

Entry

COVID-19 and Participatory Music-Making

Esther M. Morgan-Ellis 

Music Department, College of Arts and Letters, University of North Georgia, Dahlonega, GA 30597, USA; esther.morgan-ellis@ung.edu

Definition: Participatory music-making is any music-making activity in which individuals engage for the sake of the activity itself. It can be contrasted with presentational music-making, which takes the production of a performance or recording for consumption by an audience as a principal objective. During the COVID-19 pandemic, participatory musicians adopted a variety of technological means by which to make music together online. While virtual activities allowed these individuals to sustain their communities and grow as musicians, they did not satisfy all the needs met by in-person music-making. Additionally, online music-making increased access for some but posed barriers to access for others. Virtual participatory music-making remains relevant following the relaxation of pandemic restrictions, and it will likely grow in significance as communications technologies and internet access improve.

Keywords: online music-making; virtual music-making; participatory performance; Irish traditional music; old-time music; shape-note singing; congregational singing; community singing

1. Introduction

Social distancing measures that were mandated or voluntarily adopted during the COVID-19 pandemic inevitably impacted the activities of all musicians, especially those who perform for live audiences and those who gather in groups to make music. Early in the pandemic, music ensembles made headlines following several “superspreader events” that took place at choir rehearsals [1,2]. The risk undertaken by singers was scrutinized most closely, given their reliance on breath for sound production and their habit of performing in close proximity to one another using resonant indoor spaces [3,4]. Emphasis was placed on the dispersal of aerosols and droplets, which also accompanies sound production in wind instruments [5,6]. While various in-person mitigation strategies were proposed [7,8], most choral ensembles ultimately adopted virtual approaches to rehearsing and performing [9]. Other collaborative and performing musicians likewise turned to the internet as the most viable means of sustaining their practices. This entry will consider the full range of pandemic impacts on participatory musicians in particular, focusing on their uses of the internet to play and sing together.

2. Defining and Categorizing Participatory Music-Making

This entry is uniquely concerned with participatory music-making, which can involve singers and/or instrumentalists. Turino has described participatory music-making as a practice in which “there are no artist-audience distinctions, only participants and potential participants”, and during which “one’s primary attention is on the activity, on the doing, and on the other participants, rather than on an end product that results from the activity” [10] (p. 28). While it is sometimes a simple task to identify whether a musical occasion is participatory (e.g., a sea shanty singalong in a tavern) or presentational (e.g., a choir concert in a performance hall), most collaborative music-making takes place somewhere on a spectrum between the two extremes. For example, participants in college a cappella groups rehearse and perform, which are hallmarks of presentational music-making, but



Citation: Morgan-Ellis, E.M. COVID-19 and Participatory Music-Making. *Encyclopedia* 2024, 4, 709–719. <https://doi.org/10.3390/encyclopedia4020044>

Academic Editor: Stephen Bustin

Received: 15 March 2024

Revised: 23 April 2024

Accepted: 25 April 2024

Published: 27 April 2024



Copyright: © 2024 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

they are likely to train their focus “on the activity, on the doing, and on the other participants”, and the act of participation is often valued more highly than presentational accomplishments [11]. While participatory values are present in many performing ensembles, this entry will center on non-presenting collaborative musicians. During the pandemic, these individuals pursued virtual music-making for reasons that were not related to presentational performance (e.g., maintaining social connections, continuing to develop skills, and remaining immersed in a repertoire). Their needs and practices were, therefore, different from those of musicians looking to perform and reach audiences. As the pandemic recedes, these musicians have maintained many of their virtual music-making practices, which—while frustrating or valueless for presentational musicians [12]—often meet the needs of participatory communities.

In-person participatory music-making activities can be divided into two types: those in which musical participation is the purpose for convening and those in which it is secondary. The first of these categories is strongly, although not exclusively, associated with vernacular or “folk” traditions. Most of these descend from community music practices associated with a traditional culture and are accessible to participants with a low skill level yet still immersive for high-skill participants. Some communities, such as the Kaluli people of Papua New Guinea [13] or the Aymara in Southern Peru [14], collectively engage with instrumental and/or vocal music-making as a part of daily life. In Westernized contexts, participatory music-making is more likely to be a discrete activity that occurs at a scheduled time and in a specific place. Examples of participatory music communities that have been well documented in the scholarly literature include Irish traditional musicians (ITM), who play and/or sing Irish music collectively in the context of sessions [15]; old-time (OTM) and bluegrass musicians, who play American tunes at jams [16]; hip-hop rappers, beatboxers, and breakers, who exchange verses and dance moves in the context of cyphers [17]; shape-note singers, who participate in a collective hymn-singing tradition rooted in the US South [18]; English carolers, who gather in public spaces to sing traditional carols during the Christmas season [19]; and drum circle participants, who engage with a range of culturally specific drumming practices [20]. Each of these traditions is characterized by a unique repertoire and distinctive practices. However, participatory music-making is not the purview of the vernacular realm. The field also includes, for example, karaoke singers, who visit public establishments to sing popular songs—often in groups—with prerecorded accompaniment [21], and various community singing groups that adopt repertoire reflective of their shared interests or values [22]. While classical music is strongly associated with presentational performance, it too might become participatory when, for example, a group of string players gather in a domestic space to sightread string quartets [23]. What all these examples share in common is the fact that auditors are either absent or of no concern to the musicians, who participate for themselves and one another.

When participatory music-making takes place as an adjunct to a non-musical gathering, it almost always involves singing. Examples include singing in the context of worship [24], singing or chanting at sporting events [25,26], singing at protests or other political events [27], and singing for icebreakers or group bonding purposes as part of a social gathering [28]. Although these contexts decenter music-making, musical activity plays an important role in regulating participants’ emotions, confirming group identity, and enhancing feelings of interpersonal connectedness [29,30]. The power of participatory music-making to accomplish these ends means that it is often employed for therapeutic reasons [31]. In this context, a Registered Music Therapist (RMT) designs and administers a participatory-music-based intervention for the purpose of improving the physical or mental health of subjects [32].

3. Participatory Music-Making and the Internet before the Pandemic

When musical participation is translated to the digital realm, there is a further distinction to be drawn between in-person communities that use the internet as an extension of their activities and online communities that convene only in digital spaces. Both types of

communities have attracted scholarly attention in the past two decades, especially from music education researchers. Waldron and her collaborators have examined the formation of on- and offline convergent community [33,34] and online community [35,36] among ITM, OTM, and bluegrass musicians. Their focus has been on communities of practice [37], defined by the framework's architects as "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" [38], and teaching and learning in digital spaces [39,40]. Other researchers have also considered the role of the internet in facilitating music learning in these same communities [41,42]. As this body of research demonstrates, the internet—especially YouTube and community-specific websites (e.g., Banjo Hangout, Online Academy of Irish Music)—played an important role in the activities of participatory musicians before the pandemic. Until 2020, however, online tutorials and message boards served only to supplement in-person music-making, which was the primary focus of all participants. It was only during the pandemic that these communities took the act of participatory music-making itself online.

The lack of interest in virtual music-making before 2020 was due in part to the fact that latency concerns make it difficult, if not in many cases impossible, to make music collaboratively over the internet in real time. Latency is the delay introduced as an audiovisual signal travels from one device to another. Researchers in the field of networked music performance have documented the many factors that contribute to latency and have also measured latency tolerance on behalf of musicians engaging in virtual music-making, finding the threshold to be anywhere between 20 and 50 ms [43]. These studies, however, have focused on classical and popular genres, and it might be the case that participatory musicians diverge from other populations in terms of latency tolerance. High-latency teleconferencing platforms like Zoom cannot be used to perform synchronized speech or music. Teleconferencing platforms also attempt to filter non-speech sounds and prioritize the audio of one participant at a time, further limiting their usefulness for collaborative musicians. While low-latency communication platforms are available, they demand a high degree of technical ability and benefit from high-speed internet, specialized equipment, carefully tuned settings, and hardwired connections, making them inaccessible to many [44]. In addition, the communities described here place a high value on in-person, unmediated music-making, and as a result, the online platforms did not attract their interest prior to the pandemic.

However, another community of musicians—choral singers—did adopt a virtual participatory practice before the pandemic, if only in limited numbers. The virtual choir (VC) was developed by choral composer and conductor Eric Whitacre in 2009 [45,46]. In this format, individual participants record videos of themselves singing along with a guide video or audio track, which is listened to using headphones. The videos are then compiled into a digital "performance" by a video editor [47]. Although the VC was originally developed to imitate presentational choral singing, this approach was adopted by many participatory communities during the pandemic. These included groups of both singers and instrumentalists, so the resulting products will be referred to as "VC-style" videos. VC participation has been associated with intense emotional experiences, a strong sense of community, profound feelings of connection, and a sense of presence exceeding that experienced by in-person choral singers [45,48]. This suggests that VC-style participation might meet some of the social needs of participatory musicians. In recent years, apps have also been developed that allow users to create VC-style videos without specialized editing software or expertise. These include the iOS app Acappella and the social media app TikTok [49].

4. Participatory Music-Making Communities in the COVID-19 Literature

The music-making communities studied during the COVID-19 pandemic were, for the most part, the same communities that have long attracted the attention of researchers. This section will survey the practices documented during the pandemic, summarizing the activities of each community and the outcomes for participants.

4.1. Irish Traditional Music (ITM)

Several related ITM communities transitioned to online music-making during the pandemic. Irish traditional singers found videoconferencing platforms to suit their activities particularly well since the songs are rendered by a solo singer with participation only on refrains and choruses. A number of geographically situated singing sessions moved to Zoom and continued to convene on a weekly basis, some growing to attract enormous international crowds. Facebook served as an important space in which sessions were organized and advertised. While singers appreciated the opportunity to sustain their community and the increased access provided by Zoom, they lamented the loss of encouraging comments, laughter, and sung participation [50].

Many instrumental sessions convened in Zoom, while others utilized Facebook Live (FBL) or YouTube Live (YTL). The most common format, possible only in Zoom, was the “round robin” gathering, in which musicians took turns leading a tune while others played on mute. Other sessions were led by a single player throughout, sometimes using a backing track to reproduce the sound of a session, while some made use of video recordings or combined various formats. Session musicians also experimented with chained Zoom rooms by incorporating the audio from another musician playing live over Zoom into their own Zoom broadcast. This technique requires operating two Zoom meetings on two devices at the same time. On at least one occasion, in an example of what has been termed “compounded mediation”, a session host invited participants to submit recordings for assembly into a VC-style audio track that was then used to facilitate participation at a subsequent jam [51,52].

Virtual sessions maintained a strong sense of geographic location, even though participants were able to join from around the world [52]. This can be observed in the case of Mary O’s Irish Music Session, which was held in person at a New York venue before the pandemic and reimagined as a YTL broadcast in March 2020. The session convened 81 times—first as Mary O’s Virtual Session and later as Tune Supply’s Common Tunes at Reasonable Speeds—before concluding in February 2022. The session was hosted by a local fiddler, Caitlin Warbelow, who led familiar tunes at a slow pace and broadcast video contributions from a parade of guest musicians. Although Warbelow created the virtual session to sustain local community and musical development among her fiddle students, it soon attracted global participation. Setlists were usually posted in advance, and participants were provided with links to pedagogical materials. Sessions were archived on YouTube so that players could participate asynchronously [53].

4.2. Old-Time Music (OTM)

Approaches to online jamming were similar in the OTM community, although different formats were favored. Facebook played an important role, both as a site for streaming jams and concerts and as a virtual space for discussion and community building during the pandemic [54]. Online jams were hosted by individuals (e.g., Rachel Eddy’s Thursday Night Old-Time Jam) and organizations (e.g., the Berkley Old Time Music Convention’s Slow Jam Fizz series), and they took place on both a weekly and an ad hoc basis. While a handful of musicians made use of low-latency communication platforms, the vast majority turned to Zoom, FBL, and YTL. In Zoom, players sometimes used a “round robin” approach, taking turns leading a tune while others joined on mute, but it was much more common for a pair of (often professional) musicians, either cohabitating or able to broadcast from an outdoor space, to lead throughout. Because each jam usually had a single leader or pair of leaders, FBL and YTL offered the same functionality as Zoom, with the added benefit that the jam was automatically recorded and archived, thereby making it available to participants after the live event had concluded. Participants reported a range of positive learning outcomes from online jamming, including the opportunity to clearly see and hear skilled leaders and to play without disturbing others while developing skills on an instrument [55].

4.3. Shape-Note Singing

Shape-note singers were quick to adapt a variety of digital media to suit their needs. By the end of March 2020, singers were using Zoom and FBL to convene in virtual spaces, and by June, a large number were using the low-latency platform Jamulus as well, often in combination with Zoom. The singers used Zoom in one of two ways: (1) a host would play audio or video recordings of songs requested by participants; (2) participants would take turns unmuting to sing the tenor (melody) line of a chosen song while others sang along on mute. As in the ITM community, Zoom singing retained a strong sense of local identity even as singers joined from around the world [56]. FBL was also used to facilitate singing but in a unique way. While singers would sometimes broadcast solo over FBL with the intention that others would sing complementary parts from their homes, more frequently, several singers would coordinate to produce a chain of FBL videos. In this procedure, a singer would use a second device to broadcast themselves as they sang along with an FBL broadcast. If enough broadcasters participated, this could ultimately produce a stream in which all four parts of the choral texture were audible [57]. Shape-note singers also contributed to VC-style videos. Some of these, such as a video made to open the Minnesota State Sacred Harp Singing Convention, were intended to facilitate participation in the context of Zoom singings [51], while others—most notably a series of videos created by the group Dispersed Harmonies—were produced for the enjoyment of participants and posted online [56]. Many of these activities were coordinated using Facebook, which had already served an important role in facilitating communication before the pandemic [58]. While online singing served to sustain the activities of the shape-note community and was valued deeply by many singers, it was not accessible or appealing to everyone. Some singers were not able to participate because they did not have a suitable domestic space in which to sing, while others found virtual singing unpleasant [59]. At the same time, online singing increased access for singers who could not easily leave home, including disabled singers and those with care responsibilities [12].

4.4. Worship

Participatory singing is an important element of worship across many traditions, although scholarship on singing during the COVID-19 pandemic was limited to a few practices. As religious services moved to digital platforms, participatory singing was facilitated in various ways. Early in the pandemic, a Lutheran church in Norway posted service videos on Vimeo with hymn texts displayed on screen to facilitate participation in sung worship. In November 2020, the congregation transitioned to Zoom, and while texts were still provided on screen, diminished sound and video quality meant that hymn singing attracted fewer participants and became less fulfilling. When the congregation returned to in-person worship in May 2021, they were required to wear masks and sit in silence throughout the service [60]. Singing was similarly prohibited for the few congregants permitted to worship in-person at Baptist and Methodist churches in the US South, although those joining online were provided with PDF leaflets and encouraged to sing. Participants in a study reported that singing from home was a poor substitute for in-person congregational singing, which they valued as a mode of community bonding and an expression of collective faith [61]. When members of the Shadhili Sufi order in Singapore were forced online, they faced additional challenges because synchronized breathing, movement, physical touch, and sonic immersion were integral to their worship. Participants quickly discovered that it was impossible to sing or chant communally in Zoom, yet they found the practice of having a single individual recite and sing all the texts to be deeply inadequate. Beginning in June 2020, groups of five were permitted to congregate, and it became possible to include the sounds of communal singing in Zoom broadcasts, making them more satisfying to participants. All the same, worshipping from home remained difficult due to domestic limitations on sound volume and the use of incense [62].

While most churches made use of videoconferencing or livestreaming platforms, a Congregational church in Massachusetts adopted an alternative approach because poor

internet coverage made live broadcasting impossible. Instead, the music director assembled a weekly podcast service. Members of the congregation, as well as other singers known to the director, were invited to submit recordings of themselves singing hymns that were assembled into a VC-style product for inclusion in the podcast—an undertaking that came to be known as the “Hymn Singing in Isolation Project”. The result replicated the sound of in-person hymn singing, and congregants were invited to sing along with the podcast when it was released each Sunday morning. Participants in a study reported experiencing widely varying levels of interpersonal connectivity and immersion while creating and consuming the hymn recordings [63].

4.5. Community Singing

While some of the practices described above might be categorized as “community singing”, the term is used here to connote group singing activity that does not conform to any particular repertoire or historical tradition. Community singing of this type often makes use of popular or folk songs and is usually (although not necessarily) directed by a song leader [22,64]. Community singing made headlines in the early weeks of the pandemic as quarantined residents of Italian and Spanish cities took to their balconies to sing and otherwise engage in collective musicking [65,66]. Although most studies emphasized technological mediation, outdoor community singing was presumably practiced throughout the pandemic. In England, for example, community musician Hugh Nankivell led a singalong at a care home by sitting in the courtyard and inviting residents to open their windows [67].

Later in the pandemic, community singing was sustained using broadcast media. On 2 April 2020, the BBC broadcast a singalong program of listener-selected songs simultaneously across five radio stations [67]. Participants took to social media to share videos of their own singing and dancing. Beginning on 4 April 2020, Danish citizens were invited to join in with a singalong broadcast daily for fifteen minutes on Danish National TV, *Morgensang Med Phillip Faber*. The host led viewers in vocal warmups and then accompanied himself at the piano, singing two familiar songs [68]. The US-based Disney Company broadcast three singalongs in 2020, all featuring celebrity performances of songs from their catalog: *The Disney Family Singalong* (16 April), *The Disney Family Singalong: Volume II* (10 May), and *The Disney Holiday Singalong* (30 November). Viewers could join in synchronously with the broadcast or later using YouTube videos [69]. On 10 April, Bachfest Leipzig broadcast a singalong *St. John Passion* on FBL, led by three distanced performers and a small on-site choir. In another example of compounded mediation, participation took two forms: choral singers around the world submitted videos of themselves singing the chorales for inclusion in the broadcast, while home viewers sang along with the chorales using provided sheet music. Home participants were invited to film their own singing, and submitted videos were integrated into a rebroadcast on 14 June [51].

Local community singing groups also took their activities online. Participants in the Irish World Music Café, located in Limerick, sustained virtual participation both by convening in Zoom and by posting performance videos to a Facebook page. While the facilitators continued to lead community singing across three synchronous Zoom gatherings (20 June, 3 October, and 10 December 2020), the fact that they could not connect physically with participants—most of whom were immigrants seeking familiarity with local language and culture—posed significant challenges [70]. Conveners of community singing groups for dementia patients in Ireland and the UK utilized Zoom, FBL, WhatsApp, and small in-person music therapy sessions to sustain their participatory singing practices. They also created YouTube videos and facilitated virtual choirs. While these activities were successful in fostering social connections and improved access for some, not all patients were able to participate due to technological and health barriers [71,72]. Skype, SoundCloud, and Microsoft Teams were also occasionally used to facilitate virtual community singing across populations, and in general, it was found that online singing contributed to the well-

being of participants during the pandemic, increased interest in in-person singing, and demonstrated potential for expanding access to community singing after the pandemic [73].

Online community singing also took place independent of in-person communities or activities. This entry will pass over the countless virtual choirs that provided a musical outlet for presentational choral singers [74], but it must address participatory singing on the social media app TikTok, which became a significant locus for music-making during the pandemic. This type of participatory musicking is not necessarily rooted in an offline community, and it engages a range of otherwise unconnected individuals. Singers in Japan—many of whom were likely karaoke enthusiasts deprived of a valued musical and social outlet—used a variety of hashtags to identify themselves as part of a community on TikTok, engaging with prerecorded material as both singers and dancers [75]. TikTok made headlines in early 2021 after Nathan Evans’s recording of “The Wellerman”, posted on 27 December 2020, went viral both within the app and across platforms [76]. The video inspired countless “duets” and remixes under the hashtag #shantytok (although “The Wellerman” is not technically a sea shanty, a category limited to work songs sung onboard sailing vessels). While shanty singers constitute an offline music-making community, “The Wellerman” in particular and #shantytok in general appear to have been popular with singers who had no previous knowledge of or experience with the tradition. Instead, they were social media users with a general interest in virtual participation.

5. Benefits and Drawbacks of Online Participatory Music-Making

While the practices documented above are diverse, conclusions drawn across these studies were remarkably consistent. Participants in all music-making traditions keenly felt the loss of gathering in a physical space. They commented not only on the inability to hear all the other participants but also on the elimination of opportunities for informal chatting, the loss of the physical sensation of vibrations created by a roomful of musicians, and the absence of tastes and smells associated with a shared meal or burning incense. Participatory music-making is an embodied practice sustained within a social framework, and none of the virtual approaches met all the participants’ physical or social needs. This loss was most keenly felt by worshippers, who largely found that online singing did not meet their needs as participants in spiritual communities.

The various forms of online music-making adopted by each community illuminate differences in social and aesthetic values. Shape-note singers preferred to sing along with recordings, which captured the rich texture of in-person singing and indexed events and individuals of significance to the community [56]. ITM and OTM players, on the other hand, strongly preferred live performance. This was possible because each tradition requires only a single melody player and chording accompanist to fully represent the music, and live performance brought the added advantage of allowing participants to see and hear skilled performers [55]. In shape-note singing, skill is not valued in the same way, and there is no role for “professional” singers. Instead, when utilized, live-leading was valued because it allowed singers to hear one another’s unique voices [56]. Additionally, while ITM and OTM leaders frequently broadcast over FBL or YTL, and players often revisited recorded sessions and jams, shape-note singers primarily met in Zoom and seldom recorded their singings.

In every category, some musicians were so displeased with online music-making that they withdrew altogether. At the same time, many participants were able to find immense value in online activity, which facilitated at least some degree of interpersonal connection and sustenance of community practice during a time of isolation and disruption. All the platforms used facilitated text-based chat, which played an important role in maintaining social connections and allowing participants to feel as if they were engaging in a communal activity. Musicians were generally delighted to see participants from around the world join their “local” activities, and many new relationships were forged. Some musicians thrived in the online environment, especially those seeking to develop their skills and those with limited or no ability to attend in-person gatherings. For these reasons, participants in studies often expressed the desire for virtual music-making to be sustained after the pandemic.

6. Conclusions

This entry has by no means addressed participatory music-making during the COVID-19 pandemic in all its breadth and diversity. While this entry has necessarily been limited to practices described in the literature, the vast majority of music-making activities pursued during the pandemic have gone unremarked upon by scholars, or else have been mentioned only in passing. For example, Crooke et al. note that one of their informants conducted online beat-making cyphers but provide no details about these gatherings, instead focusing their analysis on the circulation of social capital [77]. It also must be noted that the practices surveyed in this entry disproportionately involved socioeconomically privileged participants in Western music-making contexts. Likewise, the narrow view of participation adopted here has resulted in the omission of research into the virtual communities that formed around practices such as Mexican *música huasteca* [78] or the global network of brass bands that participate in HONK! Festivals [79]—communities in which participatory engagement is essential, even as it takes forms other than collaborative musical performance. It has also passed over uses of digital communication platforms and social media by presentational musicians pursuing remote creative collaborations [80–82]. The narrow approach taken in this entry, however, has allowed for the intersections and divergences among music-making communities to be starkly illuminated. While some of the practices described here have come to an end, others have remained in place, and the ways in which many members of these communities engage with participatory music-making have been fundamentally transformed.

As of the publication of this entry in mid-2024, at least three groups of shape-note singers convene weekly on Jamulus to sing together, and one still holds regular Zoom singings [83]. Virtual singing persists because it allows geographically dispersed individuals to sing in community without traveling great distances or even leaving the house. The individuals who participate in these singings know and care for one another, and they prefer to sing together online over not singing at all. It has also become typical to stream in-person singings to facilitate remote access. Virtual singing will not replace in-person singing, but it is a welcome adjunct in the shape-note and other communities. Virtual jamming has likewise found a permanent place in the OTM, ITM, and other traditional music communities. Organizations such as Phoenix Folk and the San Francisco Folk Music Club now host regular virtual sessions [84,85], while individual musicians lead virtual jams and sessions over FBL and host Zoom gatherings [86,87]. These often serve to maintain connections between professional musicians and the broader community, and they also produce income for performers through voluntary donations. Since online jamming has proven especially beneficial to learners, many of the ongoing virtual jams cater explicitly to their needs [55,88]. While the technologies that support virtual participatory music-making continue to develop and the role of these activities in specific communities remains in negotiation, it is evident that the COVID-19 pandemic greatly accelerated engagement with online music-making and permanently altered its role in participatory communities.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest: The authors declare no conflicts of interest.

References

1. Miller, S.L.; Nazaroff, W.W.; Jimenez, J.L.; Boerstra, A.; Buonanno, G.; Dancer, S.J.; Kurnitski, J.; Marr, L.C.; Morawska, L.; Noakes, C. Transmission of SARS-CoV-2 by inhalation of respiratory aerosol in the Skagit Valley Chorale superspreading event. *Indoor Air* **2021**, *31*, 314–323. [[CrossRef](#)]

2. Charlotte, N. High Rate of SARS-CoV-2 Transmission Due to Choir Practice in France at the Beginning of the COVID-19 Pandemic. *J. Voice* **2023**, *37*, 292.e9–292.e14. [CrossRef]
3. O’Keeffe, J.; COVID-19 Risks and Precautions for Choirs. National Collaborating Centre for Environmental Health 2020. Available online: <https://nceh.ca/resources/evidence-reviews/covid-19-risks-and-precautions-choirs> (accessed on 8 February 2024).
4. Bahl, P.; de Silva, C.; Bhattacharjee, S.; Stone, H.; Doolan, C.; Chughtai, A.A.; MacIntyre, C.R. Droplets and Aerosols Generated by Singing and the Risk of Coronavirus Disease 2019 for Choirs. *Clin. Infect. Dis.* **2021**, *72*, e639–e641. [CrossRef]
5. Alsved, M.; Matamis, A.; Bohlin, R.; Richter, M.; Bengtsson, P.E.; Fraenkel, C.J.; Medstrande, P.; Löndahl, J. Exhaled respiratory particles during singing and talking. *Aerosol. Sci. Technol.* **2020**, *54*, 1245–1248. [CrossRef]
6. Becher, L.; Gena, A.W.; Alsaad, H.; Richter, B.; Spahn, C.; Voelker, C. The spread of breathing air from wind instruments and singers using schlieren techniques. *Indoor Air* **2021**, *31*, 1798–1814. [CrossRef]
7. Nix, J.; Jers, H.; Ternström, S. Acoustical, Psychoacoustical, and Pedagogical Considerations for Choral Singing with COVID-19 Health Measures. *Choral J.* **2020**, *61*, 30–38.
8. Naunheim, M.R.; Bock, J.; Doucette, P.A.; Hoch, M.; Howell, I.; Johns, M.M.; Johnson, A.M.; Krishna, P.; Meyer, D.; Milstein, C.F.; et al. Safer Singing During the SARS-CoV-2 Pandemic: What We Know and What We Don’t. *J. Voice* **2021**, *35*, 765–771. [CrossRef]
9. Daffern, H.; Balmer, K.; Brereton, J. Singing Together, Yet Apart: The Experience of UK Choir Members and Facilitators During the Covid-19 Pandemic. *Front. Psychol.* **2021**, *12*, 624474. [CrossRef]
10. Turino, T. *Music as Social Life: The Politics of Participation*; University of Chicago Press: Chicago, IL, USA, 2008.
11. Duchan, J. Community Singing in the Age of Coronavirus: The Case of Collegiate A Cappella. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 106–120.
12. Norton, K. What the Pandemic Couldn’t Take Away: Group Singing Benefits That Survived Going Online. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 63–85.
13. Feld, S. Aesthetics and Iconicity of Style (uptown title); or, (downtown title) “Lift-up-over Sounding”: Getting into the Kaluli Groove. In *Music Grooves*; Charles, K., Feld, S., Eds.; University of Chicago Press: Chicago, IL, USA, 1994; pp. 109–150.
14. Turino, T. The Coherence of Social Style and Musical Creation among the Aymara in Southern Peru. *Ethnomusicology* **1989**, *33*, 1–30. [CrossRef]
15. O’Shea, H. Getting to the Heart of the Music: Idealizing Musical Community and Irish Traditional Music Sessions. *J. Soc. Musicol. Irel.* **2007**, *2*, 1–18. [CrossRef]
16. Williams, E.E. “Pull Up a Chair!”: Accommodation, Participation, and Disability in Old-Time and Bluegrass Jam Sessions. Master’s Thesis, University of Tennessee, Knoxville, TN, USA, 2020.
17. Watkins, P.; Caines, R. Cyphers: Hip-Hop and Improvisation. *Stud. Improv./Études Crit. Improv.* **2014**, *10*, 1–5. [CrossRef]
18. Clawson, L. *I Belong to This Band, Hallelujah! Community, Spirituality, and Tradition Among Sacred Harp Singers*; University of Chicago Press: Chicago, IL, USA, 2011.
19. Russell, I. Vernacular Christmas Carol Singing in the Southern Pennines of England. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 161–182.
20. Laurila, K.; Willingham, L. Drum circles and community music: Reconciling the difference. *Int. J. Community Music* **2017**, *10*, 139–156. [CrossRef]
21. Brown, K. *Karaoke Idols: Popular Music and the Performance of Identity*; Intellect: Bristol, UK, 2015.
22. McPherson, E. Brigadoon in the Heights: Fostering Intimacy, Community, and Activism through Secular Leftist Hymnody. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 218–237.
23. Hunter, M. Amateur Chamber Music: Repertoire and Experience. In *The Chamber Musician in the Twenty-First Century*; Doğantan-Dack, M., Ed.; MDPI: Basel, Switzerland, 2022; pp. 287–307.
24. Adelstein, R. Calling Each Other To Prayer: Group Song in British Reform Synagogues. *Ethnomusicol. Rev.* **2022**, *23*, 20–37.
25. Herrera, E. Masculinity, Violence, and Deindividuation in Argentine Soccer Chants: The Sonic Potentials of Participatory Sounding-in-Synchrony. *Ethnomusicology* **2018**, *62*, 470–499. [CrossRef]
26. Mihalka, M.W. “Take Me Out” to “Sweet Caroline”: Collective Singing in the Ballpark. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 183–197.
27. Payerhin, M. New Firebombs in Old Bottles: Social Mobilization and Cultural Resonance of Protest Songs. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 735–754.
28. Wright, T. “Scare Away the Dark”: The Promotion of Singing to Create Post-Secondary Academic Communities. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 315–329.
29. Borčák, L.W.; Baunvig, K.F. Medial Conditions for Social Bonding in Singing. *Int. Rev. Aesthet. Sociol. Music* **2021**, *52*, 391–416.
30. Theorell, T. Theorell, T. The Effects and Benefits of Singing Individually and in a Group. In *The Oxford Handbook of Singing*; Welch, G.F., Howard, D.M., Nix, J., Eds.; Oxford University Press: New York, NY, USA, 2019; pp. 919–933.
31. Densley, B.; Andrews, K. How participation in group singing in the community impacts on emotional wellbeing: A qualitative study on the perspectives of group singing participants. *Aust. J. Music Ther.* **2021**, *32*, 39–56.

32. Steele, M.E. How Can Music Build Community? Insight from Theories and Practice of Community Music Therapy. *Voices World Forum Music Ther.* **2016**, *16*. Available online: <https://voices.no/index.php/voices/article/view/2317/2072> (accessed on 15 March 2024). [CrossRef]
33. Waldron, J. YouTube, fanvids, forums, vlogs and blogs: Informal music learning in a convergent on- and offline music community. *Int. J. Music Educ.* **2013**, *31*, 91–105. [CrossRef]
34. Bayley, J.G.; Waldron, J. “It’s never too late”: Adult students and music learning in one online and offline convergent community music school. *Int. J. Music Educ.* **2020**, *38*, 36–51. [CrossRef]
35. Waldron, J.L.; Veblen, K.K. The medium is the message: Cyberspace, community, and music learning in the Irish traditional music virtual community. *J. Music Technol. Educ.* **2008**, *1*, 99–111.
36. Waldron, J. User-generated content, YouTube and participatory culture on the Web: Music learning and teaching in two contrasting online communities. *Music Educ. Res.* **2013**, *15*, 257–274. [CrossRef]
37. Waldron, J. Exploring a virtual music ‘community of practice’: Informal music learning on the Internet. *J. Music Technol. Educ.* **2009**, *2*, 97–112. [CrossRef]
38. Wenger-Trayner, E.; Wenger-Trayner, B. Communities of Practice: A Brief Introduction. Wenger-Trayner 2015. Available online: <http://wenger-trayner.com/wp-content/uploads/2015/04/07-Brief-introductionto-communities-of-practice.pdf> (accessed on 8 February 2024).
39. Waldron, J.; Mantie, R.; Partti, H.; Tobias, E.S. A brave new world: Theory to practice in participatory culture and music learning and teaching. *Music Educ. Res.* **2018**, *20*, 289–304. [CrossRef]
40. Waldron, J. The Convergence of Networked Technologies in Music Teaching and Learning. In *The Oxford Handbook of Technology and Music Education*; Ruthmann, S.A., Mantie, R., Eds.; Oxford University Press: Oxford, UK, 2020; pp. 475–485.
41. Ward, F. Technology and the transmission of tradition: An exploration of the virtual pedagogies in the Online Academy of Irish Music. *J. Music Technol. Educ.* **2019**, *12*, 5–23. [CrossRef]
42. Morgan-Ellis, E.M. Learning Habits and Attitudes in the Revivalist Old-Time Community of Practice. *Bull. Counc. Res. Music Educ.* **2019**, *221*, 29–57. [CrossRef]
43. Rottondi, C.; Chafe, C.; Allocchio, C.; Sarti, A. An Overview on Networked Music Performance Technologies. *IEEE Access* **2016**, *4*, 8823–8843. [CrossRef]
44. Morgan-Ellis, E.M. Virtual Community Singing During the COVID-19 Pandemic. *Am. Sci.* **2022**, *110*, 28–36. [CrossRef]
45. Armstrong, M. Musicking in Cyberspace: Creating Music and Fostering Global Community through a Virtual Choir. Master’s Thesis, Tufts University, Medford, MA, USA, 2012.
46. Carvalho, L.; Goodyear, P. Virtual Choir: Sharing Experiences of Singing Together Apart. In *Architecture of Learning Networks*; Carvalho, L., Goodyear, P., Eds.; Routledge: New York, NY, USA, 2014; pp. 209–224.
47. Bendall, C. Defining the Virtual Choir. *Choral J.* **2020**, *61*, 69–75.
48. Fancourt, D.; Steptoe, A. Present in body or just in mind: Differences in social presence and emotion regulation in live vs. virtual singing experiences. *Front. Psychol.* **2019**, *10*, 451931. [CrossRef]
49. McDaniel, B. Singing into a Smartphone: The Persuasive Affordances of Collaboration on Karaoke and Lip-Syncing Apps. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 50–62.
50. Thompson, C.; O’Brien, K.S. From hearth to hard drive: Well-being benefits of online Irish traditional singing sessions during COVID-19. *Health Promot. Int.* **2022**, *37*, i4–i17. [CrossRef]
51. Morgan-Ellis, E.M. Mediated Community Singing. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 8–28.
52. Bobker, A. Keeping the Tradition Alive: Irish Traditional Music Sessions during COVID-19. Master’s Thesis, Michigan State University, East Lansing, MI, USA, 2021.
53. Ward, F. Enabling Musical, Pedagogical, and Social Continuities through “Participation” in Mary O’s Virtual Irish Traditional Music Session. *Action Crit. Theory Music. Educ.* **2022**, *23*, 87–130.
54. Terrell, L. “Log On In, There’s a Band Tonight”: Social Media and the Old Time Music Community during the Time of COVID-19. Master’s Thesis, University of North Carolina, Chapel Hill, NC, USA, 2021.
55. Morgan-Ellis, E.M. Learning advantages of online old-time jams. *J. Music Technol. Educ.* **2022**, *15*, 127–146. [CrossRef]
56. Morgan-Ellis, E.M. “Like Pieces in a Puzzle”: Online Sacred Harp Singing During the COVID-19 Pandemic. *Front. Psychol.* **2021**, *12*, 627038. [CrossRef]
57. Morgan-Ellis, E.M. “Your network bandwidth is low”: Online Participatory Music-Making in the COVID-19 Era. *Crit. Stud. Improv./Études Crit. Improv.* **2021**, *14*, 1–7.
58. Dattilo, D. Changes and Chances in a Multipart Singing Community and Its Tradition, before and throughout the Global Isolation. *J. World Pop. Music* **2023**, *10*, 60–78. [CrossRef]
59. Morgan-Ellis, E.M. Non-participation in online Sacred Harp singing during the COVID-19 pandemic. *Int. J. Community Music* **2021**, *14*, 223–245. [CrossRef]
60. Strøm, I.T. Worshipping Musically Online During Covid-19. *J. Extrem. Anthropol.* **2023**, *7*, 1–22. [CrossRef]
61. Myrick, N.; Gessner, B.; Alvarado, J. Music and Human Flourishing in Christian Communities. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 852–870.

62. Othman, M.L.B. Listening for/as presence: Religious mediation of a Sufi ritual in the time of COVID-19. *Religion* **2022**, *52*, 265–283. [CrossRef]
63. Morgan-Ellis, E.M. Virtual Hymn Singing and the Imagination of Community. *J. Music Health Wellbeing* **2021**. Available online: <https://storage.googleapis.com/wzukusers/user-20563976/documents/42521696a28f40c3b22566a839e988d3/Morgan%20Ellis%20October2021.pdf> (accessed on 15 March 2024).
64. Morgan-Ellis, E.M. *Everybody Sing! Community Singing in the American Picture Palace*; UGA Press: Athens, GA, USA, 2018.
65. Van Der Sandt, J.; Coppi, A. MUSICCOVID-19: When the world paused but singing continued. *Int. J. Community Music* **2021**, *14*, 151–167. [CrossRef]
66. Calvo, K.; Bejarano, E. Musicking on Balconies: Resilience in Times of COVID-19. *Rev. Esp. Investig. Sociol.* **2022**, *178*, 23–38. [CrossRef]
67. Crisp, M. The response of community musicians in the United Kingdom to the COVID-19 crisis: An evaluation. *Int. J. Community Music* **2021**, *14*, 129–138. [CrossRef]
68. Borčak, L.W. Transmedia Performance in Scandinavian Singalong Shows: On the Transmediation of Liveness and Participation in Community Singing. In *Words, Music, and the Popular: Global Perspectives on Intermedial Relations*; Thomas, G., Winnett, S., Eds.; Palgrave Macmillan: London, UK, 2021; pp. 133–153.
69. Camp, G. The Disney Chorus: Singing Along to the Studio’s Forging of American Musical Identity. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 541–558.
70. Jaber, H.; Garry, F.; Phelan, H. ‘We are all facing the same problem’: Lived experiences of online participation in the Irish World Music Café community music initiative in the context of the COVID-19 pandemic. *Int. J. Community Music* **2021**, *14*, 273–293. [CrossRef]
71. Lee, S.; O’Neill, D.; Moss, H. Dementia-inclusive group-singing online during COVID-19: A qualitative exploration. *Nord. J. Music Ther.* **2022**, *31*, 308–326. [CrossRef]
72. Dowson, B.; Atkinson, R.; Barnes, J.; Barone, C.; Cutts, N.; Donnebaum, E.; Hung Hsu, M.; Lo Coco, I.; John, G.; Meadows, G.; et al. Digital Approaches to Music-Making for People With Dementia in Response to the COVID-19 Pandemic: Current Practice and Recommendations. *Front. Psychol.* **2021**, *12*, 625258. [CrossRef]
73. Price, S.; Phillips, J.; Tallent, J.; Clift, S. Singing group leaders’ experiences of online singing sessions during the COVID-19 pandemic: A rapid survey. *J. Music Health Wellbeing* **2021**. Available online: <https://storage.googleapis.com/wzukusers/user-20563976/documents/70a39f34e9624c13925281b002d8ddf4/Price,%20S.,%20Phillips,%20J.,%20Tallent,%20J.%20and%20Clift,%20S..pdf> (accessed on 15 March 2024).
74. Bendall, C. Virtual Choirs and Issues of Community Choral Practice. In *The Oxford Handbook of Community Singing*; Morgan-Ellis, E.M., Norton, K., Eds.; Oxford University Press: New York, NY, USA, 2024; pp. 86–105.
75. Petrovic, S. From karaoke to lip-syncing: Performance communities and TikTok use in Japan. *Med. Int. Aust.* **2023**, *186*, 11–28. [CrossRef]
76. Waldron, J. YouTube, TikTok, and Online Music Learning. In *Milestones in Music Education*; Randles, C., Ed.; Routledge: New York, NY, USA, 2024; pp. 151–188.
77. Crooke, A.H.D.; Hara, M.; Davidson, J.; Fraser, T.; DeNora, T. Fractured bonds and crystal capital: Social capital among COVID-era music communities. *Int. J. Community Music* **2021**, *14*, 247–272. [CrossRef]
78. Margolies, D.S.; Strub, J.A. Music Community, Improvisation, and Social Technologies in COVID-Era Música Huasteca. *Front. Psychol.* **2021**, *12*, 648010. [CrossRef]
79. Snyder, A.; Allen, E.; Garofalo, R. HONK!United: A Virtual Global Festival of Activist Brass Bands during the COVID-19 Pandemic. *Music Politics* **2022**, *16*, 1–28. [CrossRef]
80. MacDonald, R.; Burke, R.; DeNora, T.; Sappho Donohue, M.; Birrell, R. Our Virtual Tribe: Sustaining and Enhancing Community via Online Music Improvisation. *Front. Psychol.* **2021**, *11*, 623640. [CrossRef] [PubMed]
81. Kaye, D.B.V. Please Duet This: Collaborative Music Making in Lockdown on TikTok. *Netw. Knowl.* **2022**, *15*, 59–77.
82. Manley-Muller, G. Remote Musical Collaboration during the COVID-19 Pandemic. *J. Music Health Wellbeing* **2021**. Available online: <https://storage.googleapis.com/wzukusers/user-20563976/documents/c7dbd5ab8f1048c49600e2e11c761c4d/Manley-Muller%20October2021.pdf> (accessed on 15 March 2024).
83. Coghlan, P. (Gridley, CA, USA); Morgan-Ellis, E.M. (University of North Georgia, Dahlonega, GA, USA). Personal communication, 2024.
84. Phoenix Folk: Online Sessions. Available online: <https://phoenixfolk.co.uk/online-sessions/> (accessed on 23 April 2024).
85. San Francisco Folk Music Club. Available online: <https://www.sffmc.org/> (accessed on 23 April 2024).
86. The Ould Sod Traditional Virtual Irish Session on Zoom. Available online: <https://michaelleskin.com/session.html?fbclid=IwAR0UxIs64n1mvAHEPcP6P29czq7ppBB4FZcGfo74TbKBLokSa5Ggdn7M5Xs> (accessed on 23 April 2024).
87. Facebook: Pam Weeks. Available online: <https://www.facebook.com/pam.weeks.73> (accessed on 23 April 2024).
88. Facebook: The Learner’s Session. Available online: <https://www.facebook.com/groups/276330881264817/> (accessed on 23 April 2024).

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.