Consonante, the barrier-free method:
Orchestral work with individuals with severe disabilities

Suggested Citation

Abstract
Consonante is a method that offers musical participation for people living with severe disabilities. In order to make instrumental music possible for these individuals, two key concepts were found. The musical instruments have to be modified to suit the physical abilities of each individual musician. Custom-built musical instruments must be altered to give a consonant accompaniment. The Consonante method provides an opportunity for personal, emotional and intellectual growth, development in perceptual and sensory skills, fine and gross movement, verbal and nonverbal communication, socialization, attention, emotions, cognitive and learning abilities. This article is an exploration of how I built on the Consonante method (Vlaskamp, 2005) through my work with individuals with severe disabilities and their involvement in an orchestra.

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Special Education and Inclusion in Hungary

Köncei (2009) cited the Hungarian National Disability Program reported that “people with disabilities were invisible citizens of this country for a long time” (p.84). This situation is caused by the long history of institutional segregation in education. The first segregated institution for children with severe disabilities was established in 1875 by Jakab Frím, where cutting edge educational methods were established. One of these approaches was music (Tiszai, 2013; Gordosné-Szabo, 2004).

Due to different changes in the regulation of public education, in the second half of the nineteenth century, the system changed. Children with disabilities diagnosed to be ‘educable’ and ‘trainable’ could go to segregated special schools while children with severe disabilities, diagnosed to be ‘untrainable’ were placed in nursing homes. Until 1993 children with severe intellectual disabilities were not given the opportunity to attend school or receive private training hours in their homes (Köncei, 2009). Thus, the majority of adults with severe disabilities could never attend public schools or receive any kind of training or therapy. Because of the limited number of day-care services for people with more severe disabilities, these adults usually lived in residential or family homes that provided educational or therapeutic activities. Further complicating matters, high numbers of Hungarian families caring for a member with severe disabilities live under the poverty level (Mencap, 2001).

Hungary joined the European Union in 2004 and signed the international document on disability rights in 2007. Although the education law gradually introduced compulsory education for all children, social law provides far less opportunity for adults with severe disabilities. Consequently, those adults living in residential care, who can not participate in formal education in their childhood, still have limited access to educational, recreational, or therapeutic activities.

The Consonante Method

The Consonante Method was developed in Szent Erzsébet Home, in Ipolytölgyes. Szent Erzsébet Home is a nursing home for 150 people with severe disabilities. Zijlstra and
Vlaskamp (2005) found that listening to music provided free-time activity for people with severe disabilities. When listening to music, most of these individuals perform movements synchronized with the pulse and character of the music. These physical and emotional reactions to the music shows that individuals with severe disabilities are fully capable of appreciating music, giving motivation to caregivers to provide more musical experiences for their clients. While it is easy to discover the connection between music and behavioral changes, it is more difficult to determine that someone is being fascinated by a visual impression. Thus, musical interest is more often recognized than other artistic aptitudes (Vlaskamp, 2005).

I wanted to offer more musical activities that implement the recreational model of music therapy in which “The primary aim, whether implemented in institutional or community settings, is to help individuals engage in music or the other arts as leisure time or social activities that will enhance the quality of life, while also serving as a vehicle for therapeutic change” (Bruscia, 1998, p. 225). One such organization is the Nádizumzum Orchestra, founded in 2007. Here all musicians are residents of the nursing home and are adults with severe disabilities. Although in the last decades, numerous methods have been established in the field of community music therapy and special musical education for people with different disabilities, there is a definite need for a method that offers musical participation for people with severe disabilities. This article is an exploration of how I built on the Consonante method (Vlaskamp, 2005) through my work with individuals with severe disabilities and their involvement in an orchestra.

**Vitality Affects: From Receptive Experience to Active Participation**

In order to provide more musical participation I started to analyze the aforementioned highly musical movements and gestures that adults with severe disabilities performed as they listened to music. Specifically, I looked for possible signs of emotional involvement. A common sign of involvement is looking or going close to the source of music (Denise & Wigram, 2007). Individuals with limited motor ability respond to music with an increased level of attention, as evidenced by visible physiological reactions. These changes include changes in the scope of their muscle tone, facial expressions, or body position. These movements were more than stereotypical or repetitive patterns. Even with a highly limited repertoire of movements participants appeared to make dynamic responses to the music, matching in force, time, space or intention with the music. Daniel Stern (2010), psychiatrist, psychoanalyst, and infant researcher, describes these cross modal matching of behaviors as vitality affects.
The Special Features of Musical Involvement of Individuals With Severe Disabilities

In my own experience I have found in order to be a member of a performing orchestra, music should be an intrinsic motivation for the person. This extraordinary interest – which I would call musical talent - manifests itself in atypical forms that are difficult to measure with traditional methods. The nature, anatomy, and extent of musical talent have scarcely been studied in cases of severe motor impairment, lack of verbal communication and limited cognitive ability. In my own work I have found that individuals with severe disabilities are generally physically unable to complete the tasks of different musical tests. Aural perception can be measured by a number of clearly defined characteristics of sound, such as pitch, loudness, rhythm, time and timbre. New computer based testing procedures, as well as traditional methods for testing aural skills, expect some kind of response to these perceptions. Tests involve motor skills, verbal communication, or other abilities (Gilbert, 1981). As Professor Gerald Hüther (2009) pointed out, one of the most precise fine motor activities in the body is the control of the vocal-cords. Consequently, singing off-key is not an obvious sign of the lack of inner hearing, but rather the result of the incapacity to control the vocal cords. The same problem manifests itself in the case of producing rhythm: the inability of moving in time with a rhythm is a possible consequence of the delayed motor response. Consequently, the evaluation of the abilities in my participants must be based on close observation of the affirmative musical responses. Often the limitation of their motor and other skills can lead to misinterpretation of their actual musical abilities.

Signs of Musical Interest

The musical involvement of my clients usually manifested itself as a pattern involving more than one significant change in the person's behavior. It varied from motionless silence to the vocal or bodily expression of joy. In order to be part of the orchestra, observed active musical behavior was the most important criterion for participation. I have observed that a special sign of musical intelligence occurs when people take pleasure in imitating and responding to the surrounding environmental sounds: these clients usually sing, whistle, clap or use different objects as musical instrument. Many of the clients continually repeat different movements to create new and interesting sounds, for example, drumming on different objects or using a comb, or toothbrush as a mallet.

In observing these actions, I could distinguish that for some participants the sound produced by movement was more captivating than the movement itself. Performers with musical talents play with involvement. Their compositions are not just monotonic repetitions of the same sound, but they create music with changing dynamics, varying levels
of intensity, and orchestrating different tone-colors. I described these improvisations with different musical terms such as accelerando, rondo or theme-variations. These observed musical behaviors are not unique reactions of differently abled people, but a part of our innate human musical behavior. (Aigen, 2005; Malloch & Trevarthen, 2009; Marcus, 2012; Nordoff & Robbins, 1977). Similar musical play occurs in infancy as an innate ability to create music emerges. Modern composers, like John Cage, used this kind of playful behavior to experiment with sound. Many of his works, for example Child of Tree (1975) or Branches (1976), are percussion works using pod rattles, made from a Mexican Poinciana tree and cacti. Cage used these rattles and amplified their sound with contact microphones. I find similarities between Cage’s work and the musical curiosity of my clients.

Modern composers, for example John Cage, one of the most prominent figures of the American avant-garde style used this kind of playful experiments with sound.

**An Instrument to Suit the Movement**

As Rosenkranz et al. (2007) point out, “Playing a musical instrument is one of the most complex skills a human can achieve” (p. 5200). This activity requires focus and attention. Simplifying the process of learning to play a musical instrument from the perspective of motor development means practicing and honing new complex fine movements that are built on functional motor skills. These complex fine movements seem to be in contradiction with the natural gestures evoked by music. Nijs, et al. (2005) explain, the goal of mastering a musical instrument is to “prevent the musical instrument from standing in between what the musician wants and what he gets” (p.132). They describe this learning process as step-by-step incorporation of the musical instrument as an organic component of the body-scheme or “a natural extension of the musician”(Nijs, et al., p.132).
In pursuit of an appropriate instrument to suit the musician, one must identify and make use of their own specialized movements. In some cases, therapists should use their client’s given, customary and often repeated movements to make an instrument sound (Tiszai, 2013). While professional musicians spend many years making their instrument an integrated part of the dynamic structure of their body, therapists should find individual sound-producing movements which are already a part of the natural gestures of their clients. Finding an appropriate instrument to suit the individualized movement repertoire of the musician can be a long and challenging process and a result of careful research and experimentation.

In contrast to the traditional way of teaching and automatizing new fine movements, the Consonante method uses a reverse strategy of searching for special instruments that could be modified to suit the abilities of individuals with physical limitations (Tiszai, 2013). For example, one of my participants, an orchestra member, favorite activities was playing with the slider of the zipper. I wanted to find an instrument suited to her movements and after trying different instruments a small tambourine was the final choice. She made sounds with metal parts using a similar finger-movement as she exhibited with the zipper.

The first step in my work was to distinguish whether or not these students could establish a relationship with their instrument. Future musicians must recognize that their actions can orchestrate sound. Some of the individuals in this project were able to produce sound with an instrument, but they did not connect the sound they were making with their movements. Another condition of participation was the ability to persevere in the musical and movement activity. For some, listening to music is completely fulfilling in itself and trying to adapt them to an instrument only temporally kept them occupied and satisfied. Other individuals became engaged with this new world of music and were willing to try multiple instruments and test alternating new sounds. Consequently, they are able to recognize that they were producing the music that surrounded them.

Following this realization, the next challenge was to convince the future musicians to carry on with this newly found activity through repetition of sounds and movements. It was essential to facilitate this movement by trying out instruments of varying sizes, and in different positions or holders, to find the most natural and comfortable position for playing. These instruments were in various forms and rigidity. For example, musicians often use slightly modified guitar-picks to create sound. These picks are usually quite large and have an easily accessible spongy or plastic handle in order to accommodate the physiognomy of each individual musician. The sound quality of the instrument was also essential in this process, because the joy experienced through the creation of musical sounds remains the most important motivation for the musicians.
Bass Sound and the Perfect 5th

The movement analysis of these musicians helped professionals find instruments in which clients were able to create basic rhythmic beats. The next goal was to utilize instruments to create melodies. Instruments had to be found that could accompany any melody. The inspiration was the Hungarian zither (citera). This was a popular instrument in Hungarian folk culture. Zithers are easy to make and easy to play, and have great variety in form, size, and timbre. The simplest version called the “trough-zither” resembles an oblong rectangular trough with an open side facing the table.

The zither has only a few strings on which the main melody is generally played; the remaining strings always play the same sound. These strings are called guest strings. The guest strings provide a continual accompaniment of bass sound and perfect fifth regardless of the melody, which are the most stable and consonant intervals of a musical scale. Whichever folk song is played on this instrument, this accompaniment is pleasant consonant, but determines the key in which the melody can be played. This double accompaniment is a typical phenomenon in Hungarian folk music, called Bagpipe Bass (Balogh & Bolya, 2008).

The idea of the orchestra was based on this folk tradition. However, in our orchestra instruments had to be found and modified to suit a simplified style of accompaniment, where only these consonant tunes were played. This structure completely differs from the norm experienced in classical music or orchestras, where instruments can play any melody in any keys.

Attunement and Community

In order to be a part of a performing group, the members of the group should be able to follow the flow of music around them. This required orchestra members to step out of their own private sphere of isolation. I found that this does not always happen automatically, as witnessing and becoming part of a common group was a new challenge for these individuals.

Daniel Stern (1985) defines emotional attunement as “the intersubjective sharing of affect” (p.141). Stern’s (1985) understanding is based on three basic forms of intersubjectivity: joint attention, joint intention, and joint affect. This means “dynamic micro-momentary shifts in intensity over time that are perceived as patterned changes within ourselves and others” (Beebe, et al., 2003, p. 815). Stern notes this automatic synchronization as the core element of performing arts, especially music and dance. He describes emotional attunement as the first and most crucial mode of intersubjective sharing where more than one dimension of behaviors should match. He finds the intensity contour (profile of change in intensity over time) as the most frequent dimension of matching (Stern, 1985).
This subconscious cross-modal matching of perceived musical behaviors helps musicians to synchronize their movements to the beat of the performed piece and fellow musicians. If the musicians enjoy listening to music, they are apt to try to join in this collective production of sound and melody, initially through dance and the repetition of movements, and later on through the use of their instruments. Through my own experience I have realized that it is imperative that there be a few highly motivated musicians in the orchestra who serve as positive role models and sources of inspiration for the other players.

In addition to creating unanimous beat for the music, this cross-modal attunement is an important therapeutic experience of emotional sharing and belonging to the community. Participants with challenging behavior usually disrupt the unity of sound, but the performance and the joy of the core-members usually helps to motivate and involve these applicants. Furthermore, I have observed that these meaningful activities help musically talented individuals to overcome their aggressive or disturbing behavior. Thus, professionals should start the founding process with a few motivated musicians, involving other participants one by one when the unity of the musicians is stable enough for the new challenge. An example of this type of scaffolded participation is Martín’s (2013) work with a choir made up of patients of a psychiatric hospital. In his work, an already functioning choir invited members of an existing choir to give temporary support and be the core model of their new musical community. As the new choir was strong enough these supporting members left the choir, allowing them to function on their own (Martín, 2013).

**Instrumentation**

Finding an appropriate instrument to suit the individualized automatic movements of the musician can be a long and challenging process. It was essential that only well tuned instruments were used. Joy experienced through the creation of sound through music is only possible through the application of instruments of a relatively high quality. This insures that the orchestra produced pleasant sounds with instruments in good condition (Tiszai, 2013). In order to be able to persevere in a musical activity without being bored or tired, the way of using the instrument should suit the gross and fine motor skills of the future orchestra members. For example, banging a string instrument with a perpendicular stick or mallet is a more natural movement than using picks to make a string sound. Musicians have to use different fine movements of their wrist to be able to pick, while they can bang the strings by using many different movements of the elbow, humeral, or wrist joints. In order to facilitate this movement, it is recommended to use large plastic cards with a sponge or a plastic handle instead of small guitar-picks.
Another challenge was aggressive behavior. For example, some of the musicians enjoyed banging the instruments stronger than is optimal. In this case hard metal strings and a soft mallet were be used to suit these strong and often aggressive movements. Repeated banging, oftentimes decreases the tension of the participant. If the joy of making music is captivating enough for the musicians, it is possible to refocus their full attention on the created sound and become members of the orchestra.

Another approach to adapting instruments to participants is through modification. Musical instruments can be modified, allowing participants to use their legs if they have nonfunctional hands. One of our members with cerebral palsy could control only her legs. She became the drummer of our orchestra, tasked with kicking a big drum. Because she kicked her instrument so hard that it moved position, I tried to block it with stones. Not finding adequate stability, we created a metal holder which connected her wheelchair. This holder kept the drum at a fixed distance from her feet, allowing her to kick and participate, but also keeping the drum in place while she played. Moreover, when musicians cannot use their limbs but have proper control over breathing, wind instruments such as the pan flute with mouthpiece, tuning whistle or mouth organ are also adaptable with a holder.

The Significance and Value of Folk Music

The orchestra focused on created folk music for a variety of reasons. Kodály considered folk songs to be a child’s own “musical mother-tongue” (2007, p. 192). The repertoire of the Nádizumzum Orchestra consists of over 80 Hungarian folk songs. These songs are popular and well-known in Hungary; therefore, the audience can participate and sing along with the orchestra. Folk music is captivating for participation, offers an immersion into common cultural heritage, and thus, rebuilds the challenged sense of fellowship (Tiszai, 2015). The described model can be used by other nations. Hungarian folk music applies and uses melodies based on the pentatonic scale that is widely used in folk-music around the globe. Moreover, the fundamental tone and the perfect fifth are basic in tonal music. This makes it possible to use this form of accompaniment with other kinds of songs from foreign countries.

Participation without Obligation

Those who want to enjoy music occasionally can also profit from the Consonante Method. According to Isaac Stern, the one who learns to enjoy music will become a musician (cited by Gyarmati, 2002). Learning to play an instrument always presupposes effort and hard work. In the case of adults struggling with severe disabilities, they can be motivated by the joy of creating their own music. These people have to overcome the secondary
consequences of social isolation and hospitalization, such as addictive habits of self-stimulation. They have to leave the security of their own world, adapt themselves to the group, and delay the gratification of their needs. Many participants in the orchestra were not able to cope with these challenges or they wanted to participate without any obligation. In order to give an opportunity to other clients to participate in the orchestra for a single occasion or shorter period, open rehearsals called joy-music events were announced. These events allowed participants to contribute to the orchestra without committing to participating over an extended period of time.

**Therapeutic Effects**

The common shared musical activity helped individuals to connect to the surrounding reality, fellow musicians, and the whole society. These musicians learned to pay attention to one another and adjust their personal creative expression to the common performance. In addition to the special connections between the musicians, this creative and sensitive attention to nurturing musical skills had a strong role in community building.

**Community Building**

Music and preverbal communication both use the tonal and temporal qualities of sound, such as pitch, timbre, pulse, tempo and rhythm. According to Stern (1985), this communicative interplay of sounds and movements creates a firm basis for affect attunement, which is a form of intersubjectivity. This musical communication is a basic experience of a performing group and enhances the quality of the relationship and the sense of self. Based on Stern’s theoretical framework, Reinders (2008) underlines the importance of intersubjectivity; he mentions friendship and relationships, as the core element of life-satisfaction for people with severe disabilities. Similarly, Zeedyk et al. (2009) argue that affective attunement holds the sense of belonging and the feeling of connection, which are more important features of communication than sharing information.

Although people living in institutions spend their whole life in a group setting, they usually have a poor network of relationships, socialization is minimal and they compete for rivalry attention of the caregivers. Ironically, they become insular in the continual presence of others (Mencap, 2001). People with severe disabilities need a lot of personal attention, and it is exceptionally burdensome and fearful for them to come out of their own world. Research shows that such isolation is not only a problem of institutional settings but also manifests itself in the case of families caring for children and adults with severe disabilities (Mencap, 2001).
In the orchestra at the Szent Erzsébet Home, full participation can be a long process. First new members had to make connections with the surrounding reality, and they have to be present. Some of the musicians first enjoyed the music in a receptive way and played the instrument just for a few moments. Others were very preoccupied with their instruments without paying attention to the common shared melody. But later on they found ways to enjoy both. Participants continued their movements to the beat of the music, contributing to the rhythm of the main theme.

In the music sessions they could experience a new way of belonging. They had to learn not to expect the full attention of the leader; but instead to feel a part of a musical community. Any kind of sound made with their instrument is always consonante, in other words all of their instrumental actions are in harmony with the whole. After a two or three years of membership they acquired a sense of togetherness, they started to tease each other, and have fun with one another. This equality and mutuality brought a completely new perspective into their lives.

Another aspect of community building was created by performing. The Community Music Therapy Approach accentuates the importance of musical performance as social inclusion. Public performances of different minority groups increase the social status of the performers, facilitate social actions, and promote social recognition and empowerment (Brynjulf, 2012; Jampel, 2011; Ruud 2008). The concerts helped the audience to relate to individuals, who usually are recognized only by their disabilities. They are now musicians performing for an audience. This is a reverse situation where the community benefits from the products of those members who typically receive support without any mutuality.

**Personal Development**

Musical communication resembles basic pre-verbal interaction, because “communication and music are fundamentally made up of the same elements” (Wigram et al. 2002. p.88). Although the described performance-orientated orchestral work does not use these elements to reach therapeutic goals, years of common musical communication creates a special group-coherence and intersubjectivity with complex and interactive preverbal communication patterns. Daniel Stern's theory (1985, 2010) describes the relational aspects of the individual development. Stern accentuates the role that pre-verbal interactions play on emotional attachment and individual development.

Orchestra participants were often deprived of the ability to take responsibility for their own lives and usually do not have tasks and responsibilities of their own. In spite of this, they understood the meaning of the obligations that came along with being a part of an orchestra. They had to make an instrument sound and persevere in this activity. For them it
was a challenge even to stay in the same place and persevere in their performance. They also had to learn to delay the gratification of their needs and to tolerate the frustration that comes along with these adjustments. In other words, they learned to use their sensory, motor, and cognitive skills to accomplish tasks. This activity increased their sense of agency and self-esteem. Their level of concentration improved, so much that they can now play for an hour to ninety minutes.

By giving concerts, orchestra members experienced success and appreciation. Gaining applause was an extraordinary experience for these musicians. They became aware of their ability to give, this stood in contrast to their everyday experiences of dependency. They also developed a sense of equality and mutuality, again in contrast to the often unequal relationships experienced in Szent Erzsébet Home. This new perspective increased their self-esteem and self-confidence. This was also important for the parents and families of orchestra participants. We found that the concerts were the first events when they could be proud of their grown up child, this was observe through sharing photos and videos from the concerts with others.

Future Perspectives

Agency, in other words independency and free-choice making is one of the most important focuses of the disability rights movement. As Rimmerman (2013) points out employment is a key facilitator of promoting social participation of people with disabilities. Employment skills and career goals strengthen self-confidence, self-esteem and subsequently enhance community engagement and integration. In addition, this agency facilitates social interaction with co-workers and engagement in social activities outside the workplace. Unfortunately, people with severe disabilities are usually not able to fulfill the norms of employment, but participation in the performing arts can be a way to fill this gap.

Music as Professional Work

The Baltazar Theatre, the only professional theatre company in Hungary whose members are mentally challenged actors and actresses, is an example of this approach. The theatre was founded in January 1998, creating the conditions for people with disabilities to earn a living from their talent. The assumption that people with severe disabilities are not capable of working is a stereotype that depends on culturally specific contexts. The social model of disability underlines the environmental and personal contextual factors, therefore the activity and participation of people with severe disabilities is the responsibility of the whole society (Sayers, 2001). As a result, it depends on the society norms and values, where there is a demand for example, in the performance of such an orchestra as the Nádizumzum.
Family Orchestra

This method could also be used in therapy for families, most especially within families that have a child struggling with severe disabilities. The structure and overall balance within such families often deviates from the norm, where the members with disability often feel they are not capable of living up to their family members’ expectations, whereas other family members often feel they have to take over all the tasks and responsibilities. Such activities could provide opportunities to alleviate these preconceived roles. When family members are able to play together without stress and judgment, they experience all the members having a special way of interpreting music as a communal effort. The experience gained as a family orchestra could serve as a new model for the families where they are able to recognize new strengths of each member, which allows them to rethink the responsibilities and roles of the family members.

Conclusion

Consonante is a powerful method for individuals with severe physical and intellectual disabilities, where music empowers individuals to emerge from the bounds of isolation. Modified orchestral work allows participants to overcome their various behavioral and psychiatric problems. In order to make instrumental music possible for individuals with severe motor dysfunctions, two modifications are needed. First, the musical instruments have to be modified to suit the physical abilities of each individual musician. Second, custom built musical instruments must be altered to give a consonant accompaniment.

Seven years of orchestral work has shown that Consonante gives musicians an opportunity for personal, emotional and intellectual growth. Through the commonly shared musical performances as members, they must learn to pay attention to one another. Therefore, they must learn to be an active member of the community. Participation in the orchestra allows individuals with severe disabilities to form relationships with fellow members where neither party is forced to play the weaker, subordinate role. The joy of playing music together in and of itself acts as motivation for participants. Musical performance and concert settings permit musicians to experience appreciation of their talents and efforts. Their self-esteem grows because they finally feel successful. The Consonante method also acts as a powerful promoter of personal growth, by providing a bridge for marginalized and isolated members of society. The voice of music helps fill the void of silence in which these individuals are forced to live. Music is the instrument that gives these individuals the opportunity to explore the beauty of play a part and by finding their voices to share with the rest of the world.
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Tiszai graduated from Ötvös Lorand University in 2000 in special education and earned her second degree in music education in 2004. In 2013 she earned her master degree in Andragogy (Adult Education) at Pazmany Péter Catholic University. Her musical background is based on the Kodály method. Her area of expertise lies in working with individuals with disabilities. Since 2007 she has been working with individuals with severe physical and learning disabilities in a nursing home in Ipolytölgyes, Hungary. The focus of her work is the promotion of social inclusion. Since 2016 February she has worked at University of Szeged Faculty of Education Institute of Special Needs Education.