

**"Your network bandwidth is low"**  
**Online Participatory Music-Making in the COVID-19 Era**

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**Article abstract**

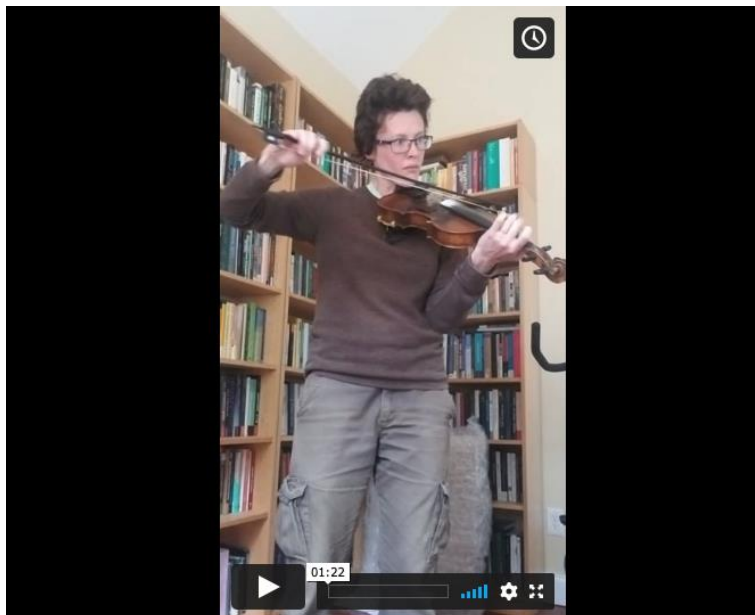
My contribution is a personal account about my experiences with online participatory music-making in the first few months of the pandemic. As an old-time fiddler, I anchored a local Zoom jam and attended a Zoom-based music camp. As a Sacred Harp singer, I participated in regular singings via Facebook Live.

## “Your network bandwidth is low”: Online Participatory Music-Making in the COVID-19 Era

Esther M. Morgan-Ellis

I am writing this at the end of May 2020, and I can state that I have engaged in more participatory music-making in the past six weeks than in the six months preceding lockdown. In just the last four days I have played fiddle and banjo with a pair of D.C.-based musicians in an old-time jam on YouTube, enjoyed a similar session with a Kansas family on Facebook, anchored a Zoom old-time jam with three local friends (all properly masked and distanced, of course), and sung out of *The Sacred Harp* with folks across the nation. The ways in which members of traditional music communities have improvised new ways of making music together are extraordinary—but the fact that we have done so is not really surprising. These people (and I count myself among them) live for the experience of making music with friends, and digital experiences have proven to be surprisingly meaningful for myself and others.

In some ways, moving participatory music-making online has increased access. I’ve been able to play and sing with people who live hundreds (if not thousands) of miles away, and I even got to attend a music camp that I never expected to visit in person. It has also increased access for those who might feel marginalized at in-person gatherings for reasons ranging from low skill level to social anxiety. At the same time, I have sometimes been excluded from online music-making due to the fact that I live in a rural area where upload speeds do not exceed 1 MBps—and I have friends who have been denied access to these activities altogether, due to poor Internet service, outdated technology, or insufficient skill at navigating digital spaces. Equitable online music communities will not become possible without improvements in software, hardware, and—most importantly—communications infrastructure.



Video 1: This was the first video of myself playing that I ever posted to social media. I wouldn’t have thought to make such a performative display before quarantine. This is George Jackson’s “Dorrigo,” which I had just learned that day and wanted to share with my jam community.

The first thing I lost following lockdown was our local old-time jam. My university announced on Thursday, March 12, that it would close the next afternoon. The jam, which takes place on campus every Friday, was canceled for the foreseeable future. I was upset that we called it off—campus didn't even close until an hour after it would have concluded! This was an irresponsible attitude, for sure. At the time, however, I could not conceive of making music with my friends in any way that did not involve physical co-presence. I assumed that we would not gather again until the pandemic had passed. Indeed, for the first six weeks of quarantine we made no effort to reimagine our jam. Instead, we upped the use of our private Facebook group, sharing tunes that we were practicing or that we wanted to learn. Near the end of March, I gathered the courage to post a video of myself playing for the first time. I wanted to feel some sort of community around my private practice.

As it turned out, I would be making music with strangers before I would be playing with friends. On April 10, a lady I had never met named Irene posted to the Facebook group Sacred Harp Atlanta about a new opportunity. I am not really a member of the metro-Atlanta Sacred Harp community. I've taken students to a few singings, and I know some people, but it's a haul and there are no groups where I live, several counties to the north. However, Irene's post immediately captured my imagination. She described how she and some friends had been engaging in zero-lag Sacred Harp singing by means of a chain of Facebook Live videos—a concept that was simple enough to grasp. The way it works is that the first performer in the chain broadcasts over Facebook Live. The next person then streams that broadcast while broadcasting themselves using another device or tab. The next person, who repeats this process, transmits the previous layers and adds their own. Various branches can develop since anyone can start their own stream at any point in the chain. Singers also decide which tracks and performers they wish to hear by choosing which broadcast to follow. There is a sort of lag, of course, insofar as participants are not actually singing at the same time, but the experience is entirely synchronous. Naturally, this is a one-way process—you can only hear people upstream from you, and you can typically only see the person whose broadcast you are following.

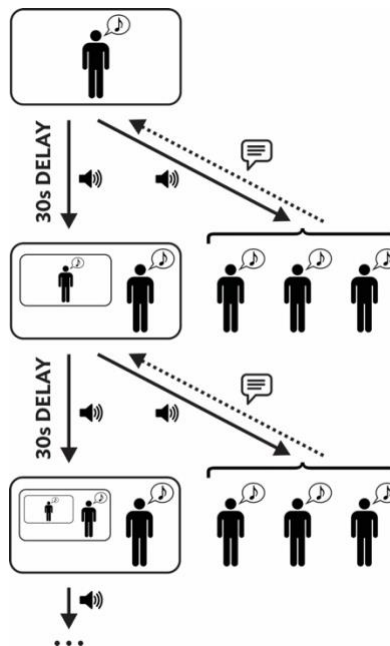


Figure 1: This diagram illustrates one possible configuration by which participants might engage in Sacred Harp singing via Facebook Live.

Irene indicated that a singing would take place later that day. I was intrigued primarily as a researcher of community singing, and I had been noting the uptick in virtual choir videos and pondering the ways in which singing communities were sustaining their activities and relationships in the time of COVID-19. When I tuned in to the final video in the chain, I had no intention of joining in, and I was immediately disappointed by what I heard. The singers were pretty badly out of tune, the energy seemed low, and sometimes one singer or another would lose their way completely. And, of course, the texture was thin, with only one voice per part—not the powerful sound Sacred Harp singers know and love. I turned the audio off for a while as I worked. Then, before signing off, I thanked Irene for sharing and lamented the fact that I couldn't sing along because I had left my *Sacred Harp* edition at the office. I said this to be polite, but really, I was not feeling at all inspired. Irene, who read my comment, responded on-camera that I could access the pages online and told me how. I figured it would be rude not to sing a number or two, so I pulled up the next hymn.

The experience of joining in was overwhelming. Intoxicating. I sang for an entire hour without giving a thought to anything else. I knew that this was an activity that I wanted to engage in, promote, and investigate. So, after it was over, I immediately sat down and wrote up my reaction. I made the following notes that day:

I really felt like I was at a Sacred Harp sing. A big part of the experience was my memories of being at a sing. Lots of things helped to bring those memories back: the sounds of the voices, the appearance of the notation, the fact that I do not belong to a regular community and am therefore always singing with strangers. It was great that I could hear the other alto—not for musical reasons, but because it really felt like I was singing with someone. It made no difference to my experience that she was unable to hear me.

I also felt like I made a real friend. This gets a little weird: While I watched Irene for two hours and heard everything she said, of course she could not see or hear me. I left a few comments (some of which got reactions from others) and we texted on Facebook Messenger afterward. For me, however, there was a real connection. It was in part like the connection one makes with a performer on screen or stage, but the fact that we could communicate in real time and shared a participatory objective was significant.

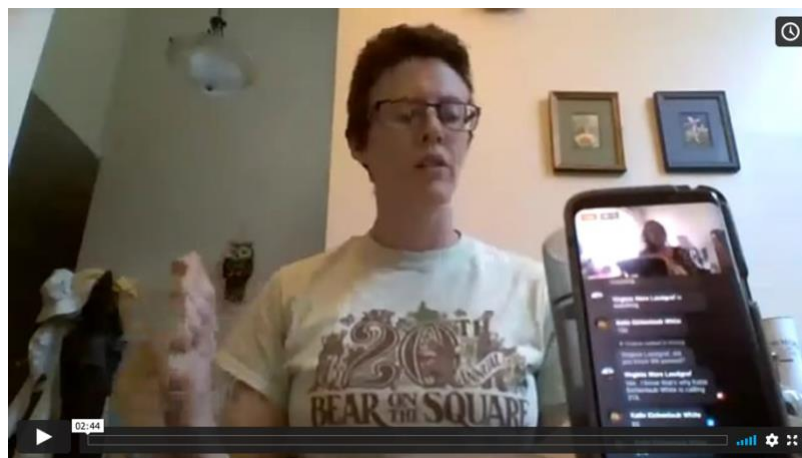
I've been joining in once or twice a week ever since. Sometimes I follow David and Peter, a tenor and bass who live together and start most of the chains, and sometimes I follow a soprano. The first time I streamed myself singing alto was really powerful—it made a big difference to the participatory experience. In my notes from the April 18 session, I wrote that: "Streaming really adds a community element. It creates an intangible connection that is part vulnerability, part responsibility. I think part of it is also demonstrating public commitment to the community. It's a little weird that the guys at the top have probably never even heard of me."

Streaming, however, also introduces elements of distraction and stress. I feel compelled to keep up with comments, some of which are made on the stream and some on the post itself. This requires monitoring at least two tabs/devices and frequently stopping my performance in order to speak or type replies. Glitches at various points in the chain are inevitable, but distressing. I have crashed my own stream several times, which means that those following me are abruptly cut off from the sing. And then there is the perplexing and elusive problem of sound quality. While a singer is streaming, they obviously cannot know what followers are hearing. Is the sound clear? Are the parts balanced? The first time I listened back to my own stream I was horrified by the muffled and uneven quality. I experimented with Irene and was able to improve it

somewhat, but I still don't know why sometimes my sound is good and sometimes it is terrible. I am always worrying about the sound while I am singing. I am also frustrated by the fact that other streamers are able to produce such superior audio and video. Some combine videos using software or additional screens, which adds the wonderful element of allowing participants following that stream to actually see the singers they are hearing. I lack the hardware and skill necessary to recreate the singing experience at this level, with the result that I feel as if I am not participating as fully as others.



Video 2: This is an excerpt from my broadcast on June 3. I broadcast using my phone while playing another stream on my laptop. The sound quality is just awful, even after over a month of experimenting. This video is such a poor representation of my experience that I hesitate even to share it.



Video 3: I was eventually able to improve my sound by purchasing a USB microphone and broadcasting from my laptop while playing another stream over my phone, which was connected by Bluetooth to an external speaker. For this July 18 broadcast, I positioned the phone in front of the camera so that my followers could see Irene, with whom I was singing. She in turn is streaming David and Peter's broadcast.

The Sacred Harp community continues to thrive. Irene set up a Facebook group (Sacred Harp Streaming), and members have improvised various new approaches to participation. On Mother's Day, for example, someone organized a line-up of singers to take turns leading songs from a Zoom meeting that was broadcast over Facebook Live.<sup>1</sup>

Immediately after participating in the Sacred Harp singing on April 10, I emailed my jam list to explain the process and ask if anyone wanted to try it with me. *I was on fire*. My jamming friends, however, were hesitant as they didn't seem to think that it would work without at least guitar and fiddle as the base track (I continue to respectfully disagree). We eventually settled on an alternative model: Four of us who live in the same area and whose instruments complement one another would gather in-person and broadcast our jam over Zoom. Participants, of course, would mute themselves.

Our first attempt was fairly catastrophic. From a technical standpoint, we found that the WiFi was inadequate. The weakness of the connection meant that our broadcast was constantly interrupted, which is devastating to the participatory experience. Zoom has a feature that is meant to smooth over connectivity issues. Instead of halting transmission altogether, the program slows and then accelerates audio. While this might work well for speech, it is inimical to groove-based music. One of our most faithful community members was so frustrated with the experience that she left the first jam early and almost didn't come back. Our inaugural jam, which was meant to last for the full two hours, had to be called after forty-five minutes.

For me, however, connectivity was not the problem. I had an absolutely miserable experience due to the fact that it felt like I was not participating in a jam at all. I was performing. This was compounded by the fact that I was the only fiddler that week (the other fiddler felt that she needed to monitor the Zoom meeting) and the jam was being filmed so that each tune could be posted to YouTube for use by our community members. I was terribly self-conscious and did not enjoy myself at all. I also did not feel in any way like I was making music *with* those in the Zoom meeting. I knew they were there, and I could see them playing, but their presence and actions were peripheral to my experience.



Video 4: This video was taken at our first Zoom jam on April 24. Playing this tune, “Barlow Knife,” was particularly upsetting—I hardly know it and was certainly not prepared to perform it in this way. I was not having fun.

Curiously enough, I was about to have a *great* time playing over Zoom—but from the other side, as one of the muted participants. That same weekend I attended the Ashokan Online Rollick as a student. This event (usually billed as the Ashokan Old Time Rollick) takes place once a year and adheres to a typical format for old-time music camps. The schedule includes classes, jams, and concerts, and many participants—including both students and instructors—return year after year, thereby forming a continuous community. This year, the Rollick was run entirely online. Students could enter Zoom meetings or watch a YouTube stream of the meeting. All of the typical offerings, including time to socialize, were worked into the schedule. I really felt like I was *there*.



Video 5: In the second week, I became more comfortable with the new Zoom-based jam model. While playing this tune I felt fully engaged with the community. We have opened every jam with “Cumberland Gap” for years. Playing it brings a flood of memories—places, people, seasons. This is true every time, but all the more so under these changed circumstances.

Although my experience taking classes was excellent, I want to focus here specifically on the jams. This was my first attempt at playing along with an on-screen musician, and I was wary. Once I figured out how to best set up the sound (with a Bluetooth speaker at high volume on a shelf near my head), I had a great time. Playing on mute can be very liberating. The participant is freed of responsibility to the sounding community. It’s okay to experiment, to improvise, to take breaks, and to change instruments because no one’s experience will be impacted by your actions. Being able to see the other players made their participation real, even if it had to be imagined. At the same time, I could sense the loneliness and isolation of the leader. There must always be one person who is entirely on their own—one person who is performing, not jamming. There was also enormous diversity in the quality of the broadcasts. Some leaders had strong Internet connections and high-quality microphones. Others produced mediocre and irregular sound or had their participation terminated altogether with what became a familiar Zoom warning: “Network bandwidth is low.”

Back home, we set to work overcoming our technological stumbling blocks. The next week we set up a hardwired connection, which largely solved the problem with delays. Some participants found that slow speeds on their end still disrupted the experience, while others struggled with the Zoom interface (one of our community members is blind and could not at first manage to mute and unmute herself). I became much happier when the other fiddler joined me again. Now

I felt like I was participating in a jam, although I still felt no connection with the muted players. At the same time, it was rewarding to know that they were having a good experience, and it was fun to chat between tunes. I have continued to assume the role of muted participant as often as I can. The D.C. jam I mentioned above—also coordinated by a Facebook group, Thursday Night Jam—takes place every week, and I try never to miss it. Because it is broadcast over YouTube I cannot see the other participants, but I know how many there are and I recognize their names in the comment stream. Being at home means I can lay out as many instruments as I like and switch between fiddle, banjo, and guitar whenever I feel like it. I can arrive late or leave early. I only have to talk to people if I want to.

I think often, however, of the community members who are cut out. I am worried about the division that has arisen in our local jam, which is now clearly split between the broadcasters and the receivers, and I wonder about those who have not yet appeared onscreen. I read frustrated posts from Sacred Harp singers who have trouble finding the streams or starting their own, and I know there are countless others who lack the hardware, Internet access, or social media savvy to participate at any level. I am fairly adept with technology, but there is nothing I can do to remedy the fact that I live in a rural area that has no access to broadband, despite years of promises from politicians and officials. And as much as I love getting to play with professionals, I know that their livelihoods are under threat. Nothing about this system is sustainable.

However, the ways we have improvised community promise to have a positive long-term impact. We have all learned so much, and we have built real relationships that will continue to resonate when in-person music-making resumes. I have shared experiences with new friends and old. Those experiences, although mediated, are perfectly real, and when we meet again (or arguably, for the first time) our shared experiences will have deepened our relationships. I hope that many of these practices are continued, even when isolation is no longer necessary. I will never be able to travel to New York for the Rollick, but I am eager to join again through Zoom. I have loved jamming with distant friends and hope that they won't stop broadcasting when their performance schedules fill up again. Operating our local jam over Zoom has made it accessible to community members who live far away or are kept at home by illness or family obligations. Why shouldn't we continue to broadcast even after distancing requirements are lifted? I certainly hope that online Sacred Harp singing will continue—I have become very fond of my new friends scattered across the country. I will be genuinely heartbroken if everything goes back to the way it was.

## Notes

<sup>1</sup> Although I didn't know it in May, Sacred Harp singers were using Zoom in a variety of ways to facilitate participatory activity. These gatherings are operated by local Sacred Harp groups, although visitors are usually welcome. Sometimes a host plays audio or video recordings and participants sing on mute. Sometimes individuals or couples take turns unmuting to lead a song. In a few places, some singers route their audio through the low-latency program Jamulus and sing live while others are welcome to join the Zoom meeting on mute. I began participating in Zoom sings in late July and have enjoyed them very much, although the experience is quite different. For details, please see: Esther M. Morgan-Ellis, "Like Pieces in a Puzzle': Online Sacred Harp Singing During the COVID-19 Pandemic," *Frontiers in Psychology*, 12:627038, 2021 (doi: 10.3389/fpsyg.2021.627038).