

Black Time in the Age of COVID

Improvising Afrologically in both Telematic Performance and Public Health Policy

Eric Lewis

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Article abstract

Both telematic performances and COVID suffer from latency. In telematic performance, it is the lag between a musical gesture you make, and the time that others in the network receive it. In COVID, it is lags between contact and showing symptoms, and between public health policy decisions and their effects. I argue that we need to embrace latency as an improvisational partner both in our telematic performances, and in our health care policies. I argue that Black aesthetics and Black approaches to sound and improvisation have long embraced latency, and that we need to become what is sometime called Afro-logical improvisers both in our networked performances and in our COVID related health policies.

Black Time in the Age of COVID: Improvising Afrologically in both Telematic Performance and Public Health Policy

Eric Lewis

“Please, a definition: A hibernation is a covert preparation for a more overt action.”
—Ralph Ellison, *Invisible Man* (prologue)

Latency, definitions:

The state of existing but not yet being developed or manifest; concealment.

The state of a disease not yet manifesting the usual symptoms.

The delay before a transfer of data begins following an instruction for its transfer.

(“Latency”)

I want to discuss similarities between these seemingly disparate definitions of latency—one concerning concealment and invisibility, another concerning the status or state of a disease, and the third concerning delays in the transmission of digital information—as they coalesce in two equally disparate-seeming phenomena: digitally mediated telematic musical improvisations (networked performance) and public health responses to COVID.¹ How we improvise effectively telematically and how we respond responsibly to COVID both involve confronting latency appropriately. I will suggest that appropriate confrontations treat latency as an improvising partner; we must improvise *with* latency, not ignore it or try to make it go away. And taking this attitude to latency—both in our telematic performances and in our public health policy—is to take an Afrological attitude to latency,² something which I think Ralph Ellison realized in *Invisible Man*, with his discussions of temporality, Blackness, and action.

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There has clearly been a drastic increase in the number of people who are using digital means to “interact” with others. Zoom and other video conferencing platforms are being used to teach classes, to speak with friends and relatives whom distance and quarantine rules prevent embodied encounters with, and of course, to make music—often highly improvisatory—with others, in something akin to “real time.” Resources, often web-based, abound offering advice and suggestions about how to “get into” networked music performance.³ Long Facebook threads can be found on the topic, where musicians share experiences with different platforms and programs and give advice, technical support, and stories about their own experiences in networked performance.⁴

A common thread in all these discussions—in fact, the dominant topic—concerns latency in networked performance and how to minimize it. Latency, in this context, is the time it takes for a signal to propagate through a network and reach the others participating in the network. In other words, if you are playing an instrument and have your sounds—and often your image via a video camera—“plugged into” your computer and sent to others, the delay between the time you actually produce the sound and when it is heard (and seen produced) by those in the network is the latency in the system. It is a product of a number of factors, including the distance the signal needs to travel as a function of the speed of light and delays added to this due to factors such as overall network load, the nature of the software and hardware one is using, etc.⁵ Many times

there is also differential latency between sound and image. Video feeds, being more informationally dense than audio, often have a greater latency than their associated sound, producing a noticeable temporal gap or lag between the two.

Of course, there is latency between sound and image in embodied collective music-making. For practical purposes in co-present embodied music-making we can take the speed of light to be infinite, but the speed of sound is approximately a foot per millisecond. In other words, if you and I are standing 30 feet apart there is a delay between my seeing your lips moving and my hearing what you are saying of approximately 30 milliseconds. We do not perceive the sounds and the images in such cases to be out of synch. Interestingly, if I flash an image on a screen and follow it with a sound 30 milliseconds later, you can easily tell they were not simultaneous. Now, it is commonly stated that networked latencies of more than 25 milliseconds interfere with one's ability to play with others in a coordinated way, to play on the beat with others, to play rhythmically, and so to play clearly pulsed music.⁶ Much that is written on networked performance concerns ways of getting your latency below this magic number—something in fact often quite difficult to achieve.

In this sense, latency is treated as a problem, a mistake, something necessarily added to the networked system which ideally would not exist. The goal of improving networked technologies is to rid them, as far as possible, of this latency, which acts, dare I say it, like a virus infecting our networked performances—added “from without,” of mysterious origins, rapidly changing and mutating, and ultimately something that can only be controlled to a certain degree. Yet what follows from recognizing that latency is an intrinsic part of networked performance (that it cannot be gotten rid of)? And what might be lost by not thinking creatively about how it impacts networked improvisations? What affordances might it open up, as opposed to just focusing on the avoidances it suggests?

If you start engaging in networked improvised performance with the expectation and goal of reproducing virtually (in the network) all the features of an embodied encounter, you will inevitably be disappointed. Technical glitches abound. Quality is limited in many ways—not just by the network itself, the software you use, and your sound card, but by your microphone, your video camera (almost always found in one's computer), your room acoustics, lighting, and your familiarity and comfort with the location you are performing from, among other factors. And, of course, you will encounter latency—sometimes as a mild annoyance, sometimes as so great as to render any form of communication more or less impossible (we have all been on Skype or Zoom encounters like this). Finally, having established a day when you and your friends are going to jam via Zoom, you did not think you were going spend your whole time trouble shooting, trying to find your “advanced audio controls,” learning about audio routing on your sound card, etc., did you?!

We are seemingly stuck, for disappointment with such networked musical encounters (which are reported by many) is caused, I want to suggest, not just by technical shortcomings in the whole network (audio and video quality, noise in the system, latency and the like) but also when the network is working well and some sense of the actual is able to be extracted by experiencing the virtual.⁷ For we are often after more than just an occasion to make music together when we engage in networked performance. We are also hoping for, and expecting, a kind of sociality, an encounter with others of the sort that collective improvisation is well established as ideally exemplifying. The technological and the social are not, here, separate spheres; they are co-penetrating and interdependent.⁸

Interestingly, attempts we make to create as technically sophisticated a means of telematic

improvisation as possible (that is, systems with low latency, good audio quality, synchronized audio and video)—attempts, in effect, to replicate the environmental conditions of actual co-present improvisations—may actually cause in us feelings of alienation and disconnect. The more we make our virtual environment like the actual environment, the more we may end up focusing on how *different* the two actually are. The paradox is this: the more “accurate” and “life-like” our telematics become, the more they simply present and foreground to us their differences from a real-life encounter. The same way the spatial latency we have recently built into our environment—for example, being forced to visit a loved one and remain 6 feet away from them, unable to touch them, might disturb one even more than no encounter at all—an accurate networked environment might simply serve to remind you that you are not actually, in an embodied sense, *with* the others participating in the network; you cannot touch them. The similitude between the virtual reality of the network and an actual embodied encounter might not produce an experience similar to an actual embodied encounter, but shine a spotlight on the differences between the two. It is therefore not surprising that virtual environments in which many report ease and pleasure in operating are often those with highly fictional and animated virtual spaces. Encountering others via your avatar in Second Life or chatting with other players in the virtual environment of World of Warcraft are not virtual worlds that mimic or draw directly upon the actual world. They are not attempting to turn reality into a virtual cognate (as Zoom and other telematics platforms attempt), but to present a distinct fictional reality which, per force, demands of one new modes of communication and expectation.

In other words, similitude—while often the aim of attempts to reproduce the presence of something that is actually absent—can have varied effects on us based on our particular needs for that which we lack. We can take pleasure in artifacts and versions/recreations of that whose physical presence is lacking, but equally, we may be pained by such things, which can serve to remind us of what is *actually* absent (a person, a body) and how different true presence is from its reproduction. And so, we might take great pleasure in the photo of an absent loved one, but equally, and particularly when we are missing an embodied encounter with them, we may be pained by staring at their photo—and we would be even more pained by a mannequin of them or a robot built in their image. Similarly, many of us may take great pleasure in Zoom meetings with those we love but cannot actually be with, but we may also (and many do) find such “encounters” deeply unsatisfactory and actually prefer phone calls and other means of communication that do not attempt to replicate multi-modal aspects of an embodied encounter. Observations such as this should give us pause when we rush to reproduce, with as “high fidelity” as we can, telematic networked means of communication. We should be particularly careful when such disembodied encounters are playing the role of substitutes for an actual encounter, and when this missing encounter is charged with social and interpersonal significance. If what we are desperately seeking is sociability, inter-human encounters, personal intimacy, and the like, then the potential for “substitutes” to disappoint is most strong. In cases such as this, almost paradoxically, the more accurate and “life-like” our telematics become, the more they will simply, for some people at least, foreground just how different they are from a real-life encounter—the hard impenetrable computer screen and the latency being like the six-foot rings we now see painted on the grass in parks.⁹

There is a moral here for telematics. We need to embrace latency, to treat a telematic improvisation not as “almost” an embodied encounter but as a totally different thing, one where temporality takes on new meaning and shape. This requires a phenomenological shift on the part of those who engage in telematics: do not try to slay latency, embrace it! Treating telematic improvisation as a collective play with time itself, as opposed to a simulacrum of an embodied encounter, actually allows for new modes of sociability to emerge, new bonds of trust and commonality to form. It creates an encounter which is not alienating due to its failed attempt to

mimic “reality,” but empowering as a collective confrontation with elastic time. Yet to do so, one must, as the composer/improviser/futurist/activist Pauline Oliveros realized, improvise with latency itself—recognize it as an improvising partner not to be ignored, and as a partner who is not merely passive, but whose contributions to an ongoing improvisation change. If music is the paradigm of a temporal art, then latency “plays” pure time itself.

Oliveros and the community of networked improvisers configured around her are most at ease with networked improvisations with variable, even very long, latencies. Oliveros realized with her very first experience of long-duration latency/delay—in the cistern in Port Townsend, Washington in 1989, with a 45 second reverberation time—that she and others were playing “duets with each other *and with the cistern*, as the sounds are continually multiplied by the acoustics” (81, emphasis mine). As a result of this and further experiments with spaces with long reverberation times, and “low-fi” early generation networked performance, Oliveros and those she collaborated with came to consider “external delay times of machines and the delay times of perceptions [as] resources and causes for improvisation” (86), ultimately having her conclude that latency is built into the very fabric of our being: “We are made of time delays, from nano- or pico-seconds to years for the whole of our lives” (88). Norman Lowrey, a friend and collaborator with Oliveros, says:

I’m so used to the specific kind of latency involved in telematic performance, from working with the Avatar Orchestra Metaverse in Second Life, that latency in improvising over Zoom hasn’t struck me as unusual. I’m also pretty used to solitude. That being said, the scale of the disease [COVID-19] along with the egregious reasons for that scale, does affect my entire framework of cognition, including memory and sense of time. I sometimes feel even more lost in time than I did previously. But ‘lost’ may be the wrong word. Improvising in groups via digital means like Zoom has contributed to my caring less about time as linear, more about connection as timeless. And maybe caring less about making sense of it all! (Lowrey)

We need to recognize that, equally, there is latency in our relationship to COVID, and that a failure to embrace this latency—attempts to ignore it or make it go away—are what have yielded many failed, perhaps even foolish, public health decisions in many jurisdictions around the world. Public health officials and politicians need to recognize this latency and play with it, improvise with it. If you do not recognize and play properly with this latency, you make bad public health decisions; you are improvising badly with COVID and its inherent latency. The policy processes here are intrinsically improvisatory. We are dealing with contingencies, with the absence of a script, and we are only partially in control of how the pandemic will unfold. And while we know that what one does affects what others may do in terms of COVID-related behaviour, such responses are highly unpredictable. But public health policy-making with respect to COVID is not simply like improvising in real time with others, for there is the added factor of latency, of the delay between the implementation of new policies and their effects on the pandemic. As we learn in our new pandemic reality to improvise creatively/artistically in telematic situations with latency, we must realize that COVID itself has latency that we must respect and respond to; we must learn to improvise with it. Improvising with COVID is akin to networked improvisation, not embodied real-time improvisation.¹⁰

It is profitable, I believe, to view certain COVID-related health policy shortcomings as cases where public health officials have failed to develop policies as the result of a responsible improvisation with the latency intrinsic to COVID; rather, they have tried to ignore it, have assumed that it is of fixed duration, or have simply hoped that it would go away. This is akin to our attempts to make telematic latency go away, but with far more drastic consequences. Public

health officials often pay lip service to this latency—for example, the two weeks or so from contact to possible infection—but then act as if it is not there, or that precisely two weeks is the latency. Such a refusal has had profound negative impacts, including failures to delay opening things up until the latency has made manifest the virus’s response to the latest policy action. In effect, policy is “out of synch” with reality. The time in which policy makers are operating and the time that COVID inhabits are too often strikingly different, and operating in the same time is crucial to eliminating COVID. If one party ignores latency while the other operates with it, there can be no successful communication, no call and (an effective) response. As I write (Feb. 18 2021), we approach Spring break here in Quebec, and recent policy decisions to open up previously closed spaces such as gyms, pools and movie theatres were recently announced. The temporality of Spring break is fixed—it is the dates it happens to be—while the evolving pandemic is operating in its own temporality. Whether this gambit to offer families some relief from confinement (surely something to be desired!) “improvises well” with the evolving pandemic and the recent uptick in variant cases will soon be known—again, once the latency in the whole feed-back system resolves itself.

In the nine months between my first writing this paper and my final edit, there has been a marked increase in our focus on and understanding of the assorted latencies inherent in COVID’s spread and our collective responses to it. As we come to improvise more effectively with these latencies, we also become more comfortable inhabiting multiple times and multiple latencies simultaneously. We quarantine for two weeks, or is it ten days? We may not touch certain objects for a day. Or perhaps three? We may not visit a shared common room until it has been vacant for 48 hours, etc. etc. Hospital emergency room occupation rates are more accurately modeled into the near future, as are tipping points for triggering new health and safety protocols. We are better able to “hear,” now, where the improvisation is going and pick out its structural features more accurately. The COVID latency, and its implications, may be different for teens than it is for the elderly. Different latencies, different responses, all affecting the ways we navigate the world at the same time.

A further feature of COVID, and public health responses to it, that bears the hallmark of collective improvisation is the feedback loop between COVID models of future spread and future spread itself, which then affects subsequent models. A model that predicts a certain future course for COVID itself, upon being made public, affects behavior that itself impacts rates of COVID spread, which in turn offer either confirmation or disconfirmation of the model and affect it and other models’ subsequent predictions. Such tightly mutually responsive behaviors are characteristic of cases where collective and highly distributed agency are at play, and improvising ensembles are paradigmatic examples of such collective agency.¹¹

*

A feature of latency in networked performance that is perhaps as bothersome to many as the existence and duration of the latency itself (particularly when it is over 25 milliseconds) is the fact that it is *variable*—it changes constantly and is often not the same for each member of the network.¹² To improvise with latency is to recognize its constantly shifting nature, to “get in synch with” its constantly changing nature. Only then can you, in a sense, vanquish it:

Once I saw a prize fighter boxing a yokel. The fighter was swift and amazingly scientific. His body was one violent flow of rapid rhythmic action. He hit the yokel a hundred times while the yokel held up his arms in stunned surprise. But suddenly the yokel, rolling about in the gale of boxing gloves, struck one blow and knocked science, speed and footwork as cold as a well-digger’s posterior. The smart money hit the canvas. The long

shot got the nod. *The yokel had simply stepped inside of his opponent's sense of time.* So under the spell of the reefer I had discovered a new analytical way of listening to music. *The unheard sounds came through, and each melodic line existed of itself, stood out clearly from all the rest, said its piece, and waited patiently for the other voices to speak.*¹³ That night I found myself hearing not only in time, but in space as well. I not only entered the music, but descended, like Dante, into its depths. (Ellison 6-7, emphasis mine)

By stepping into his opponent's time, the underdog beats the prize fighter. And this is what you need to do in networked performance, you need to step into the latency, use it, and then you can coordinate with it. Immediately prior to this passage in *Invisible Man*, the protagonist says:

I'd like to hear five recordings of Louis Armstrong playing and singing "What Did I Do to Be so Black and Blue"—all at the same time . . . Perhaps I like Louis Armstrong because he's made poetry out of being invisible. I think it must be because he's unaware that he *is* invisible. And my own grasp of invisibility aids me to understand his music . . . Invisibility, let me explain, gives one a slightly different sense of time, you're never quite on the beat. Sometimes you're ahead and sometimes behind. Instead of the swift and imperceptible flowing of time, you are aware of its nodes, those points where time stands still or from which it leaps ahead. And you slip into the breaks and look around. That's what you hear vaguely in Louis' music. (Ellison 6).

Here, Ellison beautifully and poetically describes the desire to listen to the great improviser Louis Armstrong *with five different latencies*, while describing perfectly how "being invisible"—of course, being equated in many subtle ways with being Black—is to live in and with fluid time, in and with variable latency, and to be acutely aware of this fact.¹⁴ And this description seems to reflect our COVID reality. Days go slowly, but suddenly one is surprised a week has passed. We lose our usual markers of temporal duration, the regular repetition—that is, rhythm—of tasks and movements, and so time seems to both speed up and slow down. As we become invisible in assorted ways—concealed behind masks, embedded in our homes, absent from our usual haunts—we come more and more to experience the invisibility, particularly with respect to temporality, that Ellison so eloquently describes and theorizes. As the improvising vocalist Kathy Kennedy told me in correspondence, "definitely time is now even more relative than before." And, of course, the variable latencies Ellison so artfully describes are most characteristic of telematic collective improvisation.

Ellison is equally describing an essential feature of Afrological music-making in general, and "swing" in jazz in particular: "you're never quite on the beat," yet you are "aware of the nodes."¹⁵ To be aware of the fluid nature of time and to play with time is a characteristic of Afrological improvisation and it is the very skill needed to be able to improvise with latency.¹⁶ Polyhythm, another characteristic of Afrological music, is given even greater sophistication and musical nuance via the elastic relationship to a fixed pulse that each rhythmic element is engaging with. A phenomenologically difficult task that expert Afrological improvisers undertake is keeping one's own musical line related to the heard pulse while altering its micro-timing and, at the same time, hearing and responding to the distinct ways in which others in an improvising ensemble are doing the same thing. These always fluid and different relationships that individual parts in a collective improvisation have to a perceived if not heard pulse are, in effect, distinct latencies—ways in which musical signals are ahead or behind a fixed pulse. To improvise in this way is to simultaneously occupy multiple temporal domains and to respond in real-time to their changing nature. And, in-so-far as doing so is to engage in a music-making practice that is Afrological, it is to inhabit a mode of Black-being. It is the Afrological improviser who is best suited to

improvise telematically most effectively, and, crucially, it is this same attitude—that of an Afrological improviser—that we need from our public health officials. They must recognize the latency, they must play with it; they need to “hear” the data in many different ways, like the invisible man listening to five recordings of Armstrong; and they finally need to slip into the latent time that our opponent—COVID—fights with, in order to beat it. As the mathematician Lorenzo Sadun puts it, in an article entitled, “Effects of Latency on Estimates of the COVID-19 Replication Number”:

It is not currently known how long it takes a person infected by the COVID-19 virus to become infectious. Models of the spread of COVID-19 use very different lengths for this latency period, leading to very different estimates of the replication number R , even when models work from the same underlying data sets. (Sadun)

Like the invisible man listening to five recordings of Armstrong and living in the slippages—the breaks—of time, the different temporalities of COVID—in different models and in reality (infection onsets vary person to person, etc.)—demand an Afrological improvisatory approach to public health policy.

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Every day since March 25, 2020, the members of the 312 Ensemble—Lawrence Joseph, Bryan Highbloom, Peter Burton, and myself—have been meeting on Zoom and improvising together.¹⁷ Normally we play together once a week in the studio space we collectively own. We focus on rather open interpretations of jazz tunes, from standards through compositions by the likes of Sun Ra, Albert Ayler, and Alice Coltrane. Our now-daily online meetings are preceded by an often-lengthy discussion related to COVID issues both locally and more globally, and, alas, often mentioning jazz artists and others who have passed in the last day due to COVID. We then choose a title for each of our collective improvisations (each day tends to have 2-4 such improvisations), usually related to COVID news or a homage to a passed musician or, on a happier note, a musician whose birthday it is. These titles inform our improvisations, which we have come to view as our collective “plague diary.”

Prior to these daily sessions, the four of us had had varied experience with telematic improvisation. Lawrence had never partaken in any such sessions and Peter had very limited experience. Bryan had more experience, but much of it in the early days of telematics. Only I had much experience, having used “high-end” systems based on Jacktrip, with no discernable audio latency, when participating in assorted festival and collaborative music events through a variety of platforms such as Zoom, Facetime, and Skype. My fellow plague diarists and I discussed what modes of playing were likely to be effective and enjoyable telematically, and how we might need to change our usual collective music-making practices. At first, we tried to play some jazz tunes that were more open in form than others and did not demand careful rhythmically coordinated playing. It became almost immediately clear that this was not effective—musically, aesthetically, or socially. Quite frankly, it did not simply sound bad, it sounded terrible! I suggested that we “just play, just improvise,” an approach we were already used to practicing together. This we were able to do somewhat naturally, yet an interesting phenomenon soon occurred. While it was virtually impossible for us to play in a temporally coordinated way from the very beginning of an improvisation due to latency—both its mere existence and its variability—as our failed attempts to play tunes had demonstrated, we often fell into a kind of coordinated synchronized playing in the middle of an improvisation. It seems that we needed to “tune in” to the latency and its variability, to learn the contribution that latency itself was making to each of our improvisations.¹⁸ We needed, as with the invisible man, to learn

to operate with “a slightly different sense of time,” to be aware of “its nodes, those points where time stands still or from which it leaps ahead,” to hear like Louis Armstrong, to realize that to operate in “jazz time” is already to improvise with latency and adapt to it, to make it a creative force rather than a mistake or something to try to ignore. We needed to “slip into the breaks.”

After a while we stopped noticing the latency, or even thinking about it at all, and we all felt, and continue to feel, that coordinated playing is not a problem; it happens once we tune into the latency and when this becomes naturalized. This is a strange phenomenon, which suggests further study. My hypothesis is that, just as we cognitively overcome the dissonance there should be between seeing someone moving their mouths and hearing what they are saying—we in fact do not notice any latency at all—we come to make the same neurological/perceptual adaptation in telematic contexts—where *variable latency is a feature*—with practice, and to the point where we actually do not perceive it any longer. This internalization of latency is something we also need to undertake, literally embody, in our COVID responses. How often have we gone out and concluded that the public at large has no idea what six feet is, or what “wash your hands” means, or how to wear a mask, or, or, or? As long as these gestures are forced and conscious, they will remain difficult, something we fight both with and against. And as long as health care policy makers continue to fight with COVID’s latency; ignore R-values; cheat with updating death rates and hospitalizations (a different and rather grim form of latency—how often is a graph of deaths updated with “today, deaths from 3 weeks ago have been added”?—latency!); and pay but lip service to the many latencies in which COVID operates, policies will remain ineffective. Here too, we need our policy makers to become naturalized in dealing with the pandemic’s latencies, to the point where they almost do not notice when they adjust to it properly. Reacting responsibly to COVID’s varied latencies should not be a conscious and optional decision made—balanced, say—against perceived economic needs, but rather an almost automatic response.¹⁹

I have drawn a short list of further “morals” concerning our experiences with networked performance and latency, and I think they also translate into the domain of public health policy:

1. Networked performance, due to the existence and variability of latency, almost demands highly improvisatory performance. You can mitigate against its “negative” effects by improvising with it, not against it. Similarly, our public health responses to COVID need to be highly improvisatory, nimble, open to reconsideration, and both respectful of and responsive to the latency inherent in COVID. Improvisation has been characterised as the “Art of Imperfection.” Our COVID policies need to be equally artful and aware of the imperfections in data, reporting, and modeling.
2. Everyone in a networked improvisation is operating with a related-but-different sense of “now.” Responses to your sonic gestures will take variable time, and your own responses to the sounds of others may, upon being received, no longer be appropriate. These different senses of now also need to inform our public health policy, which needs to be more sensitive to difference and to how difference manifests itself temporally. What is appropriate for the young may be different than that for the old, for the sick and for the healthy, for the rich and for the poor, for those on the front lines of delivering health care and for those who can work remotely. These differences (among others) suggest different temporalities of policy change and policy content. We all live in different times, different nows, with respect to how COVID-related health policies might affect us. COVID’s own variable latency ensures that there is no objective “now” from which policies can start their countdown to implementation and termination.

3. Freed from the expectations of closely temporally coordinated performance, networked improvisations afford one the opportunity to complete musical thoughts one begins, to play longer melodic lines. This is something I observed with our daily improvisations. Everyone over time was playing longer and more intricate melodies. The reason, I think, is this: in “normal” embodied collective improvisation you may often feel the need to alter a melodic pattern you are playing due to the precise timing of the musical gestures of others. You may alter an ascending chromatic run because, in the middle of it, the bass player starts playing repeated pedal notes, say. Yet, being freed from such synchronist thinking, one is more able to complete a musical thought.²⁰ Health care policy makers also need to complete their thoughts, to stick to well-conceived policies regardless of the “statistical noise” they may be hearing. Policies must be allowed to have their impact based on their own temporalities rather than be altered prematurely due to other things happening that have their own temporalities. And while policy must be reactive to the virus, it must also be allowed to have its effects realized via its own temporality and in accord with that of the virus.
4. Telematics tend to slow things down. We lose the impetus to change what we play as the immediate response to others, and notions of BPM are no longer operative.²¹ Latency, itself a lag or delay, slows down the duration between action and response. This too needs to be reflected in public health policy. Completing a musical gesture or a policy implementation requires slowing down, allowing for delays between cause and effect to transpire, and avoiding immediate responses to every change while, at the same time, taking recognition of the changes.

To conclude, the variable latency of telematic networked performance affords us the opportunity not to ignore it, but an occasion to respond improvisationally to and with it. The variable time that such latency creates is akin to the ways in which Afrological improvisers often approach time in music-making, and this time is itself powerfully embedded in the Black experience as exemplified by Ralph Ellison’s *invisible man*. Similar latencies, similarly elastic experiences of time, are characteristic of COVID, and our responses to it need to be equally improvisatory, equally Afrological, and equally aware of the nested latencies at play. To return to the passage from *Invisible Man* quoted at the beginning of this paper, “A hibernation is a covert preparation for a more overt action.” We can see its significance for the issues under consideration here. For hibernation is a pause, a latency, and we need to treat it as preparatory for how we respond, for our action, both in telematic improvisation and in public health policy. Latencies afford us covert preparations for more overt actions. Peter Burton, in conversation, tied a number of these themes together:

Just like we need to adjust to latency and broaden our concept of the pulse and the beat to make the music work, I kind of feel that the world needs to do that now, in terms of adjusting to all of the new challenges that are out there. I hope that our society will find some pulse that people can agree to follow and that, as a whole, we will adjust more intelligently than we have been—that is a certain connection between Zoom and the world.

And to end on an optimistic note, Bryan Highbloom comments that, “In the end everyone synchs if you just let it happen.”²²

Notes

¹ As I write this, I am watching the horrors of police and state brutality directed against Black and Brown bodies and their allies who, as a response to “pent up” horror concerning centuries of violent racist oppression, are engaging in multiple acts of peaceful protest. This could add yet another layer of analysis to the study of latency and, more specifically, invites thinking (as a number of leading Black voices are thinking) about how the “pause”—Ellison’s “hibernation”—that COVID has imposed on us all has played the role of a “covert preparation” for the “overt action[s]” we are now witnessing.

² I use “Afrological” in the sense first articulated by George Lewis in his now famous paper “Improvised Music After 1950: Afrological and Eurological Perspectives,” which is accessible, in its original version, here: jazzstudiesonline.org/files/jso/resources/pdf/22%20Improvised%20Music%20after%201950.pdf.

³ See, for example, <http://annaxambo.me/blog/research/2020/06/02/network-music-performance/>.

⁴ For example, see this exchange on the Facebook page of Corey Mwamba (cited with permission and saved on June 4, 2020): www.facebook.com/coreymwamba/posts/10157514677783198.

⁵ For a good discussion of latency and many related issues, including those addressed in what follows in this paper, see Jason Robinson, “Improvising Latencies” and “The Networked Body.”

⁶ See, for example, Renaud, Carôt, and Rebelo, “Networked Music Performance.”

⁷ See, for example, Betsy Morris, “Why Does Zoom Exhaust You?”

⁸ Scholarship examining the interrelationships between the technological and the interpersonal is now decades old. Some of the points to follow, concerning how both highly accurate and highly degraded digital communication can yield a sense of disquietude and dissatisfaction, can be found in works such as Sherry Turkle’s *Alone Together: Why We Expect More From Technology and Less From Each Other*. The focus on latency is a product of more recent technological advances, such as the ubiquity of video-conferencing software and high-speed internet connections.

⁹ Such disquietudes, when they exist, are, of course, a product of the fact that most of us in the so-called first world normally have easy access to modes of transport and freedom of movement—let alone the “basic” necessities of life—yet now find our freedoms and desires thwarted. For many, spatial barriers and latency are an unfortunate aspect of day-to-day existence, and not exceptional. In the context of telematically mediated theatre performance, see Giges and Warburton. Giges and Warburton state that, from the audience perspective, “in a sense latency *verified* the liveness of the event, authenticating the real-time (and imperfect) suturing of the proximate with the remote” (29–30).

¹⁰ In broad terms, Katrín Kakobsdóttir, the Prime Minister of Iceland—a country widely cited as having to date an exemplary response to the pandemic—describes the policies put in place as bearing the hallmarks of an improvisational response: “We started our preparations long before the first case tested positive here in Iceland... we really don’t know everything about this virus

[. . .] We just said Well, we don't know what is going to happen next" (Kolbert 30).

¹¹ For discussions of collective agency and improvisation see: Angelino, "Collective Intentionality and the Further Challenge of Collective Free Improvisation"; Hagberg, "Ensemble Improvisation, Collective Intention, and Group Attention"; Ryan and Schiavio, "Extended musicking, extended mind, extended agency"; and Walton, et al., "Improvisation and the self-organization of multiple musical bodies."

¹² A lacuna in much of the literature on latency in networked performance is its focus on a static threshold of latency that starts to produce cognitive/performative dissonance, and a failure to consider what may follow from the constantly fluid, changing nature of network latency. For example, Jonas Braasch tells us that "performers tend to agree that the threshold above which it is difficult to play in sync between two remotely located sites is about 25 milliseconds" (23). While no doubt there is much truth in this claim, it needs to be enriched by asking whether or not this threshold changes with practice/experience or with variation in the latency. Do performers "tune in" better to networked performances and their varying latency as a performance unfolds? And precisely what does "play in sync" mean?

¹³ This sentence reads like an accurate and astute description of what effective improvised telematic performance is like. Melodic lines tend to be independent of each other; they speak on their own. Unheard sounds are heard if you listen carefully and give up on coordinated playing, and if you "tune in" to latency, it affects what you hear. And yes, latency has you "wait patiently" for other's voices to speak, to respond, to contribute to the improvisation.

¹⁴ For a highly insightful and influential analysis of the Prologue of *Invisible Man* see chapter one, "The Sentimental Avant-Garde," of Fred Moten's magisterial *In the Break*—although he chose there to pursue different, but related, points than those I am making here.

¹⁵ For a detailed account of fluid time and musician's timing in Afrological music-making, see Iyer, "Embodied Mind, Situated Cognition, and Expressive Microtiming in African-American Music."

¹⁶ Throughout this paper I am in fundamental agreement with Jason Robinson, who states: "While we might assume that such latencies restrict or prevent fundamental potentials in improvisation, I contend something of the opposite. Instead, improvisative methodologies are especially poised to make creative sense of latencies and it should come as no small surprise that improvisation weaves prominently in much telematic music" ("Improvising Latencies," 66).

¹⁷ This was written on 5 June 2020, and these daily networked sessions continue through the editing this note on 17 Feb. 2021.

¹⁸ This "coming to be in synch," which resulted from repeated telematic performance together, may have implications for possible effects of telematic improvisation on improvisational practices writ large. On the one hand, if telematic improvisation becomes ubiquitous and if the pandemic is prolonged, many improvisers may come to view improvisations lacking strict rhythmic coordination (and so often lacking percussion) as the norm, which may affect how they improvise post-pandemic. On the other hand, if repeated experience with telematic improvisation allows one to re-inscribe a sense of synchronist playing, post-pandemic

improvisation may not see a radical change in its nature as a result of telematics.

¹⁹ From the time I first wrote this paper in early June 2020 to the present moment when I am editing it (17 Feb. 2021) there has been a noticeable improvement in policy makers' recognition and improvisation with COVID's assorted latencies. We are becoming better policy improvisers!

²⁰ Of course, the preferred style of individual improvisers may have it that they are generally more-or-less prone to complete a musical thought regardless of the way the collective improvisation unfolds. It is worth noting, though, that, in embodied collective improvisation, those who "stick to their guns" with respect to the development of a musical idea may sometimes be accused of not listening to others, of being a selfish improviser. In telematic improvisation, there is little, if any, tendency to view others' contributions in such terms, since one no longer has an objective temporal anchor from which to form judgements of others of the form: "Did you not hear me clearly gesture for a return to the tonic right when you decided to start a long chromatic run?"

²¹ A number of people I spoke to in research for this article made this point. Stephen Nachmanovitch stated that, "to work with latency, we have to cultivate sounds and movements that are slow, with gradual changes, which fits well with Pauline's [Oliveros] and others' methods." Ritwik Banerji stated that improvising telematically is akin to the "relaxed real-time" paradigm that IRCAM machine improvising researchers at one time operated with, where "over-activity was replaced with greater coherence, or at least, things slowed down . . . Improvisers have advised me to think along these lines as well: 'Hear the whole idea in your head first. Let it play in your head. Then actually go and play it.'" Jonathan Sterne adds that in networked performance, "less is more," and that "everything is kind of slowed down, too, literally BPM goes down . . . things take their own time" (personal conversation with the author, n.d.).

²² I would like to thank all those who took the time to talk to me about their experiences in telematic improvisation. I would also like to thank the two anonymous readers whose suggestions for improvements that did not make it into this paper will, no doubt, help me in my future research. In particular, more can be said about latency and its relationship to "Black Time," how telematic improvisation and the ways in which latency is manifest there relates to the more traditional Afrological musical notions of groove and swing, and, of course, the ways in which the continuing unfolding responses to the pandemic, by both individuals and policy-makers, can be profitably seen as coming to be better aware of the many manifestations of latency inherent in the pandemic itself.

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