Back to basic: What is missing in the virtual choir as a practice?

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Abstract
Conventionally, choir as a group activity has its dynamics through interpersonal interaction. In many studies, even interpersonal interaction became the main focus in examining social skill enhancement. The 2020 pandemic has forced our choir society to move from in-person interaction into one that includes telecommunication media massively. The idea of media changing brought up the broad known concept of a virtual choir with its problematic terms and processes. This practice's pros and cons arise in tension, purpose, and perspective. The present study would like to portray the interpersonal interaction in a choir that has the potential to enhance empathy as a social skill and how the concept of the virtual choir proposed a different perspective to this world of empathy.
Through an in-depth interview of choir conductors this study compares the form and role of empathy in the traditional choir and the virtual one. It also tries to explain the hole of interpersonal interaction in the virtual choir and predict its effect on the singer inside the group.
It is showed that virtual choir and online rehearsal scheme is potent in maintain choir continuity and give alternative of flexible rehearsal. Meanwhile, in terms of learning materials dan social interaction many things is missing such as the ability to build advance musical achivement and choral sound together, the chance of building sense of team, and the collective energy that foster empathic ability.

Keywords: choir, virtual choir, empathy

INTRODUCTION

The choir has been seen as a social place for many social groups, such as refugees (Schuff, 2014), disadvantaged people (Dingle et al., 2013), homosexuals (Latimer, 2008), people with mental health disorders (Clift & Morrison, 2011), and homeless people (Bailey & Davidson, 2002). Those researches showed the characteristic of a choir as a place to socialize where individuals feel accepted, be involved in a social environment, and not be stereotyped negatively. Related to interpersonal interaction that generates in choir groups as a practice, other researchers tried to portray the potential of this activity in enhancing social and emotional skills (Faulkner & Davidson, 2006; Parsons, 2014; Silber, 2005). One of the social skills that are widely portrayed in those researches is empathy. Empathy gained a big highlight

since it is considered important in the communication process , teamwork (Luca & Tarricone, 2011), and potential to enhance prosocial behavior. Since choir activity tends to provide interpersonal interaction, it is considered potent to foster empathy in individuals. This assumption resonates with the idea of the relation between musical group activity and empathy in some research (Rabinowitch et al., 2013).

Generally, empathy is defined as a mental state that is driven by another's mental state, the ability to adapt to another's mental state, and to respond with proper emotion (Baron-Cohen, 2009; Goldstein & Winner, 2012; Greenberg & Rentfrow, 2017; Hoffman, 2008). The mechanism behind empathy is explained by (Hoffman, 2008)to be generated in five modes: mimicry, conditioning, direct association, verbally-mediated association, and perspective taking. The first three modes are thought involuntary and based on surface observation. Meanwhile, the second later modes tend to use higher cognitive functions such as mental visualization and certain cognitive and verbal skill. To understand more about the cognitive process of empathy, we can borrow the explanation from the theory of mind that is popular under the name of mentalizing and mind-reading, which refers to an individual's ability to understand another's mental state (Goldstein & Winner, 2012). There are two streams of thought in this theory that is the theory of mind (TT) and the simulation theory of mind (ST), which ended up bringing up the hybrid between these two (Zahavi, 2010; Shanton & Goldman, 2010). TT emphasizes that understanding another's mental state mainly depends on the intellectual process started on our conclusion to others. The way an individual concludes another's mental state is deeply related to someone's knowledge about faith, desire, or emotion they had. ST brought up different ideas from TT, emphasizing the main role of an individual's cognitive process in understanding another's mental state. It is assumed humans use its brain as a model to understand another's mental state. Though these two streams explained two different mechanisms, both of them agreed on the idea that mental is unobservable, so it needs to be observed through action as its manifestation. What is explained by TT and ST tend to be called as cognitive empathy where it mainly focuses on cognitive process without involve many emotional aspects.

The explanation of why and how particular musical activity can foster empathic abilities in individuals tried to be explained by much research. Rabinowitch, et. al (2012) explained the effects of musical group interaction on empathic skills indicated by the face recognition test. It shows that some elements of musical group interaction, namely motor resonance, imitation, and entrainment, are potent to foster empathic skills. Another research (Parsons, 2014) showed the effect of musical training during childhood on pitch recognition of adults in identifying

infants' distress and how it is related to empathic ability. It shows how pitch recognition is helpful in empathic communication and understanding. The idea behind empathy and music to promote empathy is based on the assumptions that both music and empathy are cognitive and affective driven in their process (Greenberg et al., 2015). To borrow the explanation of (Hoffman, 2008) about five empathy modes; mimicry, conditioning, direct association, verbally-mediated association, and perspective taking, we can find out how these modes appear in choir practices. Mimicry as an essential part of imitating is commonly found in choir rehearsal since singers tend to imitate facial expressions to control their voice production as directed by the conductor (Manternach, 2012). Direct association and conditioning in Hoffman's explanation indicate the presence of a tangible object as an example or model for individuals. It resonates with the idea of modeling in Gonzo (1977), where the conductor tent to provide a model or actual example of voice, sound, or musical executions to be understood and executed by singers. The following modes of Hoffman's explanation are verbally-mediated association and perspective taking that require metacognitive analysis, visual imagination, and verbal skills, similar to Gonzo's idea (1977) of psychological attempts in terms of affective, visual imagination, verbal communication, and metaphors during choir practices.

The relation between empathic abilities and musical achievement is also explained by Wardani (2019) to be reciprocal, where empathic abilities support the attempt to achieve musical cohesion, and musical interaction during choir practice is potent in enhancing empathic abilities in singers. It also explained how empathic listening is beneficial in social and musical contexts during choir practices as part of musicianship to achieve better musical outcomes. Other empathic abilities that are considered constructive during choir practices are cognitive empathy, which has a role in visualizing and translating verbal instructions into muscle and musical responses. Meanwhile, affective empathy in the form of empathy concern tent to be constructive to repress singers' distress and support each other during pra-performance.

During the pandemic of COVID-19, the social distancing policy forced the choir society to swift their practices from live choir rehearsals and concerts into virtual ones. The virtual choir is not a new practice. Eric Whitacre, an American composer, created this concept in 2009, involving thousands of singers worldwide performing his composition *Lux Aurumque* (Galván & Clauhs, 2020). Now that choir society has no option during the COVID-19 pandemic, they adopted this idea, and suddenly it is boomed in many countries in different forms. The way choir society percept this very concept varies among its member. A scrutiny work done by Daffern et al.

(2021) articulates this practice's heterogonous view and perception. This research divided virtual choir into three primary practices: multi-track, live streamed, and live teleconferencing.

Through qualitative analysis of open text questions, Daffern et al. discover six main themes from the data. The virtual choir cannot be seen as merely advantageous or disadvantageous but to understand the implication of this spectrum to the member and facilitators of the choir. In terms of the positive aspect, a virtual choir can be seen as a place to facilitate choir continuity in the middle of uncertainty, an alternative of flexible and affordable rehearsal, and a condition that force the facilitator to be creative and find new rehearsal method. Meanwhile, another point of view highlighted the disappearance of social interaction during a virtual scheme that implicates not only social aspects but also a musical element. The absence of this interaction is considered to make rehearsal more difficult for certain singers since he/she receive no support from the stronger singer as in the live rehearsal. The virtual scheme is also considered to hamper the development of musical skills since the feedback cannot be done in detail as it is in live rehearsal.

Further, the implication of this social interaction absence emphasized how there is no sense of being "part of something" and increased the sense of loneliness in some singers (Daffern et al., 2021). This research showed how virtual rehearsal and virtual choir schemes affect individuals differently based on their need for social interactions and musical ability. Nevertheless, the concept of a virtual choir tends to elicit a broad spectrum of perceptions among its members.

METHOD

To answer the research question, Wardani conducted qualitative research through in-depth interview to choir conductors that are actively produced and involved in virtual choir project as an adjustment of social distancing policy during pandemic. The interview was done by teleconference focusing on examining the practices during virtual choir process: the learning, the interpersonal interaction, the obstacles, the adjusment and approach, and things in between related to empathy generation. Data collected during interview were transcribed and analysed to identify generated theme related to research questions. The step of analysis including data coding, code classifications, code elimination, and interpretation.

RESULTS

    1. Virtual Choir as An Alternative of Choir Continuity

The analysis of the interview transcription elicits some themes about virtual choir practices and their comparison with the live rehearsal. The first theme is Continuity, which emphasizes the consideration behind conductors' decision to do virtual choir where is it better to do the minimun rather than do nothing:

"the activity needs to be maintained since rehearsal is the core of the organisation (choir). Members come to the rehearsal with a purpose: to rehears, and everything else is following. If we stop the rehearsal, then there is no everything else." (BSU)

As an alternative of choir practice, virtual choir also offered a flexible and affordable rehearsal. It allowed members from different cities keep participating in the choir project. This benefit is more pronounced for independent choir whose former members get around different cities:

"now it can be a reunion when former member of my choir in different cities can join the concert because it is done online" (BSU)

Further, the importance of continuity as part of the learning process seems to override the core of singing itself, musical ability:

"yaa, we can't put same target of live rehearsal and online rehearsal. It is difficult for me to check and control such voice production through teleconference media. The (internet) connection, the device, the surroundings of the singers during teleconfere, many aspect that is not ideal for a rehearsal. But again, it has to keep going. The practice" (BSU)

    2. Adjusment of Learning Materials and Musical Targets and Its impact on singers' behaviour

Meanwhile, the theme of Learning Materials varies regarding obstacles and benefits during virtual choir.

"online rehearsal only accommodate small group of singers in a same room (of teleconference) so that it allow us to be more detail and pay more attention to each of our singer since we can sing together in sync. We focus on the development of individual voices. It is more like a vocal course instead of choir" (JFA)

"they sing with MIDI. Together with the MIDI sound that we prepared. By listening to the audio guide, we already forfeit the elemen of sight singing and musical notation reading. Yes, it might help their ability in hearing but it is not the thing. They don't really sight read. But that's the only option" (BSU)

"I didn't put hight target as I did normally. I used to focus on four aspect of competition standart scoring. But it is impossible to achieve it online. Yes, fidelity to score, we can learn it. But choral sound?" (BSU)

"No, we can't work on choral sound, indeed. Balance, blending, the things that need singing together in achieving can't be done during online rehearsal. That is why our focus is on individual singers, to make them sound approximately similar

as an individual. But they tend to show confidence. The pitch intonation is better for each singer. They are brave enough to sing and show their voice." (JFA)

How the Learning Materials change during the virtual scheme also creates a different behavior for some singers based on their differences.

"now it depends on the singer. High-achieving and professional singer tend to feel bored with the rehearsal. The process and the target. They tend to not showing they are highly potential. As simple as do the task. But the student choir, the new singers, see it as a challenge, new thing they want to do. They were excited." (BSU)

"the singers become more independent. They know how to take a reference note on piano since they have to do it by themselves during online rehearsals. It shows when they do live rehearsal, they know what to do as an individual singer" (JFA)

3. The change of social interaction and the form of empathic ability

The most highlighted theme is Social Interaction, which shows different scenarios in different rehearsal schemes.

"They interact as a small group.. five people maximum. So they tend to feel strange with members from another small group. Be shy, be awkward in our first live rehearsal eventhough they sing together in many virtual music production" (JFA)

"Indeed they were awkward to each other in our first live rehearsal. it doesn't feel like we've been singing together in many productions. Eventhough it's not happen in all singers. The comitees were more fluid in interacting with singers. Like… they were the one who approach member that has problem in rehearsal" (BSU)

In the sense of Empathic Ability related to the musical approach, social interactions tend to work differently in online schemes. Here is some context of live rehearsal as a prior comparison:

"we sing as a group, so that everything done together. Like creating dynamic of forte *by uniting singers high energy and hold the volume together for the* piano. *It is not an individual work, it is teamwork. You can achieve choir* forte *by shouting alone nor make the* piano *by yourself when everyone is loud. It is always team work….the way you hear other people 's voice" (BSU)*

"they used to practice together in rehearsal break. I don't ask them to do so, they do it because they want to. Like singing together to practice their difficult part seems help them to make it easy. Yes, it is teamwork. They helped each other during rehearsal break as well" (JFA)

Moreover, the thing becomes different in the online scheme where singers do not interact in person to achieve musical elements.

"(if there were any singers who find any difficulties in musical approach during rehearsal) there will be a team of committee who will approach them and give them extra rehearsal." (BSU)

That condition also mentioned that certain interactions between singers happened because there is a responsibility from a committee to make sure that all members can follow the practice materials. So it did not show a genuine understanding moved by the empathic approach between singers.

One of the most visible aspects of the empathic ability involved in a choir as a social group is a facial expression and gesture recognition. The analysis showed that long-term in-person interaction has a big contribution in offering this skill that is hard to be achieved through short-term interaction, even less in a teleconference.

"at first of our live rehearsal, it seemed hard for them (virtual singer) to understand (my gesture). I think it is because we don't really explore gestural instruction during online rehearsal. Or simply they haven't know me that long enough. But it is also difficult to conduct you properly online…like almost impossible. It will only little gesture to help you imagine the voice production. That's all" (BSU)

"The solid one (choir) is the one who stay longer with me. Like we already know each other, they understand my gesture. I conduct lightly and they totally understand it. But it's kind of different… hard for this singer (the online singer) who never know me in person and only learn through screen. Yes we can be connected but in a different sense with the solid one" (JFA)

"Yes, I am still using body gestures in online rehearsal. It helps them to imagine the voice production we want to achieve. Moreover, children find it fun to use gestures and imagination to learn something new. However, no, not that detail of conducting. (JFA)

Even further, the role of social interaction in choral sound production has moved to a technology approach that erases many elements of empathic interaction.

"we implement singer positioning in order to achieve blending and balance. It created certain perception in their mind about their musical ability and their responsibility to coordinate…like the soprano in outter position tend to lead the sopran in her left side. Or the singer in back need to support the singer in front of them. That is just an example, but the thing is their sense of role can be build by the positioning. So that we can achive choral sound…the blending and balancing" (BSU)

"to move together in virtual choir is hard. We only chase for the intonation. Not more than that" (BSU)

"no, blending and balancing can't be done in virtual scheme. Indeed, the empathic form in our (virtual) group is differ from the live rehearsal furthermore they practice in a small group… we can only tell that we are one team eventhough we don't see each other. I facilitate them to understand that we are team." (JFA)

"no more positioning, no dominant role of me and singer to produce the choral sound. Now it's audio editor. The mixing, mastering." (BSU)

"we do blocking in live rehearsal. We mute the unwanted voices in virtual choir" (JFA)

Further, this summary of virtual choir mentioned in this transcription,

"no, it is not ideal. I don't receive the energy and emotion I need to build the mood, the music, the atmosphere. Choir is singing together but not virtually. It is something different. But it helps us to accommodate flexible rehearsal, yes. Only that" (BSU)

"it is a good opportunity to be more detail in singers as individuals, but not to work detail in the choir itself. The technology put big part here" (JFA)

DISCUSSIONS

To understand the choir as a social space, we need to embrace those musical elements that are not the only focus of choir discourse. During the pandemic, it shows that musical elements are being reduced in many ways: the downgrade of the musical target, the inability to achieve a certain choral standard, and even more, the prominent role of technology that overrides the singers and conductors. It is easy to acknowledge virtual choir and online rehearsal as an alternative to choir continuity during the pandemic situation and as a flexible way to accommodate singers able to attend live rehearsal without being neglected by the team. However, one thing is more prominent in this phenomenon: the missing experience of in-person social interaction and its dynamic potential to promote specific social skills.

Even if some research shows the potential of virtual reality (VR) in promoting empathy (Bertrand et al., 2018; Rueda & Lara, 2020), we need to be clear that virtual choir offers a different concept from virtual reality. VR requires specific prerequisites, "the sense of being in a different place" that specific sensory experiences can support. Furthermore, (Bendall, 2020) explained how to define a virtual choir as a multimodal creative product by emphasizing the methodology and form of choral performance with the materialities of media creation.

In the sense of social interaction during virtual choir production and online choir rehearsal that is less intense and dynamic than the live choir, we should rethink how this practice will affect singers' emotional and social aspect and their musical enhancement. In the data analysis, we can see clearly how these practices reduce many musical targets in the considerations of online rehearsal limitations: the internet connection, the device being used, and the surrounding of the singers, eventhough another interview emphasizes the advantage of online rehearsal to pay more attention in individual singing skill. One of the essential things in singing together as a musical journey is to understand the role of each singer and how to proportionately adjust individuals' voices to the group (Sublett, 2009). It will increase the individuals' sensitivity to musical aspects and result in the sense of moving together as a team (Bailey & Davidson, 2002; Ferrell, 2010; Müller &

Lindenberger, 2011). When this idea of a choir group as a social team is missing, another important concept of the choir and its social benefit will gradually lose its spirit.

One important thing of voice adjustment as part of empathic listening is to achieve the blending, balancing, and choral sound in general (Wardani, 2019). Meanwhile, one of the most significant issues in the virtual choir is how mentioned aspects can easily be replaced by technology and the role of audio-video editors. Previously, singers had to be fully aware of how they sounded compared to their fellow singers and adjust to ensure they achieved the desired choral sound. The virtual choir provides full editing access from pitch and time-delay correction, volume adjustment, and voice effect until voice panning to create such 3D voice sensation as if the singers were in a specific stage positioning. Video editing is also getting more creative by not only putting singers' videos as if they sing in a multi-frame media but also editing as if the singers were on a live stage with a conductor. Now with the sophistication of audio-video editing where singers can do the bare minimum musical aspect and still produce well-quality virtual choir video, is it too much to say that virtual choir is more into digital media art than choir *per se*?

The choir as a social group and the genuine interpersonal interaction that happen in it is one of the main reason why this musical activity is beneficial in enhancing empathic ability. It is as simple as undertanding a teammate's hardship during practice or performance and giving them sincere support mentally and musically. Meanwhile, the online scheme in one interview by BSU showed that this genuine interaction is away because certain committees had been formed to look after the singers that give no room for generic interaction and understanding from fellow members. The singers might be told to accept fellow members as teammates without their generic experience of interacting as a team. Another interview data from JFA showed that the central role of social support is in the conductor facilitating a meaningful and constructive understanding of singers as a team.

In terms of empathy enhancement, we need to do a deeper reconceptualization of choir as an online rehearsal to ensure that empathic ability can still be fostered. Online rehearsal and virtual choir have left little room for the advanced gesture and facial expression recognition between members and conductors or among members. Meanwhile, the theory (Fuelberth, 2004; Goldstein & Winner, 2012; Gonzo, 1977; Hoffman, 2008; Zahavi, 2010) suggest it to be the main feature that allows individual to learn the basic of others' mental state understanding. It is also crucial for a choir group to feel the emotion of others in order to train their affective empathy and to sing together as part of empathic listening practice (Wardani, 2019).

In conclusion, a virtual choir and online rehearsal scheme is still a good alternative if our consideration is merely choir continuity and maintaining the activity of the groups. Nevertheless, every individual in online choir groups needs to re-examine their purpose in the choir. By understanding the needs of individuals as social creatures and the potential choir have to enrich our social experience, we ought to create a more inclusive, generic, and dynamic social space.

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