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New music for the new normal: Creatively overcoming challenges of lockdown

Peter Stollery & Pauline Black

School of Language, Literature, Music and Visual Culture, University of Aberdeen

Article Info.	Abstract

This paper aims to document and analyse the response to lockdown and social isolation from **sound,** a new music incubator, whose energies are normally focussed on an annual 12-day festival.

The UK Government's responses to the COVID-19 outbreak regarding restriction of the spread of the virus led to an almost total cessation of creative activity for composers and performers and a cutting back of the experience of live music opportunities for audiences during 2020. Through several projects, such as the COVID-19 Sound Map, virtual networking events for composers, signposting of online music making apps and resources for school children and families, **sound** explored and utilized new technologies enabling a re-imagining of personal, social and musical experience in new music making and sharing, drawing together strands of music, wellbeing, education and technology. This paper focuses on **sound**'s Lockdown Composing project, created in response to the needs of composers who had lost creative outlet or employment since the restrictions began. Workshops were held with composers, exploring ways of creatively harnessing the constraints of the video conferencing platform Zoom, to form their compositions. The project culminated in a live performance by an ensemble of ten musicians, based across Scotland. This digitized new experience of 'live' is discussed alongside the process of composing, rehearsing and performing in 'real time'. The paper draws on examples from composers, performers and audience members discussing coping strategies, experiences and potential future directions for composers, performers and organisations such as **sound**.

The Lockdown Composing project and new experience of 'live' was found to be beneficial for all parties, enhancing social, personal and musical aspects. Creative application of the technologies used has led to potential new directions for composers, leading to further virtual online collaborations with a Canadian ensemble.

1. Introduction

Following the introduction of lockdown[1] restrictions imposed by UK and Scottish Governments in early March 2020 as a result of the COVID-19 pandemic, musicians and music organisations in the UK needed to find new ways of working. This was not only due to the need to provide income to replace what was lost through cancelled bookings, but also to provide much-needed activity to keep minds occupied at a time when the health and wellbeing of musicians was being affected in ways which had not been seen before.

This paper presents the experiences of composers, performers and audience members with respect to their perceived wellbeing and social isolation during lockdown, through the Lockdown Composing project, devised by **sound**[2], a new music incubator based in North East Scotland. This project culminated in a live performance by an ensemble of ten musicians, based across Scotland. This digitized new experience of 'live' will be discussed alongside the process of composing, rehearsing and performing in 'real time'.

This paper will argue that, although this is a single case study, it may offer insight into the digitally mediated performance strategy employed and the subsequent perceived experiences of the participants. Through focusing on the participants' meaning making from a sociocultural perspective, it may be relevant for composers and music ensembles hoping to engage with the digital environment, as well as being of interest to new music organisations like **sound**.

The study is exploratory and inductive in nature, so no predetermined hypothesis or theory was in place at the outset (Creswell, 2013). In the discussion that follows, audience members in the study are referred to as 'A 1-4' and performers are referred to as 'P 1-3.' As this study is based on self-reports from a small number of participants from one music project, there are clear limitations. However, by using thick description (Geertz, 1973) it is hoped that readers may be able to apply the process of transferability to their own situation (Lincoln and Guba, 2000).

2. Distributed musical performance

From the early pioneering work[s] of artists such as Roy Ascott in the 1970s (Ascott, 2003) to more recent initiatives such as the Online Orchestra[3] (Rofe, Geelhoed and Hodson, 2017), interest in telematic performance, that is, synchronous musical performance over networks, has grown in parallel with the quality and bandwidth of domestic internet connections. Issues including latency, geographical distance, network infrastructure, bandwidth and computer processing power all have a contributing factor to the difficulties associated with synchronisation of rhythm when performing over networks (Rofe and Reuben, 2017). Projects such as LOLA[4] (LOLA, 2015) require extremely high up/download speeds of at least 1Gbps[5] whereas a typical Superfast Broadband network in the UK in 2020 would reach around 40Mbps download and 10Mbps upload (Rofe and Reuben, 2017).

Much of the research around latency[6] in performing networks in recent years has been around how it can be reduced, to enable more rhythmic accuracy during distributed musical performance (Chafe, Gurevich, Leslie and Tyan, 2004; Bartlette, Headlam, Bocko and Velikic, 2006; Driessen, Darcie and Pillay, 2011), but one study (Rofe and Geelhoed, 2017) tries to harness the creative aspects of not being

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[1] The use of the term lockdown in this paper refers to the first UK-wide period of lockdown put in place by UK and Scottish Governments beginning 23 March 2020, and which was gradually lifted at different stages throughout the UK from mid-July that year.

[2] http://www.sound-scotland.co.uk. **Sound** was set up in 2004 as a festival for the performance of new music, but over time, it has developed into a yearlong activity, working with performers, audiences and particularly emerging composers, hence the term 'incubator'

[3] http://onlineorchestra.com/ (accessed 5ᵗʰ October 2020)

[4] LOLA: LOw LAtency Audio Visual Streaming System.

[5] Gigabits per second.

[6] The time delay experienced between the input and the output of a system.

able to synchronize during musical performance and details the creation of musical works designed specifically to exploit this constraint in a positive manner.

3. Music, Health and Wellbeing

The World Health Organisation (WHO) defines health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (Fancourt and Finn, 2019: 2). The connection between health, wellbeing and music has been explored in many fields – education, psychology, therapy and social sciences, as well as in clinical and non-clinical settings (Pothoulaki, MacDonald and Flowers, 2013; Hallam, 2010). There are no studies located in the area of new music, technology and wellbeing; therefore this is an area which warrants further research. Engagement in musical participation has been shown to have a positive benefit on wellbeing (Davidson and Krause, 2018) and music can provide positive experiences to promote mental health (Saarikallio and Erkkila, 2007; Vastfjall, Juslin and Hartig, 2012). It must, however, be acknowledged that it may be difficult to define an exact correlation between music, health and wellbeing (MacDonald, Kreutz and Mitchell, 2013).

The health benefits of listening to music have been well documented (Pothoulaki et al.; 2013). In a recent study regarding mental health and how time was spent during the COVID-19 pandemic (Bu, Steptoe, Mak and Fancourt, 2020) listening to music was found to increase life satisfaction, however, so was spending time gardening, reading and doing other such leisure time activities. This paper attempts to explore the perceptions of the participants regarding what it is in particular about the experience of participating in a musical activity that has contributed to their health and wellbeing.

Playing in a music ensemble can result in the development of musical ability as well as a whole range of social, emotional and cultural benefits (Hallam, 2010; Creech and Hallam, 2011; Hewitt and Allan, 2012; Small, 1998). These wider benefits are equally applicable to audience members as well as performers (Pitts, 2005).

Saarikallio (2012) discusses the importance of the psychological aspects of music making from the emotional, mental and social dimensions, whereas Sloboda and Juslin (2010) argue for music's importance, regarding the regulation of emotion and coping strategies. Ruud (1997) also argues that music has the ability to foster a sense of belonging, which is essential for wellbeing. We suggest that the opportunities for online music performance provided by the Lockdown Composing project helped these areas continue to flourish, despite the global pandemic.

The concept of musical identity has been linked to quality of life (Ruud 1997) and self-esteem (Hargreaves, Miell and MacDonald, 2002) and following Ruud (1997) we suggest this may be one of the most fundamental notions to underpin wellbeing. Drawing on the concept of musicking[7] (Small, 1998) we suggest that the Lockdown Composing project supported a feeling of belonging, participation and community for both performer and audience alike at a time when musicians were restricted in regular group musical activities due to social distancing regulations.

4. Background to the study

Sound is a new music incubator based in the North East of Scotland. Established in 2004, originally through a partnership between the Department of Music at the University of Aberdeen and Woodend

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[7] Activity involving or related to musical performance - for example, performing, listening, rehearsing, or composing.

Barn in Banchory, Aberdeenshire, it encourages new music creation and discovery. Its main output is the '**sound**_festival'_ which takes place annually in October, but it also provides year-round activity supporting a wide range of composers, engaging with local communities and providing a variety of participative opportunities. These activities fall under the sub brand of '_surround_**sound'** and include community projects for young composers and performers, for those in socio-economically challenged communities and for local players who want to get involved in new music making. During the lockdown, all these activities had to move online and that move to digital space provided the opportunity to create new activities, which had previously not been considered. Face to face methods of communication had to be replaced by digital alternatives such as Zoom and Johnson and Merrick (2020) discuss the importance of using Zoom as a means of connection for wellbeing conversations at this time.

One of the first activities **sound** set up was a fortnightly session called 'Covfefe', where composers could meet up virtually, over a coffee, on the Zoom[8] video conferencing platform, discussing a range of topics, from issues around the effect which lockdown was having on musicians in the sharing of practice. During the first of these meetings, it became clear that many of the participants had lost income and some were struggling to pay rent and even buy food. Immediately after this session, **sound** put out a crowdfunding call to raise money for a Lockdown Composing project, comprising four paid commissions, not only to help these composers financially, but also to provide performing opportunities for players desperately seeking live performing opportunities.

Any Enemy (North East New Music Ensemble), a group of performers also based in North East Scotland was chosen as the ensemble for whom the composers would create new work. The ensemble was formed in March 2018, with support from **sound**, to provide opportunities for local players to perform new music; it has featured at the **sound**_festival_ each year since then, as well as part of _surround_**sound**. Most of the members are instrumental teachers in the area for whom teaching had moved online and who had been denied the experience of playing live with local semi-professional ensembles.

An open call for submissions was put out via the **sound** website and social media, and four composers were selected based on their methods for exploiting the idiosyncrasies of the audio capabilities of Zoom for musical performance and the general constraints of creating music for live online performance. Following a series of interactive rehearsals, where composers and performers were able to experiment with and learn about the audio environment on Zoom, the first online concert was livestreamed and recorded by **sound**: Lockdown Composing Project 1[9]. After a further period in lockdown, due to ongoing restrictions, the decision was made to curate a second online concert: Lockdown Composing Project 2[10].

At the start of lockdown, a proliferation of pre-recorded orchestral and choral works began to appear on the internet. These pieces required each performer to record their own musical part, synchronized to a click track, which would then be layered and combined with the other recorded parts by a sound engineer. The work is created in real-time but put together outside real-time to create the illusion of a live performance, polished and tidied using all the tools available to the sound engineer.

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[8] Prior to the COVID-19 outbreak, **sound** co-workers had used Skype as their normal method for video conferencing. As that platform has limited opportunity to improve audio quality for musical presentation, the team moved to Zoom at the start of lockdown and it became the platform of choice for all activities, including meetings and performances.
[9] Available at https://www.youtube.com/watch?v=_CMuivVPA3A (Accessed 12th March 2021)
[10] Available at: https://www.youtube.com/watch?v=WGJDJUrZLzkandt (Accessed 12th March 2021)

Figure 1.   Screenshot from Lockdown Composing 2 performance on Zoom.
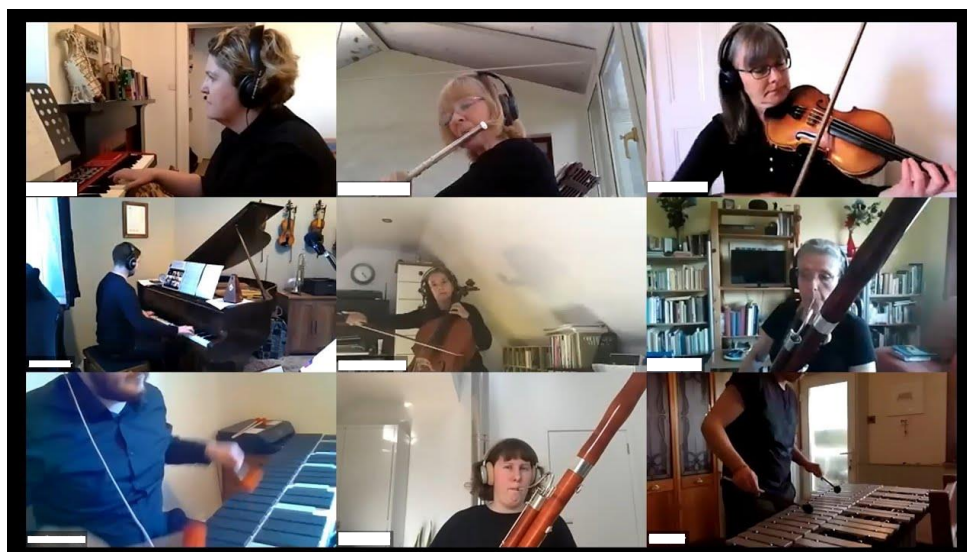
5.   Lockdown Composing

With the Lockdown Composing project, the brief for composers was to harness the constraints presented by platforms such as Zoom and actively use them as compositional challenges. These constraints included:

- Latency.
- Variable qualities of network infrastructure and bandwidth amongst players.
- Variable audio production quality amongst players, dependent on quality of microphones.
- The limitation in the number of sounds (3 or 4) able to happen simultaneously, with Zoom being designed for speech and conversation rather than musical performance.

A further constraint was that, as the project was devised during lockdown, only the technology which the players already had in place could be used, as travel to deliver better equipment was not possible.

Because Zoom is optimized for speech and conversation, some of the algorithms in place to support this mitigate against successful orthodox musical performance. Some of these algorithms can be disabled and so players are required to adapt their audio settings[11] as follows:

- Disabling the automatic adjusting of the microphone volume; this allows for a wider dynamic range from the players as the software no longer automatically tries to compress the audio to a uniform level which would be preferable for speech.

- Activating the option for enabling the original microphone sound; selecting 'Turn on Original Sound' in the meeting allows for the sound to bypass the software's echo cancellation and audio-enhancing features and avoid, for example, the cutting out of a long low pitch from an instrument, which the software might construe as background noise.

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[11] A subsequent release of Zoom (version 5.2.2) in September 2020 provided enhanced audio facilities for musical performance called High Fidelity Music mode.

Figure 2   Zoom microphone settings for optimal music performance prior to version 5.2.2 audio upgrade (MacOS view).
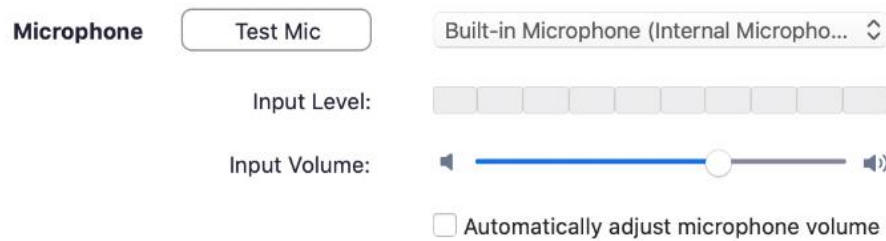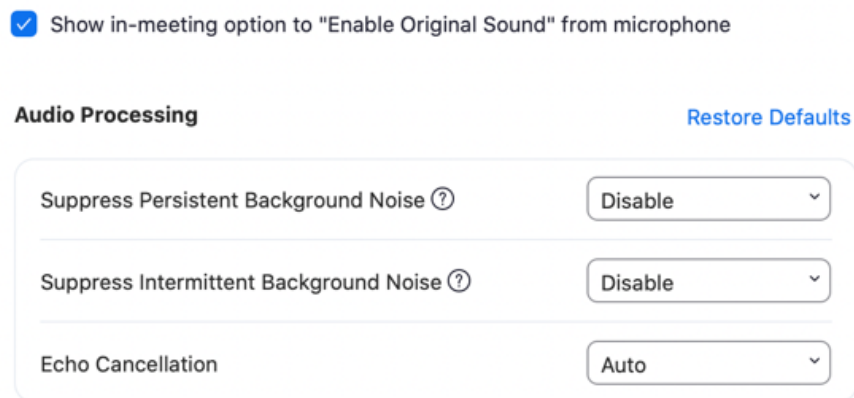

Figure 3   Zoom advanced audio settings for optimal music performance prior to version 5.2.2 audio upgrade (MacOS view).

6. **Research Method**

The research is a descriptive case study (Stake, 1995) and an investigation of lived experience (Van Manen, 1990). Following ethical approval, an online survey, containing quantitative and open-ended qualitative questions was sent to composers and performers with follow up online focus groups conducted using opportunity sampling (Newby, 2010). The focus group interviews took place in September 2020 and lasted 45-50 minutes. As both researchers were members of the ensemble, one as conductor/director and one as a performer, it was important to remain aware of assumptions and personal bias (Lanzoni, 2005) throughout the research process and to remain objective: 'critical self-awareness of their own subjectivity, vested interests, predilections and assumptions and to be conscious of how these might impact on the research process and findings' (Finlay, 2008: 17). This paper reports on the data from the Performer focus group (n = 3) and Audience focus group (n = 4). None of the participants had tested positive for COVID-19.

As a follow up to the survey data, the participants were given the opportunity to respond to broad semi-structured interview questions concerning:

- Their feelings at the start of lockdown in relation to being a musician.
- Their feelings and perceptions as they began the Lockdown Composing project.

- Their feelings and perceptions with reference to taking part in the online performances.

Participants were also able to comment on anything they felt was worth adding to the discussion around their health and wellbeing in relation to the Lockdown Composing project. A number of prompt questions were available as a resource to guide the conversations. The focus group interviews were facilitated and recorded via Zoom and then transcribed fully afterwards.

All qualitative responses were subject to in depth reflexive thematic analysis, based on Braun and Clarke's six stage process (2006, 2019). Following a period of immersion in the data, the data were coded and developed into themes. The data were revisited until patterns of shared meaning were constructed, with final themes being generated.

7. Results and discussion

Three significant themes were derived from the data analysis which were fundamental to all participants, both performer and audience member alike:

- Initial sense of loss.
- Finding purpose.
- New possibilities in the online environment.

7.1 Initial Sense of Loss

The shared sense of loss at the start of lockdown from both performers and audience members alike was very strong. The impact of the sudden lack of music making opportunities caused worry, uncertainty and feelings of dismay from all participants. Performers commented on the sudden impact of the financial strain caused by a loss of performance opportunities: 'it was financially, really quite frightening' P1. This, in particular, was, and still is, detrimental to the wellbeing of the performers in the study. The social interaction which comes with music making was missed by performers: 'one felt quite isolated musically' P2. This is in line with Saarikallio (2012) who documents the psychological benefits of music making to foster emotional, mental and social bonds and Ruud (1997) who shows that music can enable a feeling of belonging.

P1 went on to describe how they began to question their sense of identity: 'I was also surprised how not having concerts really affected me much more than I thought... I was starting to question what was the point of doing it at all?... I did feel quite pointless actually.' This shows the importance of the social constructionist paradigm, foregrounding the interplay with other musicians, as well as an example of a lowering of self-esteem, or psychological distress (Hargreaves, Miell and MacDonald, 2002).

This sense of loss was felt by audience members too, who missed the emotional involvement with performances: 'Immediately, a feeling of a sense of loss. The...to not have the interaction with live interaction with performers was a great loss' A1. 'Having things just completely cut off physically and emotionally … from your music community A2. Drawing on Small's (1998) definition of musicking it can be noted that audience members discussed that this sense of loss was felt from the entire new music community, not just by the performers, and that this had a great impact on wellbeing:

> 'To music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing. We might at times even extend its meaning to what the person is

doing who takes the tickets at the door or the hefty men who shift the piano and the drums or the roadies who set up the instruments and carry out the sound checks or the cleaners who clean up after everyone else has gone. They, too, are all contributing to the nature of the event that is a musical performance.[1](Small, 1998: 9)

7.2   Finding Purpose

With the growth of virtual music making opportunities during the pandemic, musicians and audiences have once again been able to share in music performances and concerts across the globe. Technology has facilitated many collaborations and shared ventures which may previously not have taken place. Described by A2 as 'a sense of hope', P2 shared her experience of playing every day to her mother, bringing a sense of connection, which was an activity that she had never done prior to lockdown: 'curiously that that gave me a purpose' P2. A2 described the power of an online music sharing project when working with her students to enhance the sense of community: 'that actually had a huge, a very positive effect' A2. Here the value of a shared social space can be seen to combat the isolation of lockdown, with the power of music used to bring the community together (Hallam, 2010; Creech and Hallam, 2011). The data shows that re-establishing connections, making new connections and building community through music making, in the case of this project, the new music community, were all vital in giving participants back a sense of purpose and to overcome the sense of isolation felt at the start of the lockdown period. P4 described herself as feeling elated and 'high as a kite' after performing a concert, which did a great deal for improving her sense of wellbeing.

As referred to above, a lot of online music activity presented during lockdown has not been interactive and whilst this means that music can take place once more to connect people, A3 discusses here that the experience falls short of the 'live' performance: 'I've listened to a variety of music performances online. It's not the same, it's just not the same as having the direct interaction with participants' A3. There are many virtual collaborations available to watch online now, which has opened up a rich possibility of listening experiences not available before COVID-19. However, participants agreed that satisfaction from these performances, as a listener, was not as emotionally fulfilling as being an audience member at a concert, unless you happened to know someone taking part, which made it more interesting to watch that person. A2 discusses emotions here: 'I had just been sitting... and thinking about how emotional I'd felt about the, you know, the not being able to have direct involvement in the audience participation in music' A2

7.3   New possibilities in the online environment

The **sound** Lockdown Composing project re-imagined the online performance as a live performance for both performers and audience alike, bringing positivity and a sense of purpose. Instead of simply trying to recreate what might normally happen in the online space, something different was created through the digitally mediated performance:

> [']what filled me with the most immense hope and joy was that it wasn't just about making do or trying to reinvent the space or find the space, but it was on purpose pieces written for this Zoom and for this environment with the limitations and the advantages, on purpose, like really, like, not trying to fit something old into, but actually creating something new, on purpose for this environment.['] A2

A2 went on to describe the benefits to creative thinking and intellectual engagement that this brought, being an exciting and new way to make and share music online: '...extremely important for hope

and extremely important for your mental health and wellbeing.' A2 This is in line with Ruud (1997) who showed that music can be beneficial to stimulate intellectual curiosity, foster a feeling of social interaction and enrich communication, thus impacting on overall wellbeing.

In one piece, participants (audience and performers) were able to follow a projected score on screen, created in Max/MSP software, which was described as an enhancement of the regular concert-going experience, that added excitement to the participant:

'how useful and helpful it was to follow the score in the pieces last Sunday, and that was very exciting. It took me about 5 minutes to work out how to read it, but that was exciting in itself...and I was actually thinking where there is material that can could potentially enhance the experience of listening, it would be great to have it.' A1

Participants valued being able to see the performers onscreen and being able to look up the list of attendees. Although they did miss the in-person conversations which would normally take place at a concert, having an inbuilt question and answer session, utilising the chat function on Zoom was seen as a real positive to encourage communication and socialising between people who might not have socialized previously. It did also open up the possibility of connecting with a much larger community; this has led to a future online collaboration between Any Enemy and the Brandon University New Music Ensemble from Manitoba, Canada[12].

One audience member reflected that, because of attending and interacting in these Lockdown Composing project concerts, the listening experience might, as a result, be different when returning to the concert hall: 'I think I suspect our listening skills will be enhanced as we will be almost hypersensitised to hearing music live. Maybe we will listen with fresh ears. Who knows, I hope' A1

From the performers' perspective, P4 discussed the positive benefits to her wellbeing of making music with others once more to combat isolation: 'That gave me great fun and a way of actually socializing and being amongst you' P4. This again evidences Saarikallio's (2013) discussion on the importance of the psychological aspects of music making – in particular here the social dimension, with its impact on the emotional and mental wellbeing aspects. However, there were some aspects which were initially challenging for the performers to deal with: 'There were so many variables that were terrifying. You know that we don't usually have to deal with when you're in a normal concert like the internet issues, headphones, cables, lights from music stands and no conductor and just the securities of cues and other people breathing with other people, in that you couldn't rely on anything really. So, it felt totally terrifying' P1. It can be seen here that the start of the Lockdown Composing project was not without some initial strain on some performers, however this seemed quickly overcome,[:]

'...but it was actually really nice to be in that mindset of being in on stage, performing 'cause I felt like I totally went into the same kind of shape, the same sort of headspace that I would do for a performance, even though this situation was just completely foreign and. And actually it was just really nice. It's like an old friend. It was like coming back to a really familiar situation that even though it was scary, it was just really wonderful to be back in that sensation actually, which is interesting. 'cause it made me realize it was all in my head.' P1

Feelings of relief and feeling back to some sense of 'normality' as a performer can also be noted here: 'at the end of it I suddenly thought, yeah, this is. This is all right. This is real.' P4.

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[12] This took place on ~~January 30th~~ 30 January 2021 as part of **sound**festival.

The post-concert experience was a major part of discussions for both audience members and performers alike. A3 enjoyed watching the concert with her partner saying 'it was really nice to be able to have a conversation about a musical performance that we had just both listened to' helping them feel that sense of normality, as they were regular concert goers. All participants regarded the post-concert conversations and the concept of just 'hanging out' with friends following the performance (again the social aspect) as being vital to their wellbeing, valuing the musical participation (Pitts, 2005). The Lockdown Composing project had to re-imagine the post-concert experience and a Zoom room was created for performers to socialize virtually following the second concert. This is in line with Johnson and Merrick (2020) who used virtual chatrooms to promote wellbeing within their student population. One participant also started a thread on Facebook following the concert with a photograph:

> …as this was my stage today and I suppose I'm quite proud of the fact that I've actually done a concert which at that time I think pretty much nobody was really doing live concerts. I think I was yeah, feeling really proud of us all really. A sense of relief as well. P1

Figure 4   P1's performance area following the Lockdown Composing project.

Another discussed wanting to text friends to discuss the concert before joining in on the Zoom chat, which could be likened to meeting family members in the audience before then joining a wider circle of friends for post-concert drinks. This shows that the concert conventions were still possible, albeit in the online environment, which helped the performers feel as if they were regaining this other vital part of their lost identities connected to life as a performer.

Rehearsals and experience gave a feeling of confidence, combined with the concept of one of the pieces, aptly named 'Social D[ist]ancing' which included improvising around feelings found during lockdown, as well as having to keep distant from other players, described by P4 as 'think of social distancing and the awkward dancing that we all have to do...it sort of all came together in my head.'

P4 discussed the positive benefits of improvisation in the online environment, which had previously been a stumbling block for some of the members of Any Enemy and had caused a degree of psychological distress. For the classically trained musician, the thought of improvising can be an anxiety-inducing experience (Wright and Kanellopolous, 2010). P4 stressed that 'the other thing that really excited me was the way that in that piece we could actually give free reign to the freedom that we've never believed in before to improvise.' P4

Interestingly, P1 also discussed a newfound freedom linked to working in an online environment – the fact that it is sometimes difficult to hear or be heard. This seemed to enable a sense of confidence and is in contrast to what might be referred to as a 'normal' playing environment: 'maybe in terms of, sort of, a classical music kind of upbringing your whole time, you have such high standards of perfection and tone and quality and intonation', whereas P1 clearly felt that since Zoom controlled so much of the sonic qualities, 'chances are it's going to be a pretty rubbish violin on Zoom anyway (laughs)', something which could allow her to focus on other aspects of performance. It may be that it is easier to take a risk with improvisation in an online environment as the need to concentrate on perfection and replicating music accurately cannot easily be achieved there.

P4 discussed that she felt more able to experiment online, due to the different perspective and being able to see people on screen. She felt it was far easier to look at people on a screen and to see, hear and notice what they were playing, compared to them all sitting in the same room. 'You could look and see what people were doing and you could also hear and see what they were doing. The feeling that we could actually see. You know, in particular when I could see the keyboards and see what was happening and think, oh yes, there's no reason why we can't do that, you know?'

P4 went on to say that she was used to 'doing all my concentration with my ears 'cause my eyes are always occupied with the box in front of you.' Like many video conferencing platforms, the Zoom platform places participants in 'boxes', however P4 refers here to shifting her focus from having her eyes on her own music stand (the box in front of you), to becoming more aware of what the other members were doing (as she could now watch everyone); this was done by using both her eyes as well as her ears, giving her confidence to develop her improvisation.

Interaction and collaboration are fundamental to the improvising group (Monson, 1996) and this suggests that for some people, learning to improvise in the online environment may be beneficial as this environment may be conducive to develop the listening and interaction skills of an ensemble, by making performers aware of the need for collaboration, such as is found in an improvising ensemble.

8. Discussion and Conclusions

The findings indicate that the performers and audience members experienced an initial sense of loss at the start of lockdown, which had an impact on them socially and emotionally and that musicians were suffering financially, causing them to worry about an uncertain future, including a loss of identity as a musician. Through participation in the Lockdown Composing project, they re-established a sense of purpose. Through the shared experience of participation in an online, interactive music event, conceptualized through Small's (1998) notion of musicking, both performers and audience members reported positive psychological benefits gained through social, emotional and mental stimulation (Saarikallio, 2012) as a result of participation in the project. All participants perceived the Lockdown Composing project to have a positive impact on their health and wellbeing. This is in line with Weinberg and Joseph's (2017) study which showed that those who actively engaged with music scored higher on their subjective wellbeing scale than those who engaged passively, or not at all. They therefore deduced that active forms of music engagement offer benefits to wellbeing. The participants in this study, through active participation in musical activity, experienced an increase in their wellbeing (Davidson and Krause, 2018).

Forming and developing a sense of musical community and belonging (Ruud, 1997) was essential to the wellbeing of participants in this study. Being part of a community, such as the New Music community appears to be valuable for the promotion of health and wellbeing referring back to Small (1998) and his concept of musicking. The immersive experience and interaction felt as an audience member in a music concert is just as important as the performance experience, '...being a part of an experience and I think that really does something for your mental health and your wellness.' A2 It could be argued that gathering together in any social context or activity would be beneficial for health and wellbeing and that it is difficult to make a correlation between music, health and wellbeing (MacDonald, Kreutz and Mitchell, 2012) so why music and why this project in particular?

P1 describes the special contribution that music makes in her life and how the Lockdown Composing project has contributed to her wellbeing: 'I think it's made me realize how much of a big deal it is in my life to make music with other people. And how even just to be in a space where you hear that sound shared and how your contribution affects a group…that it's just always well for so long has been part of my life and to be without it, I feel like I've got an arm or a leg missing. This has really helped a lot.'

Audience members discussed this provocation and felt that the difference between another social experience and a musical one such as this is the emotional connection to the musical experience and the connection with the performers:

> 'So, when you listen to music live, even live streaming, you are connecting with people, so you're feeling like you're being lifted out of the isolation, more than just watching, observing a show...and I think that everything about watching a live concert and seeing the faces and the music being produced, like, you know, on the instruments … I think that has a huge impact on your emotions, but also for your health, like you feel connected for that moment with the musicians, you remember the experience of being in a concert hall or being in a space together, that community, you feel connected with people which lifts you out of the isolation.' A2

Social interaction and recreating the concert-going experience, although creatively re-imagined for the virtual space, was of utmost importance to all participants. It should be noted that the after-concert space was deemed as important for the participants and as much part of the event itself, so this should be considered when planning future online events.

A surprise finding from the study was that the online space was considered by some to be an easier environment for finding ways into improvisation. This may be because the performer has to accept a less perfectionist attitude due to Zoom being in control of the sounds generated and it may also be because the visual senses can be enhanced as a performer. This may be worth further exploration for musicians from a western art music background who find improvising anxiety-inducing (Wright and Kanellopolous, 2010).

This study had limitations in that the researchers were also involved in the project as composer/director and performer, however, having this perspective may also be deemed advantageous. It would be beneficial to study an online new music ensemble in a context where the researchers were not part of the study, as well as an online ensemble in a different genre/style.

The Lockdown Composing Project 1 presented an opportunity to four emerging composers, at an incredibly difficult time for self-employed musicians, to create music in an environment where constraints actually became musical parameters to be exploited. At the same time, it gave much needed opportunities for local musicians to play live music, but in new and exciting ways, different from their previous experiences; it also nourished an audience, starved of the interaction and social benefits gained from attending live music events. This project was further developed through Lockdown Composing Project 2, allowing performers, composers and audience to continue to share music making in the digital environment, despite ongoing restrictions of COVID-19. The mental health and wellbeing of all three constituencies was boosted immeasurably.

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