be (Sterling, 1984). If something different from what the brain expected happens, depending on the person, it will make us like or dislike the song more. Music preferences are one of the important predictors of sing-along behavior or *sing-along-ability*.

By singing along, people create a familiar atmosphere in different venues (Bennett, 1997), facilitate social bonding, (Packer & Ballantyne, 2011) create positive social interaction (Finnegan, 2007), and vice versa: musical identities are developed in the social activity of group singing (Davidson & Faulkner, 2016). Nowadays, group sing-along behavior occurs regularly at football matches and popular music concerts.

Football chants

Football chants express social and cultural identity. Moreover, they establish the individual and collective identity and express the individual’s self-concept as a member of one social group (Tajfel, 1981). It is interesting that, as fans increasingly gain a strong sense of belonging to the community, shared faith, and commitment to be together, their singing becomes more in tune. Furthermore, the more developed football as a sport has become, the more precise tuning of singers at the stadiums has been. Group singing seems to develop as human consciousness and culture develop because music played a crucial role in the development of the human mind and cultural cognition (van der Schyff, 2014). There is some evidence showing that musicality is the ability of great antiquity and fundamental part of being human (Mithen, 2006). Anyhow, we can understand singing in-tune as an ancient category, but still cannot surely tell if it is biologically inherited or it is a product of the environment.

In some countries, such as England, there is a long and well-known tradition of singing at football matches. Therefore, football fans in England are able to sing historical or adaptations of popular songs, a mock of the originals, songs from musicals, nursery rhymes, or even the classical themes. The first-ever football anthem is Sir Edward Elgar’s “He Banged the Leather for Goal” (1898). In the second half of the 20th century, football supporters began singing and creating chants to accompany games (Kopiez & Brink, 1999). The first chant ever sung at the football match was “You’ll Never Walk Alone” by Rodgers and Hammerstein. Since the 1960s, Liverpool F.C. fans have sung this song with intense emotions, where the song peak coincides with the long holding tone in-tune (<https://www.youtube.com/watch?v=Go-jJIgdlso>).

Singing along behavior could be viewed from the “neo-tribes” perspective (Maffesoli & Foulkes, 1988; Malbon, 1999). In his pioneering book “The Soccer Tribe”, British zoologist Morris relates soccer to tribal living and compares football fans with a tribe (Morris, 1981). *The first similarity* can be observed when the selected individuals, such as

ratified fan leaders, initiate the chant, while a large group of fans joins in quickly (Kopiez & Brink, 1999). The lead singer, or anthemic leader, unites fans in a temporary “neo-tribe” and motivates them to tune together in relative unison (WordNet, 2010). This could be compared to Brown’s theory of “contagious heterophony”, recognized in wolves howling, when one animal starts calling and other members of the group join in (Brown, 2007). This type of singing is also seen in the ancient Serbian folk songs named “ojkanje”, where one singer starts and then the rest of the singers join in (Petrović & Ljubinković, 2011). *The second similarity* is that football chants remind us of a “call to a party”, an invitation to participate in the party through singing, and might be compared to a “war-cry”. “War-cry” in fighting battles is traditionally male-dominated, so male singers are more “sing-along-able” than females. Male vocalists might think that joining in with female singers is a threat to their masculinity. Therefore, they tend to sing more anthemic songs than females (sports anthems, for example, see Dockwray, 2005).

The third similarity is that fans of both football clubs have their own terraces (territories), from where they encourage their own team and jeer at the opposite one (Kopiez & Brink, 1999). The role of football chants today and ancient war songs is similar, and that is to inform the opponent fans/enemy about the strength, group strategy, and territory ownership (Hagen & Bryant, 2003). *The last, fourth similarity* shows that both football chants and ancient group songs were emotionally engaged choruses of highly synchronized sounds (Hagen & Hammerstein, 2009). Besides singing, fans clap and rhythmically applaud, so through bodily processes of rhythmic entrainment, participants become synchronized with each other’s motion and emotions (Durkheim, 1912). Interaction ritual theory (interaction ritual chains) proves that the intense emotional and ritual experiences of sports fans effect singing in tune (Collins, 1981). The role of emotion in group solidarity is important for understanding fan behavior and singing along in tune.

Singing along in concerts

Sing-along behavior is the musical quality that might motivate an individual to sing along to a particular song (Pawley, 2009). Several musical factors influence sing-along behavior, but there is no indication of a single or simple “sing-along formula” (Pawley & Müllensiefen, 2012). According to the evidence, the only song that made 100% of the audience sing along was “Imagine” by John Lennon (Pawley & Müllensiefen, 2012). High energy, high chest voice, and songs with clarity of consonants and lesser use of melismas usually motivate the audience to sing along (Pawley & Müllensiefen, 2012). What makes rock songs sing-along-able are short phrases in the chorus, little rhythmic variability, descending melodic contours, and simple intervallic movements (Dockwray, 2005). It seems the audience feels motivated to sing along if songs are catchy and easy to learn, having short phrases within the octave range and being more syllabic (Stefani, 1987). However, some very complex songs in both lyrical and musical aspects make fans sing along in-tune. The question then arises: what makes a song difficult for singing? In his work, Geissmann (2000) argues that complex songs (signals) evolved first and that meanings were added to these signals later (Fitch, 2006).

A very complex, but “sing-along-able” song is “Bohemian Rhapsody”, the Queen’s biggest worldwide hit. The lead singer Freddie Mercury reached out to everybody in the

Wembley stadium in 1985 and fans accompanied by singing in tune, primarily as being deeply touched by the beauty of the song and emotions that the singer shared (<https://www.youtube.com/watch?v=oozJH6jSr2U>).² It seems pretty reasonable to assume that memory for AP and group singing in tune co-exists with the emotion associated with the piece (Eschrich, Münte & Altenmüller, 2008). The song mixes genres of ballad, opera, and rock anthem. It lasts almost six minutes and includes six completely different sections with character, tempo, and meter changes. *Lyric variables* that could motivate fans to sing along are: the entire song is in English³, with some words from non-English languages (Galileo, Fandango, Figaro, Magnifico, Bismillah, Belzebub); the presence of the third person singular (mama, he); combination of person/group in chorus. *Vocal style variables* that could provoke singing along are: more frequent/intensive use of reverb effects in chorus; the song is mostly sung with some speech parts; very relaxed and calm style in verse is in contrast to the highly energized choruses; the song is mostly syllabic with some melisma; precise consonants; backing and main vocals play equal role; vibrato (Pawley & Müllensiefen, 2012). It is known that when a baby is exceptionally distressed, the cry contains vibrato (Vonwiller, 1986) and has an emotional effect on the parents (Seashore, 1967). It seems that vibrato and some other musical features have a strong emotional influence on listeners resembling primitive emotional responses (Davis, 1998). It is like Mercury's "call to party" - he starts singing and then fans continue together in unison or take over - and unites fans in the "neo-tribe". Concerts fans experienced a temporary social bonding (Mogan, Fischer & Bulbulia, 2017), felt connected to the performer by engaging with live music (Packer & Ballantyne, 2011), and became synchronized with each other's motion and emotions.

There is evidence that proves infants display a range of "proto-musical" behaviors, producing regular synchronization of vocal and kinesthetic patterns gaining multimodal sensory information (Papousek, 1996). It means that infants not only listen to sounds, but also produce them and actively move while doing so because music of different cultures, throughout history and in various societies, has always involved not just sound, but action, too (Blacking, 1973). The relation between singing and evolution can only emerge from an understanding of music's identity in cultural context and its manifestation in early childhood and development (Cross, 2001). Therefore, group singing has been a major component of music education (Spruce, 2002) because of the huge benefits it brings.

2 However, many years after Mercury's death, the crowd of 60,000 people precisely sings "Bohemian Rhapsody" without the singer even been there (<https://www.youtube.com/watch?v=YL9E1Sm5Pik>).

3 It is interesting enough to mention that at the concert of the same band in Rio de Janeiro, the crowd of 400,000 people sang the song "Love of my life" in tune, even though their maternal language is not English, but Portuguese (<https://www.youtube.com/watch?v=fGCBXdY4HKQ>).

The benefits of group singing

The benefits of group singing are: *physical, psychological, social, musical, and educational* (Welch, 2012).

Physical benefits of group singing relate to respiratory and cardiac function. Group singing could improve lung and heart function and immune system. Lung cancer patients who sang in a choir had a greater expiratory capacity than those who did not (Gale et al., 2012). Also, it can help the development of fine and gross motor control in the vocal system and neurological functioning (Welch, 2012).

Psychological benefits relate to: intra-personal communication, the development of an individual's identity, singing as a cathartic activity, and interpersonal communication (Welch, 2012). Group singing can reduce anxiety and depression and positively affects people with chronic mental illness (Grocke et al., 2009). It reduces the stress hormone cortisol during choir rehearsals in professional and amateur singers (Beck et al., 2000). It also improves mood by releasing positive neurochemicals such as β -endorphin, dopamine, serotonin, and oxytocin into the forebrain (Freeman, 2000). When singing in a group, the immunoglobulin A, an endocrine defense against bacterial infection in the upper respiratory tract, is being increased (Clift et al., 2010). The satisfaction of performing together is associated with the activation of the brain's reward system.

Social benefits relate to an enhanced sense of social inclusion and better social well-being. From the time a child is born, singing is the most basic form of interpersonal, social, and cultural communication (Welch, 2012). Group singing has the potential to enhance the quality of life because it can help improve singers' attention, focus, and regular commitment (Clift et al., 2010). It decreases loneliness (Cohen, 2006) and strengthens social musical identities (Davidson & Faulkner, 2015) by forming social bonding (Pawley & Mullensiefen, 2012; Welch, 2012). There is evidence to suggest that singing can be beneficial for building a sense of community, i.e. children with more developed singing ability tend to have a more positive sense of being socially integrated (Welch et al., 2014). Furthermore, singing in schools improves self-esteem, confidence, enjoyment, and engagement in the class. Some studies reported singing increases empathy (Rabinowitch et al., 2012). Group singing has a huge effect on the homeless, marginalized people, and middle-class people (Bailey & Davidson, 2005). The act of singing conveys information about group membership (age, gender, culture, social group) and emotionally unites people. By inducing emotions, music changes behavior, so emotion is required for rational decision-making (Mithen, 2005).

Musical benefits from group singing relate to the realization of musical potential and the creation of an individual's musical repertoire. Vocal learning is a basic and widespread skill (Racette & Peretz, 2007), while the ability to sing in tune is an indicator of the general musical ability (Welch, Sergeant & White, 1997). For children, singing in tune presents a continuum of skill, ranging from almost total "untunefulness", through degrees of increasing vocal pitch control, to vocal pitch accuracy regardless of the tonal center of the melody (Welch, 1985). The relative proportion of "in-tune" singers has been found to increase as a function of age. Some results show that approximately 35% of seven-years-olds in western countries sing "out-of-tune" in contrast to only 7% of the

eleven-year-old population. There is also a clearer gender difference, with girls being more competent “in-tune” singers than boys (Welch, Sergeant & White, 1997).

Finally, the educational benefits of group singing relate to increasing skills, knowledge, and understanding about the world around us, both in music and through music (Welch, 2012). Good singing experiences at school are also believed to be a major component of developing a lifelong interest and involvement in music (Pitts, 2009). However, when people lose ties with their traditional culture, the role of singing decreases in society. Evidence suggests that singing is a relatively low-status element of Music education in schools (Finney, 2000), and children’s singing skills progress relatively slowly at the start of school (Leighton & Lamont, 2006). Many primary school teachers lack confidence in their own singing skills (Neokleous, 2009) and may not be singing much with their classes, preferring to rely on recordings. In many schools, singing has become a selective element of Music education in schools (for example, extracurricular choirs) (Bray, 2009). Referring to the previous arguments of group singing benefits, getting singing back to primary schools as the central musical activity, and offering group singing to every primary-school child, is of utmost importance.

Conclusion

Group singing is the oldest form of humans’ collective identity expression. It served to humans’ physical survival through male-dominated “war-cry” in battles or “call to party” in mating. In traditional or “primitive” societies, group singing, as a part of religion and rituals, played an important role in producing collective consciousness and the state of collective musical identity.

Nowadays, football chants and singing along in concerts allow researchers a unique insight into human music behavior. Fans’ tribal behavior provokes singing in-tune because of their emotional engagement, the stability of auditory imagery, and latent absolute pitch ability, i.e., absolute memory for the pitch in favorite melodies. While some authors believe fans are motivated to sing along if songs are easy to learn, contain short phrases, small range, little rhythmic variability, and simple intervallic movements, the others argue that there were complex signals/songs that developed first.

Group singing is an integral component of music education because the positive connection between singing and well-being has been proven. It is confirmed that regular singing contributes to good mental and physical health, and that singing improves social development among children. Regular high-quality singing at school has a positive impact on learning outcomes. Therefore, group singing has to be placed at the heart of music education, and a singing strategy to develop singing activities and choirs accessible to all pupils.

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Povzetek

Skupinsko petje predstavlja najstarejšo obliko izražanja ljudi. V tradicionalnih družbah je bilo skupinsko petje del verskih obredov in ritualov ter je tako igralo pomembno vlogo pri oblikovanju kolektivnega zavesti in stanja kolektivne glasbene identitete. Skupinsko petje je bil ključni dejavnik v zgodnjem razvoju človeka, saj mu je omogočal fizično preživetje s pomočjo bojnih krikov vodilnega moškega v krdelu in mu predstavljal tudi klic priprave na paritev. Skupinsko petje naših prednikov je bilo verjetno unisono in uglašeno, saj naj bi človeška vrsta takrat posedovala absolutni posluš za zvočne dražljaje, ki so bili ključni za medsebojno sporazumevanje in preživetje. Skupinsko petje sodobnega človeka na športnih dogodkih in glasbenih koncertih izraža narodnostno, družbeno in kulturno identiteto. Ob skupnem petju feni delijo čustvena, socialna in kognitivna doživetja. Sinhrono pripevanje je običajno intonančno pravilno zaradi močnih socialnih vezi in čustvene zavzetosti. Nekateri avtorji so predpostavljajo, da so feni motivirani za skupinsko petje, če so pesmi enostavne za naučit, če vsebujejo kratke fraze v manjšem obsegu in z malo ritmične variabilnosti in enostavne intervalne postope. Drugi avtorji pa trdijo, da so se evolucijsko najprej razvili kompleksni glasovni signali/pesmi. V skladu s slednjo predpostavko lahko razumemo pripevanje ob zelo kompleksni skladbi "Bohemian rhapsody" Britanske rock skupine Queen. Feni pripevajo in ohranjajo ritmično in melodično točnost, ker skladba izvablja močne čustvene odzive pri poslušalcih. To čustveno zavzeto "neo-plemensko" pripevanje kaže, da vsak človek inherentno poseduje stabilnost zvočne imaginacije in latentno sposobnost absolutnega posluha. Ta absolutni spomin za tonsko višino v priljubljenih melodijah nakazuje, da so glasbene preference eden izmed pomembnih napovednikov ubranega in uglašene petja. Skupinsko petje predstavlja integralno komponento glasbenega izobraževanja, ker zagotavlja fiziološke, psihološke, socialne, glasbene in izobraževalne pozitivne učinke za posameznikovo blagostanje. Potrjeno je bilo, da redno petje prispeva k mentalnem in telesnem zdravju in da spodbuja empatijo in prosocialno vedenj pri otrocih. Redno kakovostno petje v vrtcih in šolah ima pozitivne učinke na učne dosežke. Zato je potrebno zborovsko petje umestiti v samo jedro glasbenega izobraževanja in ga narediti dostopnega vsem učencem.