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Isolation Journal: remote interactions in the time of the Covid-19 pandemic

This paper discusses the development of artistic collaboration during the global lockdown, related to the Covid-19 pandemic. The art work under study involves the author’s practices of ecological sound art and intercultural collaboration. A core component is the interaction between the author and the Canadian composer and improviser John Oliver. A primary outcome of this work was the album Isolation Journal, released in 2020, in the midst of the pandemic. One feature of Isolation Journal was how it revisited site-specific recordings made in Vietnam, on the countryside north of Hanoi, for an installation made by Östersjö in collaboration with Nguyễn Thanh Thủy  and Matthew Sansom (Östersjö &  Nguyễn, 2016). Through remote interactions, and by building a complex sampler instrument, using Östersjö’s recordings of aeolian dan day, a traditional Vietnamese lute, as well as field recordings from the site, Oliver and Östersjö created the album*Isolation Journal* through remote interaction. This in turn became a fundamental building block when the author’s Vietnamese/Swedish group The Six Tones took the initiative to develop a scene for telematic performance at Manzi Art Space in Hanoi. This series started out with a concert with John Oliver, The Six Tones and guest performers from Hanoi in July 2020. Building on audio and video documentation, as well as on qualitative interviews with the participating co-performers, an analysis of the emergence of discursive voice (Gorton & Östersjö, 2019) is drawn from these two internally linked artistic projects. The paper develops the analytical framework of tele-copresence, a synthesis of the contrasting concepts of telepresence and copresence, as a means for analyzing the virtual presence which emerges through such remote musical interaction.

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# Introduction

This paper discusses the creative process of making *Isolation Journal*, an album created in April and May 2020, during the COVID-19 pandemic, through remote interaction between the Canadian composer John Oliver and the Swedish guitarist Stefan Östersjö. Further, the paper also discusses how the design of the artistic collaboration was taken further in a telematic performance connecting the Manzi gallery in Hanoi with spaces in Europe and Canada. Audio and video materials are embedded in the interactive pdf-version of the paper.

# Tele-copresence during the COVID-19 Pandemic

The COVID-19 pandemic has had a profoundly disruptive effect on human-human interaction. Its impact has been experienced in all areas of society, but especially in practices which typically depend on physical co-presence. One such field is the performing arts, which rely on the encounter of artists and audiences in the context of cultural venues such as theatres, practice rooms, concert halls.  Access has been severely restricted due to the pandemic, making it difficult for audiences to access live music, but even for musicians to rehearse and perform together. In order to avoid isolation, institutions, students, teachers and individual musicians across all genres have explored different forms of remote interaction, mediated through the internet, radically challenging and transforming music practice globally. The user of experience of such technologies are often referred to as “telepresence”**,** a term coined by Martin Minsky (1980), in a paper discussing teleoperations, the remote control of a machine.

In Antonini Philippe et al. (2020), one of the first psychological studies of online teacher-student relationships in music education during the COVID-19 pandemic, both positive and negative trends were identified. Of particular interest is how one of the four dimensions they identify “was characterized by the discovery and development of a new type of relationship—a long-distance relationship involving a profound relational reorganization” (n.p.). For both teacher and student this entailed a reconfigured interaction, a new form of positive relationship, emerging despite, or better, even through the physical distance: “Because of its novelty, the development of this new form of relationship resembled the pattern gone through during a first encounter, and it involved the following three components: making a new acquaintance, the development of boundaries, and the maintenance of the previous relationship” (ibid). But telepresence stretches way beyond such dyadic relations. In telematic performance—understood as the real-time interaction between musicians that are geographically dis-located, and may or may not involve both aural and visual communication—Mills (2019) argues that similar intercorporeal processes occur, “not only between musicians’ ‘bodies’ and the network but also through the distributed environments and ‘nonhuman bodies,’ instruments, technology and acoustic spaces with which the performance is taking place” (p. 157).

*Telepresence* may also be seen as an extension of the broader notion of *copresence*. In 1966, Goffman defined copresence as human experience of being together with other, an experience which is dependent on “richness of information flow and facilitation of feedback” (1966, p. 18), a factor which distinctly shapes the behaviour of each individual. While Goffman understood these phenomena as dependent on proximity, experienced in the same physical space, Campos-Castillo and Hitlin (2013) argue that “the physical presence of other actors is neither necessary nor sufficient for copresence” (p. 169). As pointed out by Giddens (1991), already the telephone provides communication means that allow for an experience of copresence.  Campos-Castillo and Hitlin (2013) propose an updated understanding of copresence as instead dependent on “the *perception* of mutual entrainment between actors, where entrainment is the mutual synchronization of three components: attention, emotion, and behavior” (169), whether mediated by communication technologies or through interaction in the same physical space.

Combining the technologically-oriented perspectives of telepresence with the sociological concept of copresence, human relationships which are technologically mediated may be conceived of as *tele-copresence*. In the field of music, the notion of *tele-copresence* may be understood as encompassing the qualities of technologically-mediated synchronous cooperation between musicians in multiple locations and the sociocultural contexts which shape their activities. Technologies for such realtime interaction between musicians over the internet have been under development since the first experiments carried out in 1993 (McKinney, 2016).

The present paper builds its analysis of tele-copresence on a theoretical framework which combines perspectives from embodied music cognition with sociologically grounded understandings of musical creativity.[[1]](#footnote-2) This entails a combination of the study of how a shared voice (Östersjö 2020) emerges as an outcome of artistic collaboration, but also with specific focus on how such processes are reliant on interactions with musical instruments, broadly understood as any technology involved in the artistic process. Further, the study employs the temporal perspectives on artistic creation conceptualised by Per-Anders Nilsson (2011) as Design Time, in which instruments or compositional materials are created, prepared or modified, outside of the temporal framework of musical performance, and Play Time, which refers to any form of realtime composition, musical interpretation or improvisation that takes shape as acts of performance. When applied to remote interaction between musicians over the internet, this distinction provides a perspective which further details the musical affordances of each type of situation, and also, suggests how different forms of interaction can also be mutually supportive in a creative process.

**Analytical Framework and data collection**

The analysis is built on qualitative data, captured through exchanges during the compositional processes and performances, all collected in 2020. Additional data was collected in 2022, in the form of interviews, some of which designed as stimulated recall interviews with video drawn from the concert performance.

# Mediated experience of place in Bắc Ninh, Vietnam

This section provides a background to the main part of the paper, and introduces the perspective of sense of place, and how such experience of presence may also be technologically mediated. This observation will in itself be important for the further argument, but most of all, this section provides a brief account of the ecological sound art, recorded in Vietnam in 2013, which formed the basic material for the remote exchange which the paper discusses.

In September 2013, Stefan Östersjö visited the village of Ngang Nội in Bắc Ninh, an area north of Hanoi, to carry out an ecological sound art project with the British composer and sound artist Matthew Sansom and the Vietnamese đàn tranh player Nguyễn Thanh Thủy.[[2]](#footnote-3) The village, characterized by the large ponds next to the rice fields, is surrounded by mountains on all sides. When scouting the area in spring the same year, the group found that the mountains were full of pathways. Most of them lead to little burial sites. When they talked to people in the village, they learnt that the reason for this is that the area is regularly flooded. The mountains are a safe haven for the ancestors, but also hold the tracks that little children follow on their way to school. They were fascinated by the pathways and decided to situate one project on the nearest mountain top. Östersjö had brought a đàn đáy, a long-necked Vietnamese lute, and now set it up as an aeolian instrument, with harmonics excited by the wind, by stringing it through the bridge, several meters away around trees further down the slope. By alternating the string tension, Östersjö could then control the pitch of the resulting dense clusters of high harmonics. The group returned to the mountain every morning for several days. Östersjö’s recording setup allowed for a very detailed representation of the interaction between the wind and the instrument, captured from inside the lute with two AKG microphones, one condenser instrument microphone, and one hybrid contact/condenser microphone. With a SONY stereo recorder, Matthew Sansom captured the soundscape on the mountain, providing a contrasting aural image of how the noise from the surrounding villages was a constant, but distant, presence. Additionally, Nguyễn Thanh Thủy recorded video with a handheld camera. This capture was used for an installation produced by the three artists at the Manzi gallery in Hanoi, which premiered during the Hanoi New Music Festival in December 2013.

What is of interest to the present paper is how the technologically mediated listening affords a particular experience of place in the interaction between performer, the site-responsive aeolian lute, and the natural environment on the mountain top in Ngang Nội. The tiniest inflection of pitch with the left hand (afforded by the high frets characteristic of Southeast Asian lutes) as well as the slightest colouring when a plucked note is extended by harmonics, excited by the wind, is brought to immediate attention to the performer, when monitoring over headphones. Such a listening situation, with a microscopic focus on sound objects, I have previously discussed as micro-sonic listening (Östersjö, 2020). The setup offers a choice for the performer to either be immersed in such technologically mediated listening “through microphones” (Westerkamp, 2002) or, to instead tune in to the space, listening with the human ear. In this particular site, the two options afford radically different experiences, since listening with the human ear reveals the noise from the nearby villages, and the micro-sonic listening focusses on the sonorities captured inside the lute.

# Isolation Journal: Remote Interaction in Design Time

On April 18 2020, Stefan Östersjö and John Oliver were in a chat, sharing their experiences of the pandemic, and its current effects on their artistic work. Oliver mentioned live-streaming events and notes how he has “been tuning into a few things, but it's usually depressing because people put in all the effort for the live event and not many people are watching, unless it’s the symphony or something”. They start discussing ideas for a collaboration and, with reference to the above, decide to look at a recording project, thinking it could have both telematic components and track exchange components. Since Oliver and Östersjö are both guitarists, playing many different experimental models, they start listing their instruments to think of interesting constellations. Östersjö mentions his work on Vietnamese lutes, and points Oliver to an online article, reporting on an ecological sound art project in which he played the dan day, a Vietnamese long-necked lute, stringing it up as an aeolian instrument, with extended strings capturing harmonics in the wind. John listens to a recording of the aeolian lute and says “this sort of detailed close-mic stuff is great”, suggesting also that some of the source tracks for the exchange could be from archives. Östersjö proposes that they could consider making a “site-specific” CD, find a few different places in which to record, and include the Vietnamese mountain top, together with one site in Canada and one in Sweden. The next morning, Oliver sends an email suggesting the title Isolation Journal for the recording project, a title which they both like.

On the 29th of April, Östersjö has shared a track with aeolian lute and the two get together online to discuss what to do with it. Oliver suggests “keeping the source recording more or less intact and doing a couple of things to make it into a piece: adding low sounds, and creating processes that extend the sounds in the source recording” (personal communication, April 29, 2000). Still at this point, the aim was to create a single piece for the CD, and then find new locations to make other site-specific explorations.

On the 14th of May, Oliver shares two tracks based on the dan day recordings. In an email he describes how he is

recording the tracks like a journal: one ‘idea’ per track. I did a number of experiments, and as soon as I had created ‘Track 1’, I knew I had a good opening for our concept of ‘isolation.’ It is mysterious: the listener has no idea what creates the sound. Then, track two, suddenly, we have an instrument, making some sounds...but the ‘musical’ sounds are just as attractive to the ear as the sounds of the plectrum on the strings, and the ear searches through the sound to the background birds and voices...then, suddenly, an echo chamber that amplifies the small sounds and resonates the strings like a drum” (Personal conversation, May 14, 2020).

In an interview in February 2022, Oliver describes his working process in further detail.

Firstly, I focussed on individual sounds or short motives that Stefan played. I put these into new sonic spaces and manipulate the sounds to create a new experience. Yet my objective in pieces where this is the focus is to create a kind of expanded version of his instrument and listening. One of the clearest examples of this at work is in the two tracks “Mountain Spirits” and “Pathways.” In the first half of “Mountain Spirits,” we hear Stefan’s original improvisation on the very long strings: we hear the click of the pick, as well as the resonance of the strings. However we also hear the dog and the rooster in the background. In the second half, I enhance the detail of those đàn đáy sounds and increase their spectral energy. Then at the beginning of “Pathways,” I begin with a focus on the natural sounds we just heard, and I place Stefan’s playing on an equal footing with those sounds, abstracting out his sounds to integrate them with the soundscape. I also move the sounds in space so that we have the impression of moving in a soundscape, even though the location of the recording did not move.

Less than two weeks later, on the 25th of May, Oliver has completed two more tracks, and the discussion moves to how the methods used in the first four pieces might be expanded to create a large-scale form. This discussion leads to the decision to make the dan day recordings the only material for the album, picking three parts of the original improvisation to stand on their own, and build a form on the CD in which some tracks are created through further processing, some explore the soundscape of the site, and again some are improvisations by Oliver, using a sample library of the aeolian lute and the soundscape.

Oliver built his instruments in the Ableton LIVE software, controlled by their Push 2 hardware controller interface. In an interview in February 2022, he describes how this sampler software allows him to create transformations of sound “using standard electronic music subtractive and time-domain synthesis techniques, such as filtering, envelope, panning, looping, transposing, time-stretching, and so on”. He further describes how he

also designed the controller settings to allow the sound to be transformed in response to expressive gestures of the fingers, mostly the velocity of striking and releasing a keypad, and pressure applied after striking. So I developed sound design and playability in the same creative act. My creative process tends to be intuitive rather than linear; however the “intuition” is only possible due to deep training in electronic music and instrumental performance. (Actually, I approach all music creation in a similar way, whether a score written for acoustic instruments, or an electronic instrument design: I “play” as I write. For me, the manner of execution (playing) is fundamental to the concept of the sound design (composition). (Oliver, Personal communication, February 2022).

This artistic method could be understood as shifting between the modes of design time and play time, and Oliver describes how he is playing around “with the sound as I ’build the instrument,’ and then, when I feel like I know it well enough, I hit record. I want to get it in one take. If it's no good, I do another take. I don't edit (Personal communication, June 9, 2020). Much of the interaction between Oliver and Östersjö had to do with evaluating some of these performances, and eventually agreeing which tracks were good to go on the album. Considering how Oliver’s process of shifting between Design Time and Play Time entails building an instrument based on samples of Östersjö’s improvisations, the interactions between Oliver and Östersjö could be conceptualised as negotiations of a shared voice. An example of such a negotiation is found in the conversation on the same day, where Östersjö notes how

In the new track 10 (with the tremoli) I wonder whether the form could be slightly modified. It has a great, and more complex texture starting from 1:11, and in comparison, the more monolithic starting texture seems a bit too much like listening to a sampler, if you see what I mean? It's important to make it an energetic track, but perhaps it could benefit from greater dynamic shifts, and more presence of the soundscape too? (Personal Communication, June 9, 2020)

there is a corollary here between Stefan’s recording and my process. Stefan was deeply listening to two things when he recorded: the sonic environment in which he placed himself, and the feedback loop of his own playing of the strings and body of the đàn đáy. He created a beautiful interaction between these two domains: playing in response to the wind, the rooster, and other soundscape elements, while also creating his own polyphony of sounds on the đàn đáy. In the same way, I listened into this 29-minute sound world, and then created my own tapestry of sound, extracting and recombining the elements. Note that I could not have created such a work as this album if not for Stefan’s already integrated soundscape approach to making sounds on the instrument. Free improvisation as a form came of age during the era of the expansion of recorded music during the mid-20th century, as composed music became more engaged with the sciences and forged a new path away from the story-telling and representational frame of the 19th century. The microphone and amplification created a new type of listening to sonic detail. This had an influence on Stefan’s project from the beginning, and on his manner of playing, allowing the tight integration you hear in our collaboration. And yet, we barely discussed the project. It simply came to be. (Oliver, personal communication, February 2022)

eventually guided the interaction between the two protagonists when they moved into Play Time, in a telematic performance, which met a live audience in Hanoi in July 2020.

On the 9th of June, Östersjö proposed to Oliver that he might join a telematic performance with The Six Tones, and that he had been thinking that ”if you play one or more of your sampler instruments, the other two players from the group could join, and improvise with this virtual ’me’” (Personal communication, June 9, 2020). Oliver agreed that the idea of creating a hyper instrument to perform in the concert was a good one, and they discuss further how a performer’s voice may be represented and performed on a sampler, a perspective which will be central in the discussion of tele-copresence in the next section.

**Telematic performance at Manzi: Remote Interaction in Play Time**

On the 12th of July, The Six Tones made a telematic performance at the Manzi Gallery in Hanoi, with two guest performers, John Oliver, from his home studio in Canada, and the DJ and improviser Tri Minh, on stage in Hanoi. Also on stage in Hanoi was Ngô Trà My, the dan bau player of The Six Tones. The remaining members of the group were in different locations in Sweden: Henrik Frisk was in Uppsala, Nguyen Thanh Thuy and Stefan Östersjö were in Stockholm, all connecting from home studios. Sound Jack (Carôt 2009), an open-source software, was employed as a platform for the telematic performance.

The concert was produced as a part of Musical Transformations, a research project[[3]](#footnote-4) concerned with musical change, in which The Six Tones had studied how a piece called *Vọng Cổ,* had developed in southern Vietnam, seeking to understand the impact of the hybrid context in which the piece was created and altered through time. The central part of that work was carried out in the south of Vietnam in 2018-19, in collaboration between members of the group and master performers from this tradition. One of these performers was Phạm Công Tỵ, who plays two versions of the two-stringed fiddle, the *đàn gáo,* and *đàn cò*, [[4]](#footnote-5) and it was decided that the opening piece of the concert would be a performance of *Vọng Cổ* in which Ngô Trà My would play with a pre-recorded video of the other members of The Six Tones and Tỵ playing an experimental version of the piece. This formed part of an overarching approach to the concert, which would mix pre-recorded materials with live telematic interaction in several ways. The most immediate reason for this decision was that the internet connection at the gallery was unreliable and had been causing issues in the tests made prior to the event. But it would also contribute to a more convincing visual presence of all performers, since parts of the visual content would be edited as films. To further enhance the connection between audience and the performers in their respective sites, videos were pre-recorded in which the performers talked about their collaborations, and of the music played.[[5]](#footnote-6)

However, when it comes to the first piece on the program, the performance of *Vọng Cổ,* there was an artistic motivation for setting up a performance with perfect synchronisation. In Musical Transformations, the analytical procedures were based on stimulated recall of audio and video recordings, carried out by all participating musicians. In the early sessions it had become very clear that for the participating masters of the tradition, perfect synchronisation of the structural downbeats in the music was an absolute prerequisite for a successful performance of *Vọng Cổ.* Hereby, any perceivable latency in the interaction would risk the quality of the performance, and a pre-recorded track was artistically a logical approach. The video was produced through track exchange, similar to that in the making of Isolation Journal.

The laptop based setup that Henrik Frisk used for the performance has been developing since 2010 through the various intercultural interactions that The Six Tones had been engaged in. Though the computer is obviously overwhelmed with musical and technical constraints it is also, in to some degree, more open ended than a traditional instrument, and this undetermined aspect of the computer as instrument was explored in developing the instrument along with the collaborations we engaged in. One of the main goals was to avoid what may be best referred to as cultural masking, i.e. sounds and musical gestures that are so strongly tied to a western musical culture that they risk to dominate the sonic space. Hence, the ambition was not necessarily to create sounds that would be similar to the Vietnamese instruments, but to allow for the development of the electronic instrument in dialog with the musicians that we engaged with. The collection of instruments used are a combination of generative programs, sample based playback and real-time sound manipulation.[[6]](#footnote-7) Problems with synchronization made sound manipulation less useful so in this performance it was primarily the generative and sample based brograms that were used.

Despite the mentioned exceptions, the major part of the concert consisted of live telematic improvisations, in which John Oliver played a sampler instruments, built on the material from Isolation Journal. Henrik Frisk and Trí Minh both performed live electronics, with Ngô Trà My playing the *đàn bầu* on stage in Hanoi, while Stefan Östersjö played đàn đáy and Nguyễn Thanh Thủy đàn tranh from Stockholm. As mentioned above, the internet connection in the gallery space was not reliable and in the early end of the concert, the remote performers found themselves thrown out of the interaction on several occasions. For the two performers on stage, this was frustrating, but they felt a strong need to make the show go on, not the least since they were playing to a full house. As Ngô Trà My describes her experience, in an interview in February 2022, “I must admit that I was extremely stressed and worried before the concert. I recall many challenging moments”, as when the internet connection caused dropouts of one or more of the remote performers. However, she continues to state how

all those factors played a role in how I performed in that concert and actually somehow it made the concert unique and interesting. Although my feeling was extremely tense at times, so that I almost couldn’t breathe, I was absolutely focused on playing with the sounds from other musicians which I could hear before the interruption, and at the same time being aware of how to interact also with the space, and with the audience at Manzi, to make sure they didn’t feel the gap in the music, until the moment of internet drop out was over. In my experience, this made the concert really special and unique. (Ngô Trà My, personal communication, February 2022)

She further describes how the thorough preparations, and the design of the concert, with the pre-recorded components, contributed strongly to the outcome.

We will now turn to an excerpt from the performance (see video X below), drawn from the last minutes of the concert, and consider the interaction between the performers. This video combines a recording of the Soundjack feed with a local recording of the two acoustic instruments in Stockholm. Unfortunately the local recording video and audio recording at Manzi failed, and therefore, the only reference to the sounding outcome is drawn from these files, which also include local video recordings from each of the remote sites.

The excerpt starts with a soundscape from the recordings in Bắc Ninh, but with an intensified dramaturgy, drawn from electronic files played by both Oliver and Frisk. This soundscape appears to shape the form of the entire piece, giving way for short tremolo phrases, most often in the acoustic instruments, and the duo of đàn đáy and đàn tranh also brings in incantations of short melodic fragments. In a stimulated recall interview, Nguyễn made a series of observations, related to the interaction:

When listening back to the recording, I remember that I felt it was a very nice opening. Through the interaction between the four players (I cannot hear the *đàn bầu*), the resulting music sounds like sounds that just happens in nature, in the forest. The sound of leaves, of water, with the sound of the dan tranh played on the left hand side of the bridge, which blends in with the soundscape. But to me, the second part of the piece is not so well structured. At 1.52 It feels like Stefan wants to build a crescendo. Everyone seemed to respond to that, we can see it both in the image of people playing as well as in the sound, but eventually it doesn’t seem like we get there together. I was kind of expecting either a second movement in terms of the length of the piece, just by the middle of the piece that could expect another second build up, but actually we’re kind of going to the end while it was only half way into the piece so, it is too long for a coda, From 2:34 the music starts fading out already, and the end of the piece is at 4:42, structurally that is too long for a coda, the piece is fading out too early.  (Nguyễn Thanh Thủy, personal communication, February 2022)

A characteristic feature of the interaction is a certain hesitance before each individual phrase, and it can be assumed that this is partly to the difficulty in hearing all players, but also, partly a response to the latency. Everyone appears to be engaged in attentive and searching listening, making sure with each entry not to interfere with any new initiative, while the soundscape from Bắc Ninh creates a continuity, and continual identity, in the first one and a half minute.

It is essential to bear in mind that each location affords a different listening situation. Not even the two performers who are physically in the space at Manzi can claim to hear the same as the audience does, but they certainly are closest to that listening situation, compared to the remote performers, whose listening is defined by their local network connection, with its specific latency. In anotherstimulated recall interview, Ngô Trà My describes how she remembers that she was playing already in the start of this piece, but her instrument is not heard. At the same time, she says: “I remember when I played this piece, I only heard the sound of the dan tranh, now and then there was the sound from the dan day and I heard very little from electronics” (Ngô Trà My, Personal communication, February 2022). The fact that she didn’t hear them first made her hesitate, but then she decided to keep the music going for the audience. But she also recalls how audience members came up to her commenting on the ending of the piece, in which the *đàn bầu* plays the final melodic lines, and she herself notes how “although the sound of *đàn bầu* only appeared very short at the end of the piece in the recording, the ending with the *đàn bầu* sounded quite interesting. It seems to make the piece complete” (Ngô Trà My, Personal communication, February 2022).

As this first soundscape fades out, it is replaced by tremolando figurations, in the electronics but also in the đàn đáy. This in turns fades into a more fragmented, texture, which becomes a coda, with two final melodic figures in the *đàn bầu.*

# Discussion

What then were the possibilities for creating tele-copresence in the Play Time of the concert at Manzi? And, when, or if, it emerged, what were its characteristic features?

Perhaps we should first consider how sense of place is created in the recording session on the mountain in Bắc Ninh. We have noted how the listening situation is characterised by the detailed rendering of the instrumental sound of the lute, and its interactions with the wind. But what is the intentionality of the technology in this situation? Isn’t the proximity of the instrumental sounds also a means for making the mountain site absent in the moment of performance? Or rather, is there a similarity between the Design Time experience of the soundscapes, as in Oliver’s studio, and such micro-sonic listening to the site through the đàn đáy? A similarity which might be understood as a possibility to choose between proximity and distance, an affordance of the listening situation which is grounded in the intentionality of the audio technology. In turn then, it seems inevitable that the performers in the telematic concert each experience very different physical spaces, and that essentially, the listening situation again provides a choice of proximity and distance. But, when considering the interaction between the performers in the final minutes of the concert, the listening situation also appears to urge a certain attentiveness, a searching attention to the Other, which takes musical form in carefully entered musical phrases and sonorities.

Having said this, we must of course consider the impact of the physical performance spaces on the experience of performance. While the performers in Canada and Sweden were all in private studio spaces, with the potential for distracted perception that playing a concert in a place not intended for performance entails, the two performers in Hanoi were in a concert space with a full house. Further, the visual interaction was very limited, not only due to the latency, but also since the video from Hanoi was not working. Video was projected in Hanoi on the back wall, but there was no video link that worked both ways.

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1. The technologies developed for musical performance and music teaching mediated over the internet form part of the wider field of Information and Communication Technologies (ICTs), wherein smart household technologies constitute one related field. In a seminal paper, Sassen (2002) observed how, to understand the place of these new technologies from a sociological perspective, we must avoid a purely technological interpretation, and recognize “the embeddedness and the variable outcomes of these technologies for different social orders” (p. 365). ICTs can indeed be constitutive of new social dynamics, but they can also be derivative or merely reproduce older conditions. [↑](#footnote-ref-2)
2. Sansom and Östersjö were both part of the Landscape Quartet, a group made up of four sound artists, and this project in Vietnam formed part of their work, partly funded by the AHRC. A thematic issue of Contemporary Music Review discusses some of their approaches and artistic outputs (see further Hogg and Norman [eds], 2013). [↑](#footnote-ref-3)
3. Musical Transformations was funded by a grant from the Marcus and Amalia Wallenberg Foundation, and was carried out in 2018-2022, with the main field work done in 2018-19 in the south of Vietnam. [↑](#footnote-ref-4)
4. Both are bowed string instruments and part of the larger family of two-stringed Asian fiddles. [↑](#footnote-ref-5)
5. One of the videos presented the Isolation Journal project and introduced the audience both two the original ecological sound art recordings made in Bắc Ninh, and to the further transformations these materials underwent in the collaboration between Oliver and Östersjö in 2020. This video can be viewed online following this link: <https://www.youtube.com/watch?v=FYrpFTZ_R_U> [↑](#footnote-ref-6)
6. These are written in PureDate and Faust and played with a controller by Keith McMillen [↑](#footnote-ref-7)