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Listening Through Social Media:
Soundscape Composition, Collaboration and Networked Sonic Elongation
Holly Rogers

The affordances of new technology allow physical and aesthetic participation in the resonances of our environment. Composers and artists of *musique concrète*, sonic art, noise music and electroacoustic music have long used technology to record and process real-world sounds, using them as compositional material for music composition and the remediation of our sonic ambient environment. Audiovisual technology has enabled this form of sonic creativity to move into the moving image arts: creative sound design and soundscape composition in fiction and documentary film traditions have become increasingly common, thanks to the capabilities of the digital audio workstation and other technologies that enable the easy and imaginative combination of sound with music, and sound with image. Internet culture and social media have accelerated this move towards moving-image soundscape and its remediated afterlife. The affordances of mobile media with inbuilt cameras and microphones, online editing tools and compositional software, the promotion of user-generated and DIY content, the interconnection between platforms and the fluidity of post-media affect has led to new possibilities for the creation, remediation and consumption of the sonic arts. YouTube, in particular, has become a hub for sharing, manipulating and interpreting new ways of sounding and hearing our environment. According with the bodily turn in millennial musicology, which treats music as an embodied, situated practice, YouTube can be approached as a musical instrument that encourages refreshed creative activity, based on mobility, collaboration and open-ended process.

While moving image media is often a highly collaborative and decentralised space, with directors and composers working closely with actors, editors, sound designers, script-writers, costume and set stylists, cinematographers and a whole host of other creative forces, social media spaces have thrust the collective utterance into the foreground. The promotion of peer production and participation has opened up opportunity for innovative forms of collaboration and alternative approaches to making able to generate transmedial work very different from the

finished and discrete products we find in cinema and television.[1] Web 2.0 – Darci DiNucci's term, later popularised by Tim O'Reilly (2004), for the increased move towards user-driven content, the idea of network as a platform, large-scale collaboration and the interoperability of technologies and software from the early 2000s on—has seen a move away from fixed and authored moving image material into a maelstrom of voices, perspectives and grass roots creativity.[2]

For music, this has had a profound effect on composition, performance, circulation, marketing, fandom and pedagogy, an influence I charted in the opening chapter to this volume's companion book, *YouTube and Music: Online Culture and Everyday Life*.[3] YouTube, as one of the first, and still one of the biggest platforms for music since its 2005 launch, has remained a pivotal space for refreshed modes of engagement with sonic material. And yet, in the age of post-media, audiovisual affect readily spreads across platforms and through devices, absorbing the subtle specificities of each and activating audiences in different ways. While Twitter privileges text, Instagram static and, increasingly, moving images and YouTube and TikTok video and sound, each hyperlinks and cross-references to the others in complex and entangled ways: in fact, since Instagram's introduction of reels and stories, this entanglement of platforms, format, style and content has become even more pronounced. This transmedial movement of moving images and sounds to, through and beyond YouTube allows us to see several things. First, how different platforms generate specific types of engagement with everyday sounds; second, how sound and its creative manipulation can adjust to different user requirements; and third, how sound can gather meaning and resonance as it passes through cyberspace. To explore the ways in which sound is mediated by social media technologies and users, I here extend my previous work into what I call networked sonic elongation.[4]

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[1] See Carol Vernallis, Holly Rogers and Lisa Perrott, *Transmedia Directors: Artistry, Industry and New Audiovisual Aesthetics* (New York: Bloomsbury, 2020).

[2] Webarchive.org, "Web 2.0 Conference," conference website, San Francisco, California (October 5-7th, 2004), at https://web.archive.org/web/20050312204307/http://www.web2con.com/web2con; Darci DeNucci, "Fragmented Future," *Print* 32 (January 1999): 221-222; Tim O'Reilly, "What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software" (September 30, 2005), at https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html.

[3] Holly Rogers, "'Welcome to your world': YouTube and the Reconfiguration of Music's Gatekeepers," in *YouTube and Music*: *Online Culture and Everyday Life,* ed. Holly Rogers, Joana Freitas and João Francisco Porfírio (New York: Bloomsbury, forthcoming).

[4] Holly Rogers, "Sonic Elongation and Sonic Aporia: Two Modes of Disrupted Listening in Film," in *The Oxford Handbook of Cinematic Listening*, ed. Carlo Cenciarelli (Oxford: Oxford University Press,

Sonic elongation is a compositional technique that has become common across moving image media over the last three decades. Appearing first in experimental films and documentaries, before moving into mainstream cinema culture, sonic elongation arises when real world, profilmic or foley sounds, synchronised with onscreen images and clearly emanating from the filmed world, undergo some sort of creative manipulation. Gradually, the recognisable sounds become muddled, move away from the images that originally generated them and move into a different physical and conceptual space. Now unsynched and set adrift, sounds become compositional material and can be manipulated into musical rhythms, phrases, tonalites and textures without the addition of any other sonic material. A good example can be found in Edward Artemiev's electro-acoustic score for *Stalker*, Andrei Tarkovsky's 1979 post-apocalyptic sci-fi. In one scene, the film's protagonists journey towards a mysterious Zone on a small train. At first, we hear sounds that seem to be realist soundeffects, coming from the objects we are looking at. Gradually, though, the sounds become strange: they become unsynchronised and uncoupled from the image, and their textures become reverberant and unfamiliar, phasing in and out across the screen. Several minutes in and the sounds are almost entirely abstracted by electronic distortion, resulting in what Tarkovsky calls not sonic realism, but "resonance".[5] During this process, environmental sound is heightened and enlarged until it gathers together into a sort of musical flow. For the process to be successful, audiovisual fusion needs first to be established—we both see and hear a train—before the sounds undergo their transformation.

Elongated sounds demonstrate our fluency with cinematic vocabulary and the strength of the "irresistible weld" between sound and image that Michel Chion attributes to the lure of "synchresis"— a terminological mash up that refers to the natural and multimodal fusion of audiovisual components.[6] And yet, as the roles of sound and music become ambiguous and disjointed, soundscape begins to exceed image; and, as audiovisual gaps begin to open, they engender new processes of listening. The terminology here is significant: to elongate—to extend, broaden,

2021), 427-449; Holly Rogers, "Sonic Elongation: Creative Audition in Documentary Film," *Journal of Cinema and Media Studies* 59, no. 2 (Winter 2020): 88-113.

[5] Andrei Tarkovsky, *Sculpting in Time: Andrey Tarkovsky*, trans. Kitty Hunter-Blair (Austin: University of Texas Press, 1986; 2003), 162.

[6] Michel Chion, *Audio-Vision: Sound on Screen,* trans. Claudia Gorbman (New York: Columbia University Press, Second edition, 2019 [1994]), 5, 63.

enlarge—suggests a reconfiguration of audiovisual material. But unlike stretching, elongation does not imply distortion, or a thinning out of material as it is pulled through space and time, but rather a process of augmentation and growth from one thing to another: it indicates an accumulative, transformative process of sonic interpretation.

Reconfiguration, accumulation, transformation, interpretation. These four poles of sonic elongation feed into the core strategies of social media and over the last few decades, the manipulation of real-world sound through cybermedia's spaces has become increasingly prevalent. When uploaded, actuality sounds and images captured by amateur artists from all over the world can instantly become compositional material for other web users: and when what Jay Rosen has referred to as "the people formerly known as the audience" treat these sounds creatively, the process of sonic elongation becomes communal, participatory, fluid and self-reflexive. [7] I call this multi-voiced elongation of noise from image 'networked sonic elongation' and define it as a technique that arises through multiple interpretations of an audiovisual event. As a practice of remediation, networked sonic elongation is related to, yet slightly different from, its cinematic cousin. Although it starts from a clear location and stretches the sounds gradually away from it, it is a creative progression achievable only through online collaborative processes. As a result, it has implications for how we listen to online culture and how online culture intersects with, extends, and, most radically, changes the world around us as it passes through the creative lens of multiple users. Original or existing sounds can be remediated in one of two ways. First, cyber-users employ the process of sonic elongation to respond in multiple ways to the original material. This generates numerous interpretations of the primary audiovisual object. Second, users can expand upon each other's versions to produce a series of variations. This form of collaboration operates like Chinese whispers. Such produsage—Axel Bruns' term for a hybrid between producer and user—allows non-professional creators to employ cheap or free, easy-to-use technologies to remediate their environments and share their processes and perspectives in collaborative situations.[8]

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[7] Jay Rosen, "The People Formerly Known as the Audience," in *The Social Media Reader*, ed. Michael Mandiberg (New York and London: New York University Press, 2012), 13-16.
[8] Axel Bruns, *Blogs, Wikipedia, Second Life and Beyond: From Production to Produsage* (New York: Peter Lang Publishing, 2008).

To focus this exploration, I focus on networked sonic elongation during the first global lockdown, when quarantined populations across the world became more dependent than ever on online culture for communication, information and creativity: when the relationship between the real and the cyber became increasingly entangled; and when the democratised, networked potential of YouTube, with its accessible technologies, vast communities, established affinity spaces and potential for interaction became a vital place of sociability and information. While YouTube and other social media platforms have always given a glimpse into, and interpretation of, current affairs, when familiar modes of social engagement were removed during the pandemic, their communicative capabilities augmented. I suggest that, during this time, YouTube became a post-media nexus of sonic resonances that captured the fear, pleasure and anticipation of Covid-19. This chapter, then, is about the online mediation of sonic artefacts during the first wave of the 2020 pandemic. As the world retreated indoors, cyberspace became a significant space for creative expression and partnership, offering the opportunity for interactivity at a time of absolute inactivity.[9] But how were we asked to listen and how did the internet mediate our access to the outside world? Social media sites like YouTube gave us unprecedented and essential forms for sonic connection with others and with our forbidden surroundings; but through whose ears have we been invited to do this? What processes of mediation have occurred and have these been recognised? And most importantly, can we believe what we hear?

The Wave of Silence

As populations were locked indoors during the first wave of the Covid-19 pandemic, sonic recordings of the real world—particularly of pastoral spaces—became increasingly popular. On April 19th 2020, Oli Gudgeon, writing in the magazine *Contemporary Sound Art* reported an increase in soundscape video views during early quarantine, with data from Google Trends showing a surge in what the author describes as "search terms like 'ocean soundscape', 'nature sounds forest' and 'rainforest soundscape'", which became "'Breakout' topics, meaning those search terms are experiencing new, significant growth", a trend particularly clear from

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[9] The problems of terminology that surround cyberculture, cybermedia and cyberspace are discussed in detail in *Cybermedia: Explorations in Science, Sound, and Vision*, ed. Carol Vernallis, Holly Rogers, Selmin Kara and Jonathan Leal (New York: Bloomsbury, 2021).

YouTube's traffic data.[10] Johnnie Lawson's YouTube channel, for instance, which provides extreme long-form videos of natural sounds, experienced a 20% increase in traffic between mid-February 2020 and the start of lockdown in early April of the same year, while other popular sites, like the BBC archives, recontextualised their collections to directly attend to the sonic needs of a locked down population by promoting the calming soundtracks from nature programmes and field recordings from rural landscapes. The dedicated BBC's Covid-19 Collection claims that "The power of music and sounds from the natural world are known to help during challenging times. To offer comfort and support during the current pandemic, BBC Archive, BBC Music and the Natural History Unit offer a selection of calming tracks and soundscapes for patients, care workers and families affected by Covid-19".[11] This is not particularly surprising. Locked at home, entire populations were cut off from the physical world around them. Sites like Johnnie Lawson's used the long-established soothing effects of bird song and running water to calm people's nerves and offer an alternative sonic space that could overlay the alarming realities of the pandemic. And yet, strangely, had people been allowed to venture outside, into the deserted streets and empty squares of capital cities and major towns, they would have encountered a soundscape that was not entirely different to those found on Lawson's YouTube channel.

The radical and abrupt reduction of global mobility as the coronavirus pandemic gathered pace during the world's first wave was unprecedented. News reports marvelled at the horror, but also the beauty of what's become known as the 'wave of silence' that engulfed most of the world's noisy urban centres. Human-derived sound in Paris, for instance, dropped by 90% as the city moved into lockdown.[12] According to several accounts, the vibrations and seismic waves sent deep into the earth by human modes of transport diminished to such an extent that geologists and geoscientists reported a reduction in seismic noise of almost 50%. This, reported *Science Magazine*, "is the longest and most prominent global

[10] Oli Gudgeon, "Natural Soundscape Video Views Surge amid Covid-19 Quarantine," *The Medium*, last modified April 19, 2020, at https://medium.com/contemporary-sound-art/natural-soundscape-video-views-surge-amid-covid-19-quarantine-4fb9bf8cabd3.

[11] BBC Archive, "Archive for Well Being Collection," *BBC*, at https://www.bbc.co.uk/archive/covid-19_collection/zrfq2sg.

[12] Abby Wendle,"Human Life is Literally Quieter Due to Coronavirus Lockdown," *npr.org*, last modified April 14, 2020, at https://www.npr.org/2020/04/14/834460094/human-life-is-literally-quieter-due-to-coronavirus-lockdown?t=1587480808639&t=1599641868346.

anthropogenic seismic noise reduction on record," a drop, writes Elizabeth Gabney for *Nature Research Journal*, that has meant that "the planet itself is moving a little less".[13]

But silence is the wrong word here. As human-generated noise reduced, a plethora of other sounds came to the fore: the subtle sounds of nature, weather, creaking architecture, whispering trees. Amidst the chaos and horror, there were multiple reports of increased wildlife presence in the cities; goats, coyotes, foxes, but particularly birds, many of whom had adapted their songs to be higher and more varied in pitch, as well as louder, to compete with human noise, an adaptation that resulted in increased stress hormones. As the wave of silence crept over our urban environments, many birds found themselves shouting into a vacuum, able to expend less energy in their vocalisations and devote it instead to searching for food and boosting their immune systems.[14] Nature, it seemed, was wasting no time in reclaiming its territory. For some, this silencing of human noise and the re-energisation of nature was nothing short of miraculous; for others, the absence of human presence was an eerie reminder of the virus' lurking hold over global movement, capital and freedom. In an interview on April 10th 2020, prominent sound artist and wildlife sound recordist Chris Watson noted an increase in the spatial depth of listening: "You can hear into the distance, because normally a lot of the detail and subtle sounds—and that includes birdsong, of course—gets lost amidst a mush of traffic noise particularly in urban areas". This, he reasoned, produced a strangely distorted sense of temporality: "we're hearing the world like people heard it decades ago".[15] The sounds of our near surroundings, in other words, became unfamiliar. What was once heard only as background noise was suddenly positioned in the foreground by stint of its sudden otherness: taken away, forbidden and left with little human intervention, real-world noise suddenly became a common and highly desirable commodity.

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[13] Elizabeth Gibney, "Coronavirus Lockdowns have Changed the Way Earth Moves," *nature.com*, last modified March 31, 2020, at https://www.nature.com/articles/d41586-020-00965-x?fbclid=IwAR1wJGGezt06Q5JqgxQqDPVnaNNRIPJcti3xsSwG2wpgzhL0dhL73ymVHjU.

[14] Nancy Eve Cohen, "With Covid-19, Fewer Cars, Quieter Soundscape for Birds and Humans," in *New England Public Radio*, last modified March 31 2020, at https://www.nepr.net/post/covid-19-fewer-cars-quieter-soundscape-birds-and-humans#stream/0.

[15] Chris Green, "'You Can Hear Into the Distance': Wildlife Sound Expert on how Coronavirus has Changed the World," inews.co.uk, last modified April 10, 2020, at https://inews.co.uk/news/coronavirus-lockdown-wildlife-expert-bird-songs-environment-nature-417130.

And yet, not everywhere was quieter. While the outside became hushed, home life became increasingly cacophonous as work and children were confined to kitchen tables and makeshift bedroom schools. For some, the unfamiliar noises of their new domestic workspaces made it difficult to concentrate and it wasn't long before the internet offered the chance for people to resound their alternative environments with familiar background hums. In his work on YouTube's "domestic sonic videos", João Francisco Porfírio has noted how longform recordings of hoovers and fridges have become incredibly popular over the last decade.[16] During lockdown, these videos proliferated further, with apps like Calm Office, an office sound generator tool that allows you to replicate the drones of a typical busy office space, gaining widespread use (figure 1).[17] For others, however, the message to Stay at Home increased local sounds with the potential for emotional and physical harm. As Marie Thompson has previously written, the silence of leafy suburbs, quiet streets and safe neighbourhoods is a privilege only some can afford; during the pandemic, swathes of the population were locked into dense housing or dangerous domestic circumstances.[18] For people in such situations, lockdown bought a stressful excess of local human noise. During lockdown then, human-generated sound was distributed differently and unevenly through urban environments, becoming estranged from itself.

<INSERT FIGURE 1 HERE>

Online communities were quick to respond to the world's new sonic realities. As the urban streets became quieter, the noise of online content and activity gathered pace, increasing in volume and exploding with creative responses to the unprecedented situation. Although it's important to note that lockdown threw into relief global inequalities in terms of power provision, technological distribution, internet connection and censorship, according to a report by *The New York Times*, social media sites and streaming services saw a marked increase in traffic during the

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[16] João Francisco Porfírio, "YouTube and the Sonification of Domestic Everyday Life," in *YouTube and Music*.
[17] Ir.S. Pigeon, Calm Office (website), at https://mynoise.net/NoiseMachines/openOfficeNoiseGenerator.php.
[18] Marie Thompson, *Beyond Unwanted Sound: Noise, Affect and Aesthetic Moralism* (London: Bloomsbury, 2017), 88.

pandemic, with Facebook seeing a 27% upsurge in traffic and YouTube a 15% growth compared to the months preceding lockdown.[19] However, according to statistics from the Pew Research Centre, YouTube's growth during pandemia was greater than any other social media app across America, increasing from 73% of American adults in 2019 to 81% two years later, while in India, the first 45 days of lockdown resulted in 20.5% new subscribers.[20] YouTube's own data reveals that the search terms "at home" and #withme garnered 500 percent increases on March 15 2020 alone.[21] Significantly, the greatest increases in viewership were seen on laptops while mobile media saw a marked drop in response to people spending more time at home and the reduced opportunity for mobility. Other notable successes can be found in online connecting sites, with Houseparty up 79%, Zoom enjoying an unprecedented renaissance and apps like Nextdoor coming to prominence as people sought to create local communities and become involved with their direct neighbourhoods, demonstrating a reenergised interest in local communities and environments. These increases show a clear desire for connection and companionship to go some way towards countering the instruction to Stay At Home, Shelter in Place.

During this time, environmental sound, and its mediation through online culture, became an increasingly meaningful way for people to keep track of the outside, to share experiences and to react to the porous boundaries between what could once be clearly demarcated as physical and cyber realities. Confined to the home and unable to directly experience these newly audible sounds, people turned to the internet as an ear to the outside world. While many opted for the pre-recorded sounds of nature like Lawson's, others were ravenous for information about the outside and the sharing of recordings of what our empty world now sounded like

[19] Paul Harkins and Nick Prior, "(Dis)locating Democratization: Music Technologies in Practice," *Popular Music and Society* 45, no. 1 (November 2021): 84-103; and Ella Koeze and Nathaniel Popper, "The Virus Changed the Way We Internet," *New York Times*, last modified April 7, 2020, at https://www.nytimes.com/interactive/2020/04/07/technology/coronavirus-internet-use.html.
[20] Salvador Rodriguez, "YouTube is Social Media's Big Winner During the Pandemic," *CNBC*, last modified April 7, 2021, at https://www.cnbc.com/2021/04/07/youtube-is-social-medias-big-winner-during-the-pandemic.html; India Partner, "YouTube sees 20.5% Surge in Subscribers Base During the 45 days of the Lockdown," *Business Insider*, last modified April 21, 2020, at https://www.businessinsider.in/advertising/ad-tech/news/youtube-sees-20-5-surge-in-subscribers-base-during-the-45-days-of-the-lockdown/articleshow/75268860.cms.
[21] Dennis Romero, "YouTube Thrives as a Window for Those Isolated by Coronavirus," *NBC News*, last modified April 2, 2020, at https://www.nbcnews.com/tech/social-media/youtube-thrives-window-those-isolated-coronavirus-n1173651.

flooded cyberspace almost immediately. Government platforms and smaller, more creative initiatives launched projects to collect, archive, measure and assess sonic data in order to analyse the impact of confinement on our urban soundscapes.[22] The collaborative *Silent Cities Project*, for instance, created an open-access database of 35,000 hours of phonographic audio of the unique and ephemeral sounds of locked-downed habitats from 161 locations around the world.[23] *The Sound and Memory* website, on the other hand, aimed to "build a public archive of the sounds of pandemia, a collective testimony of the global crisis we are inhabiting"; here, the sounds and images could be captured on little more than a mobile phone; this project was about "archiving as much data as possible for posterity."[24] Although YouTube didn't issue an official call in the same way as these dedicated, research-based webpages, the platform was inundated with the videoed images and sounds of desolate spaces from around the world, many captured through illegal walks, from windows or via drones. This form of remote cyber-listening had a profound impact on the way that people engaged with everyday sounds. Now inaccessible, local and exotic locations could be experienced through a computer screen; and as we will see these estranged sounds and disembodied images took on great importance. On YouTube, real-world sounds resonated in a particular way. Users want videos with the highest 'definition' of sound possible: the 'best' rain, the 'best' blackbird song, the 'best' waterfall sounds. As a result, real world sound recordings are often maximised. To achieve hyper clarity and definition—or 'crispiness', an adjective common in the comments sections of YouTube's real-sound videos—uploaders employ a range of sonic manipulation technologies to construct a fictional reality that is already quite distinct from its captured source sound. This maximization of sonic definition is one of the reasons that a video or a channel is more successful than others.

To listen to these recordings of absence, natural re-plenitude and hyper-definition takes a special kind of attention that seems at first to be at odds with what Nicholas Carr derisorily referred to as "the shallows of distraction". Engagement with

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[22] See, for example, Cesar Asensio, Pierre Aumond, Arnaud Can, Luis Casco, Peter Lercher, Jean-Marc Wunderli, Catherine Lavandier, Guillermo de Arcas, Carlos Ribeiro, Patricio Munoz and Gaetano Licitra, "A Taxonomy Proposal for the Assessment of the Changes in Soundscape Resulting from the COVID-19 Lockdown," *Internal Journal Environ. Res. Public Health* 17, no. 12 (2020): 4205, at https://www.mdpi.com/1660-4601/17/12/4205/htm.

[23] "THE SILENT CITIES PROJECT," website, last updated April 13, 2022, at https://osf.io/h285u/.

[24] "Sounds of Pandemia: Sound Archive Covid-19," *Changing the Story Leeds*, Leeds University, at https://changingthestory.leeds.ac.uk/projects/sounds-of-pandemia-sound-archive-archivo-sonoro-covid-19/.

the internet, he argues, has rewired our brains to engage only superficially with material encountered.[25] John Palfrey talks more benevolently of an oscillation between "grazing" and "deep dive" for digital natives, or those born into a digital world.[26] These projects to collect the new sounds of urban life under pandemia trod the divide between grazing and deep dive engagement in interesting ways: hums, drones and the sounds of nature that ordinarily reside in the back of our perceptual awareness are here thrust into the foreground by both their strangeness and their physical in-accessibility.

"we're gathering the ambient sounds of isolation": Networked Sounds

These projects and YouTube uploads aimed to document, capture and preserve the current sonic environment through a form of acoustic ecology, that both archived and disseminated sonic content through open-access online processes to produce both important forms of communality and significant historical sonic documents. But other projects encouraged users to not only capture their local sounds, but also to enhance, stretch and manipulate them through a process of sonic elongation: in other words, to *respond* to these new sonic environments. The creative responses to the captured sounds of quarantine could be produced by single artists or by teams of remote collaborators who passed content between users and platforms to make collective critical sonic responses to captured, real-world sounds. To those listening remotely to these mediated realities, the soundscapes included information not only about what was happening outside, but also about how the lack of human-generated sounds was affecting the global community; about how people felt about these new soundscapes.

American experimental sound artist Drew Daniel, one half of electronic music duo Matmos, explored the creative potential of these phonograph recordings of locked down life in a particularly innovative way. Matmos have long been interested in composing with, and collaging, real-world sounds, often formed from samples such as "the amplified aural activity of crayfish" that appears on their first album (*Matmos*, 1997), sounds from medical procedures (found on their 2001 album *A*

[25] Nicholas Carr, *The Shallows: How the Internet is Changing the Way We Think, Read and Remember* (London: Atlantic Books, 2011).
[26] John Palfrey and Urs Gasser, *Born Digital: Understanding the First Generation of Digital Natives* (Philadelphia: Basic Books, 2008).

Chance to Cut Is a Chance to Cure), or the whir of their washing machine, which generated all the sounds for their 2016 album, *Ultimate Care II* (named after their Whirlpool Ultimate Care Washing Machine). Throughout their career, the duo have explored crowd-sourced composition and for *The Consuming Flame: Open Exercises in Group Form* (2020), they generated the entire album from samples, all recorded at 99bpm, contributed by 99 musicians. As the realities of quarantine unfolded, Daniel released a Twitter statement on 1st April about a new Kickstarter project (figure 2). It said: "we're gathering the ambient sounds of isolation" and will "combine them into one collective track".[27] The call generated sound clips from around 200 contributors from "across the planet"; "from Italy, Germany, Mexico, Czech Republic, India, Kenya and many" others. Once in Daniel's hands, the recordings were cleaned up and focused, but, he states in a recent interview, "I did not otherwise process or manipulate these sounds. Sometimes, a single sound is heard in isolation. At other times, I decided to cluster and overlay the sounds into distinct areas (at its densest there are twelve separate layers playing simultaneously)....Sometimes the threat of the coronavirus is front and center; sometimes it's far in the background."[28]

<INSERT FIGURE 2 HERE>

On May 4th, the 15-minute track, "Quarantine Supercut", went live on Kickstarter's Creative Independent arts site.[29] The piece moves from calm, domestic noises, a type-writer, a baby, a cat, an electric kettle, a girl "not in the mood" for her homework; before increasing in anxiety as things become more glitchy; we hear someone sigh, more sounds are overlaid, there's an annoying squeaky swing, some drones, a voice yells "I just want a couple of seconds to myself"; the sounds become less identifiable, more closely miced, falling over one another. A cough, in reference to the virus, precedes the noise of rain from inside a car as the radio tells us about

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[27] Katheryn Thayer, "Matmos' Drew Daniel Wants to Mix the Sounds of Your Quarantine," *Kickstarter*, last modified April 8, 2020, at https://www.kickstarter.com/articles/matmos-drew-daniel-mixes-quarantine-sounds.

[28] Drew Daniel, "Quarantine Supercut," *Creative Independent*, 2020, at https://thecreativeindependent.com/events/tci-irl-1/.

[29] Peter C. Baker, "Making a Supercut of the Sounds of Quarantine," *New Yorker*, last modified May 4, 2020, at https://www.newyorker.com/culture/cultural-comment/making-a-supercut-of-the-sounds-of-quarantine.

the COVID test; new sounds are added, the rain thunders down, louder and louder, overwhelming the voice.[30] While these sounds can be detangled, with many of the original submissions uploaded to YouTube (see video 1), the result is an egalitarian form of soundmaking that foregrounds the wonder of community in a time of dystopian crisis as recognisable real-world sounds are compiled to reveal the synergies in the differences.[31]

In itself, this process stems fluidly from the commonplace cultural processes that drive many areas of online life. The mediation of the world in which we live is one of the lynchpins of social media culture. Personal YouTube channels, Insta-vlogs and TikToks regularly stage content and make use of editing techniques and filters to manipulate the ordinary into something utopian and aspirational. This trickery has become an expected part of our virtual communications. "Quarantine Supercut" also pulls into the participatory nature of web 2.0. There have been examples of online participatory performance and composition in the past of course, and musical produsage and collaborative creativity can be found throughout social media and other sites. During the pandemic, however, such examples took on a peculiar resonance, by portraying—or reimagining—a world we are no longer able fully to participate in. What we are hearing in Daniel's project is "the people formerly known as the audience" activating to take creative production of sonic memory. We can think of this process as a form of citizen journalism that reports and interprets current events. Referring to "the everyday life of hundreds of millions of people who make and upload their media or write blog became public", Lev Manovich notes that "What before was ephemeral, transient, unmappable, and invisible became [with web 2.0], permanent, mappable, and viewable".[32] With YouTube's early slogan of "Broadcast Yourself", it is not a surprise that the Most Responded and Most Discussed categories are made up of two-thirds of user-generated content (as of 2019). Jean Burgess and Joshua Green recognised this early on in the scholarly

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[30] Drew Daniel, "Quarantine Supercut," *Creative Independent Soundcloud*, 00:15:02, uploaded 2020, https://soundcloud.com/user-597121341/tci-irl-the-sound-of-quarantine?ref=section-tci-irl-promo-open-call-quarantine-supercut-with-drew-daniel; Baker, "Making a Supercut o the Sounds of Quarantine."

[31] See, for example, Fabrizio Modonese Palumbo's contribution, "Disintegrating Turin," YouTube video, 00:06:00, May 4, 2020, at https://www.youtube.com/watch?v=Vy-_pJXsboY.

[32] Lev Manovich, "The Practice of Everyday (Media) Life," in *Video Vortex Reader: Responses to YouTube*, ed. Geert Lovink and Sabine Niederer (Amsterdam: Institute of Network Cultures, 2008), 38.

engagement with social media, when they proclaimed that some of the most important content on YouTube resides in a different aesthetic space from the glossy nature of its professional content: they say, "because so much of the symbolic material mediated via YouTube originates in the everyday lives of ordinary citizens, or is evaluated, discussed, and curated by them, that YouTube, in theory, represents a site of cosmopolitan cultural citizenship."[33] Writing of "cultural citizenship", Yoca Ermes identifies a "process of bonding and community building, that is implied in partaking of the text-related practices of reading, consuming, celebrating, and criticising offered in the realm of (popular) culture".[34] Michael Mandiberg reminds us that this process of citizen journalism destabilises "the one-directional broadcast from a reporter to an audience into a multivoiced conversation among participants".[35] The multivoiced "Quarantine Supercut" does just this. The piece does not give us an overlaid alterative to the wonder/ horror of the wave of silence: rather, it leaves a strong residue of its origins and places the process of its creative interpretation clearly in view.[36] We hear the original recordings, but they have now been placed alongside and over the top of each other so that we hear each differently: "I want music that is a balm, or an alternative, or a different world", he says.[37] On the one hand, the sounds in this piece clearly retain their source context: eating crisps, a cat meowing, the hushed city streets, rain falling on a car. But on the other, it mashes them together to convert these crowd-sourced personal moments into a global message. It moves from field recording towards soundscape composition, sonic art, music composition; from sonic document to a multi-authored musical remodelling. Each upload represents an important sonic moment or absence from numerous people: these chosen moments were curated and re-positioned against one another by Daniel, a facilitator rather than an author.

YouTube's Pandemic Musicking

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[33] Jean Burgess and Joshua Green, *YouTube: Online Video and Participatory Culture* (2009. Rep. Cambridge: Polity Press, 2019), 77, 126.
[34] Joke Hermes, *Re-reading Popular Culture* (Malden: Blackwell, 2005), 10.
[35] Michael Mandiberg, "Introduction," in *The Social Media Reader*, 3.
[36] In this sense, networked sonic elongation comes close to the processes and aesthetics of video art, which can be performative and merge with its environment and visitors in entangled ways. See Holly Rogers, *Sounding the Gallery: Video and the Rise of Art-Music* (New York: Oxford University Press, 2013).
[37] Thayer, "Matmos' Drew Daniel Wants to Mix the Sounds of Your Quarantine."

As I explored in the Introduction to our first volume of essays, YouTube has been a significant site for online musical activity since its launch, with music videos consistently prominent amongst the most favourited category and, by 2018, 47% of all online music streaming coming through the platform.[38] During the pandemic, YouTube's circulation and remediation of music became more prominent than ever. In many ways, what was already happening to music online—in terms of composing, listening, playing and teaching—was bought into the relief—and even accelerated—and it was reported that, during the first few months of lockdown, 48% of visitors to YouTube were seeking not information on the pandemic, despite its dedicated COVID homepage, but rather music-related content.[39] This content came in several forms (see video 2).[40] Older songs received renewed viewership and new versions were uploaded with pandemic-appropriate lyric changes;[41] pandemic-bespoke festival and concerts, like #SOSFEST, which saw the National Independent Venue Association partner with YouTube to run a 3-day virtual benefit festival (see video 3), and Andrea Bocelli's live-streamed concert from the Duomo di Milano—Music for Hope—received millions of views (see video 4);[42] a renewed passion for crowd-sourced collaborative videos developed, many of which quickly rose to the top of the most viewed lists; and a zeal for remixing well-known songs using editing tools like YouTube's empty-spaces musical remixer to let in a sense of isolation generated several viral memes.[43] Other musical activities aimed to transmit scenes of hope and unity into isolated bedrooms and the platform blew up with grass-roots vernacular videos of apartment block singsongs (figure 3) and dancing doctors who used

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[38] Hugh McIntyre, "Report: YouTube is the Most Popular Site of On-Demand Music Streaming," *Forbes*, last modified September 27, 2017, at https://www.forbes.com/sites/hughmcintyre/2017/09/27/the-numbers-prove-it-the-world-is-listening-to-the-music-it-loves-on-youtube/.

[39] Lucas Matney, "YouTube Launches Dedicated COVID-19 Home Page Section," *TechnCrunch*, last modified March 19, 2020, at https://techcrunch.com/2020/03/19/youtube-launches-dedicated-covid-19-homepage-section/?guccounter=1; Channel Factory, "Content Consumption and Consumer Sentiment Amid the Coronavirus Pandemic," *Channelfactory.com* at https://channelfactory.com/content-consumption-sentiment-amid-covid-19channel-factory/.

[40] YouTube.com, "The Year in YouTube Music," YouTube Culture & Trends, last modified December 9, 2020, at https://www.youtube.com/trends/articles/2020-youtube-music-stats/.

[41] Eric T. Lehman, "'Washing Hands, Reaching Out' - Popular Music, Digital Leisure and Touch during the COVID-19 Pandemic," *Leisure Sciences* 43, no. 1-2 (March 3, 2021): 273-279.

[42] #sosfest, YouTube channel, at https://www.youtube.com/hashtag/sosfest; Andrea Bocelli, "Andrea Bocelli: Music For Hope - Live From Duomo di Milano," YouTube video, 00:24:56, streamed live on April 12, 2020, at https://www.youtube.com/watch?v=huTUOek4LgU.

[43] Meredith C. Ward, "The Sounds of Lockdown: Virtual connection, Online Listening and the Emotional Weight of COVID-19," *Sound Effects* 10, no. 1 (2021): 8-26, at https://www.soundeffects.dk/article/view/124195/171127.

YouTube to spread messages of social distancing, hygiene and hope through song. These amateur clips of unedited real-life situations became a vital tool for maintaining and developing community across cities and countries, as Joana Freitas, João Francisco Porfírio and Júlia Durand note in their work on YouTube's pandemic surge of interest in video game, library music and sonic relaxation content and the move from "*mobile*" to "*immobile* listening."[44]

<INSERT FIGURES 3a and 3b HERE>

For many professional artists, lockdown was a great creative opportunity to both explore new aesthetic forms and to tap into the vast potential of the locked in, furloughed global audience: Taylor Swift wrote her *Folklore* album during lockdown, premiering the first single, "Cardigan" on her YouTube channel on July 24th 2020, for instance. The song helped her to secure her 6th US number 1 and propelled her to the top of the Digital Song Sales chart, with twenty number ones. It's difficult to say concretely that the song's success was down to more people having time at home to listen and view new content, or that her enforced stripped down pandemic aesthetic opened the doors to new ears, but streamed music and music videos were clearly booming. We need only look to BTS's release of their single "Dynamite", released on 21 August, to see that Taylor Swift's success was not a one off. "Dynamite" broke records when it became the most viewed video within the first 24 hours of its drop on YouTube with 101.1 million views. But there was also an increase in re-released content that ordinarily resided behind paywalls—music teachers, university module leaders, bands, venues and magazines released content for free in the spirit of

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[44] Gieson Cacho, "By-product of a Pandemic: Coronavirus Parody Music Videos Flourish on YouTube," *Mercury News*, March 31, 2020, at https://www.mercurynews.com/2020/03/31/byproduct-of-a-pandemic-coronavirus-parody-music-videos-flourish-on-youtube/; Michelle Langley and Leah Coutts, "Why do we Turn to Music in Times of Crisis?" *World Economic Forum*, last updated March 30, 2020, at https://www.weforum.org/agenda/2020/03/coronavirus-music-covid-19-community/; Susannah Clapp, Kitty Empire, Laura Cumming, Michael Hogan, Sarah Crompton and Fiona Maddocks, "Cancelled Culture: At-home Substitutes for Major Theatre, Art and Music Events," *Guardian*, last modified March 28, 2020, at https://www.theguardian.com/culture/2020/mar/28/cancelled-cultural-events-alternative-online-theatre-podcasts-comedy-art-pop-music-books; Joana Freitas, João Francisco Porfírio and Júlia Durand, "Listen, Watch, Play and Relax: YouTube, Video Games and Library Music in Everyday Life During the Pandemic", in *Sonic Scope: New Approaches to Audiovisual Culture* 3 (2021), at https://www.sonicscope.org/pub/jzu92u0h/release/2.

comradery: over on TikTok, Prince's estate made his entire catalogue free to stream.[45]

The pandemic also became a popular subject matter for music compositions. Within weeks, scientists translated the spikes of the virus directly into a strangely beautiful composition called "Viral Counterpoint of the Corona Virus Spike Protein".[46] It was also not long before the gestures of performance were merged with those becoming pandemic prevalent, often with a degree of humour, as in Jeff DePaoli's piece *Coronavirus Etude For Piano and Disinfecting Wipe (For Piano Teachers Everywhere*: figure 4a; video 5).[47] Hidden messages appeared encoded into Logic— as in Dani Howard's composition "Stay Home" (figure 4b), in which the visual interface spells #STAYHOME as the music unfolds across the screen.[48] Others offered bespoke services adaptable to each person's locked down circumstances: Matthew Shlomowitz, for instance, took commissions for his *Music For Cohabiters* project, offering compositions written especially for the instruments, players and abilities present in different quarantined homes (video 6).[49] One of his pieces, "Hexatonic Cycle with a Calm Stanley", shows a family performing a piece for piano, oboe and cello with the young Stanley trying to stand still and play the djembe (figure 4c).[50] In all these examples, compositions were uploaded straight from source with no middle man, no industry trail, no contracts, demonstrating a heightened presence of DIY grass-roots music creation and distribution processes during the pandemic.

<INSERT FIGURES 4a, b and c HERE)

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[45] Deidre Simonds, "Prince's Entire Music Catalog Now Available on TikTok After the Late Icon's Estate Vows Inspire a 'New Generation' of Fans," *Daily Mail*, last updated July 8, 2020, at https://www.dailymail.co.uk/tvshowbiz/article-8464873/Princes-estate-makes-music-catalog-available-TikTok-inspire-new-generation-fans.html.

[46] Vineeth Venugopal, "Scientists Have Turned the Spikes of the Coronavirus into Music," *Science Magazine*, April 3, 2020, at https://www.sciencemag.org/news/2020/04/scientists-have-turned-structure-coronavirus-music.

[47] A, "Coronavirus Etude - for Piano and Disinfecting Wipe - WATCH UNTIL THE END!" YouTube video, 00:01:28, March 14, 2020, at https://youtu.be/whNICyl_et0.

[48] Dani Howard, "A little musical message to the world," Twitter post, March 24, 2020, at https://twitter.com/danihoward6/status/1242475804484763652?lang=en.

[49] "University Lecturer Instrumental in Creating COVID Lockdown Compositions," Southhampton.ac.uk, April 16, 2020, at https://www.southampton.ac.uk/news/2020/04/covid-compositions-shlomowitz.page.

[50] Matthew Shlomowitz, "Hexatonic Cycle with a calmStanley (Music for cohabiters)," YouTube Video, 00:02:55, April 14, 2020, at https://www.youtube.com/watch?v=1kPzdTeQ5f0.

Sonic Remediations

Once recorded and uploaded to YouTube, these ephemeral moments, new videos and responsive compositions became endlessly repeatable. Populated by ever expanding numbers of amateur and DIY users, rather than professional creators, social media's referencing, reuse and remixing of existing online content came to dominate its aesthetics to such an extent that O'Reilly identified a platform's potential "hackability" and "remixability" as one of the defining features of Web 2.0.[51] As we've seen in this book's introduction, musically, we can find the reuse and remixing of online material—particularly in song and dance form—everywhere, from the overt and continual referencing that drives musical versions and parodies, fanvids, reaction videos, bad lip-synching, lyric videos and music mashups on YouTube, to the majority of TikTok's re-versioned content.

YouTube's "generative qualities" and the embrace of low-fi, amateur content became for many a significant means of creating social connections and escapism during the early days of lockdown. Versions became extremely popular during the pandemic, with parody songs like Chris Mann's "Hello (From the Inside)" manipulating popular culture's most familiar works into humorous parodies of current events (Mann's version has received almost 15 million views and pages and pages of comments, see video 7).[52] During the pandemic, this process of engaging in nostalgia through new ideas became extremely important. Starting from easily recognisable sonic or audiovisual material, memes knowingly embrace amateur aesthetics, using one cultural form to comment on another by highlighting similarities and differences and de-centring authorship through participating audiences and citizen journalism.[53] However, this can result in complicated labour dynamics. We can see this happening in "Quarantine Supercut". Created from natural sounds, this piece of sonic art both embraces the distributed authorship of web 2.0's user-

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[51] O'Reilly, "What is Web 2.0?"

[52] Chris Mann, "Hello (from the Inside) An Adele Parody by Chris Mann," YouTube video, 00:04:51, March 26, 2020, at https://www.youtube.com/watch?v=M5azNpTwVk8.

[53] See for example, Barnaby Goodman, "Amateur Content Creation as Compositional Practice: Viral Videos and Internet Memes in Online Participatory Culture," *Sonic Scope: New Approaches to Audiovisual Culture* 2 (2021), at https://www.sonicscope.org/pub/m46tmp3s/release/1.

generated content *and* its zeal for retromania and remixing: "'I don't get to make any sounds" Daniel says, positioning himself as a curator rather than a composer: "I just get to make the choices about their order and length":

> It's like a trust fall. I'm here to work with whatever I'm given, and to grow something from those submissions. I don't know how I'll feel about them, I'm not sure my feelings matter. I think what matters is what we all contribute, what everybody gives: "Here's 30 seconds of my life. Take it and do something with it." I think that memorial capacity of electronic music, to hold moments of time, and to make us care about them, and to dignify even very small and quiet things and say that they're worthy of attention, I think that's really powerful. It's not about me as a composer. It's just about the fact of what happens when you put a frame around everyday life and say, "This is worth your time."[54]

Here, field recordings are uploaded and recontextualised, collaged together to give a reading of current events that is both hopeful—we are all in this together—and terrifying—stay at home.

Networked Sonic Elongation

If we now return to the idea of networked sonic elongation, we can see how the affordances of social media have encouraged participatory forms of sonic engagement. YouTube's mashups and memes offer musical community in the form of playing, exploring and creating together. However, in the earlier analysis of "Quarantine Supercut", it was clear that this piece represents not only a more holistic and simultaneous process of compositional collaboration, but also a form of remediation where content is not taken from other online sources, but rather from the real world in a process of acoustic ecology; here, sound becomes a mediating device between users and their forbidden environments. And yet, whose reality are we hearing? The idea that a field recording can be objective and free from agency has been rejected by many in the sound art community.[55] For each piece of phonography (sound recorded in non-professionalised spaces with an emphasis on discovery rather than invention), many decisions have been made about what was worth capturing, where to place the microphone, when to press record and when to stop. And yet a condition of phonography is that the recorded sounds do not undergo any form of significant intervention after their capture; that the presence of the sounds

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54 Thayer, "Matmos' Drew Daniel Wants to Mix the Sounds of Your Quarantine."
55 See Lawrence English, "A Beginner's Guide to Field Recording," *Factmag*, n.d, at https://www.factmag.com/2014/11/18/a-beginners-guide-to-field-recording/.

remain as an historical artefact, or a portal into what once was. While the framing belies a clear agential presence, the sounds rest undisturbed post-recording. And yet, they harbour a potential for temporal and interpretative intervention that can act as a powerful contemporary reaction to past events, as Paul Hegarty suggests in his work on the captured "sonic real": "Opening these recordings to constant and unlimited reconfiguration allows them to move into our present, to harbour not just what is was, but also what it means today."[56] Key to all sonic arts is the refreshed and reinvigorated forms of listening it encourages—the ability to listen differently to our sonic environment—, an aural engagement that has been rigorously theorised as reduced listening, deep listening, critical aurality and so on.[57] This form of engagement changes again when sounds are in some way manipulated. Once captured sounds are opened to more than an interpretative temporal fusion—once a source sound has been stretched, abstracted, augmented, heightened or otherwise manipulated—we enter the realms of *musique concrète* and soundscape composition.[58] From its emergence from R. Murray Schafer's 1970s World Soundscape Project, soundscape composers have used creative processes of sound combination and transformation to investigate how environmental noises influence and impact our creative and mental health.

In 2002, soundscape composer and theorist Barry Truax issued four useful characteristics of soundscape composition: 1. listener recognisability of the source material—this is achieved by making sure that the original texture and content of the recorded sounds are not obscured; 2. their knowledge of the context of the material, in terms of both environmental and psychological familiarity; 3. the composer's knowledge of these contexts and her ability to infuse the composition with these meanings, and "(4) The work enhances our understanding of the world, and its influence carries over into everyday perceptual habits".[59] "Quarantine Supercut"

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[56] Paul Hegarty*, Annihilating Noise* (London: Bloomsbury, 2020), 40.

[57] Pierre Schaeffer, *The Soundscape: The Tuning of the World* (New York: A.A. Knopf, 1977); Pauline Oliveros, *Deep Listening: A Composer's Sound Practice* (New York and London: Deep Listening Publications, 2005); John Drever, "'Primacy of the Ear' – But Whose Ear?: The Case for Auraldiversity in Sonic Arts Practice and Discourse," *Organised Sound* 24, no. 1 (2019): 85-95.

[58] Barry Truax, "Genres and Techniques of Soundscape Composition as Developed at Simon Fraser University," *Organised Sound* 7, no. 1 (2002): 5-14.

[59] Barry Truax, "The Aesthetics of Computer Music: A Questionable Concept Reconsidered," *Organised Sound* 5, no. 3 (2000): 119-126.

shows this process at work. The source material and its contexts remain easily recognisable for the listener. The sonic ambience gives clear clues as to location and the psychological context can be gleaned from the tone of the voices, the urgency of the radio broadcast and so on. As the curator of the sounds, Daniel draws out the meanings and resonances between the disparate clips to create a powerful reading of life under quarantine.

But, while it shares many characteristics with soundscape composition, networked sonic elongation is slightly different. Sonic elongation is a process by which we stretch sounds away from a corresponding semantic sonic anchor: the object that produced them. Sound can remain close to the original material or become unrecognisable. So far, this mimics the process of soundscape composition. The difference, however, lies in the processes by which the sounds are transformed against an image and their afterlife. In networked sonic elongation, the original sounds are usually gathered from many sources; if they do come from one sound recordist, they are subsequently filtered through many voices. Either way, fundamental to the success of networked sonic elongation is the distribution of authorship and the use of online tools for its creation—from sound design apps to modes of social media distribution. Although Daniel's crowdsourcing Twitter call for "Quarantine Supercut" generated peer-produced content, he, by his own admission, curated it into a fixed and final form that went live on Kickstarter, as we've seen. Other forms of sound mashup can be found in projects with a more collaborative, back and forth movement that builds on one another's ideas to develop a project simultaneously. The most liberating forms of networked sonic elongation, then, remain in flux. Each contribution acts as the launchpad for a new configuration, much like Instagram's memes or TikTok's infinite versions of the same dance, song or action. But crucially, the source material must be remixed and manipulated as it is in soundscape composition; with little added to transform the sounds from one user's interpretation to another's. And it must be understood as a continual process rather than the production of a discrete composition.

<INSERT FIGURE 5 HERE>

Although networked sonic elongation can occur through same-site remediation, at its most powerful, it remains a continual, open-ended and multi-

platform process. Many of the examples noted so far began as bespoke, small projects, hosted on webpages with already-established sound-art communities. However, once in motion, the remediations migrated to YouTube, where they drew in new audiences and kickstarted different types of collaboration and response. Cities and Memory, a field recording project that bills itself as "a global, collaborative sound art and mapping project that remixes the world, one sound at a time", plays into these creative post-medial migrations. Every dot on an interactive google map (figure 5) marks a field recording. Click on any dot and the sounds from that location begin. The project's reach is astonishing, including over 4000 sounds recorded by 750 sound-artists in more than 100 countries. As the pandemic got underway, they launched #StayHomeSounds, with "The desire to capture and compare. To share and marvel" at the pandemic's new global sounds.[60] Recordings came from all over the world, including the cacophony of locked-down homes, the silence of shopping centres, the rejuvenated sounds of nature, and new sounds, like clap for carers, local bell ringing, balcony singing and so on. These field recordings of quarantine took on a peculiar and eerie resonance. If we think back to Truax's four points above, is it even possible for listeners to identify and empathise with source material that is so sonically strange?

The Cities and Memory team grappled with this strangeness by inviting straight forward field recordings, but also a sonically-elongated version of each: "Every sound on the map is accompanied by a 'memory' version, which is a recomposed, reimagined or remixed version of that sound through which our users can explore the sounds of the world as they are, or explore an alternative, imagined sound world created by the collective imagination of hundreds of artists. Remixing the world, one sound at a time – in short" proclaims the project's founder Stuart Fowkes.[61] The webpage offers instructions, tutorials and links to online sound-making resources and software, which either the sound recordist or any other user can use to transform the uploaded recordings. These tools are ubiquitous and primitive: smart phone apps, free software; all easy to use and quick to share.

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[60] Cities and Memory, "Remixing the World, One Sound at a Time," *citiesandmemory*, n.d, at https://citiesandmemory.com/.
[61] Silvia Lacovcich, "STUART FOWKES, capturing the world into an autonomous network of sounds,"*clotmag*, last modified October 4, 2020, at https://www.clotmag.com/interviews/stuart-fowkes-capturing-the-world-into-an-autonomous-network-of-sounds.

Anyone with a recording device, however simple, could become involved. One notable example from this project is the re-imagined sounds of Grand Central Station in New York. The original phonography was recorded by Geoff Gersh on March 30th, 2020, around 9pm; it was then remediated through the Headliner app by another user, who manipulated the sparse and reverberant sounds of the cavernous hall to mimic train sounds and synths filling in the absent spaces.[62] With participation from all over the world, and by giving free licence for subsequent transformation, these pieces showed the power of transmedia to carry a story far and wide. Cross-platform community discussion on Facebook and Twitter allows users to share content and collaborate on re-imagined sounds, sharing the results on YouTube, Kickstarter and bandcamp, and even receiving prominent airplay on London's Resonance FM (figure 6).[63] Cities and Memory, then, is a project where content is not stable but constantly develops, undoing and redoing itself as people manipulate the work of others. And yet, like soundscape composition, it also remains pretty literal: the mapping element positions us in the exact location from which the elongated sounds were taken. And yet, it also provides access to the various ways that the global community reimagined and interpreted these eerie locked-down environments in myriad ways. We can even suggest that, by filtering the sonic strangeness of Covid-19's lockdown through the familiar processes of cyberculture, these re-imagined soundscapes provided a shared comfort to their listeners.

<INSERT FIGURE 6 HERE>

In this project, then, we can see the main themes of networked sonic elongation at play: the manipulation of real-world sounds via participatory, online culture; the blurring of producers and users and the continual produsage of creative content; the remixing and remediation of both real and online source material; the interoperability of technologies; and the post-medial spread of sounds across various social media platforms.

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[62]Cities and Memory, "Grand Central Interior," *Audio Boom*, April 3, 2020, at https://audioboom.com/posts/7547462-grand-central-interior.

[63] Lanre Bakare, "Art Project Captures Sound of Cities During Coronavirus Outbreak," *Guardian*, March 31, 2020, at https://www.theguardian.com/world/2020/mar/31/art-project-captures-sound-of-cities-during-coronavirus-outbreak?CMP=share_btn_tw.

Remediating Silence

In the years since YouTube's launch, the process of sharing, collaborating and distributing have claimed ownership of many of our lives; our thought processes and modes of communication. The platform now sits within a tightly connected nexus of post-media potentialities, its content spreading across social media sites and out into everyday life. Experiencing cataloguing, manipulating and disseminating music across this nexus has become entirely normal; and during the Covid-19 crisis, the social media vortex took on a particularly comforting and uniting role. YouTube sits at the centre of this vortex in several ways. First, with its ability to support a wide range of formats, it serves as a resource and a destination for sonic art practice. With millions of channels and videos dedicated to real-world soundscape recordings, it continues to provide ample raw material for composers to play with; and with well-established algorithms, search engines and communities, material can easily be passed between users. When uploaded, tags and comments provide a useful way to link between remixed works. Yet significantly, YouTube also acts as a vital conduit between various existing and bespoke online platforms.

Second, as we've seen, a major factor since YouTube's beginning has been to populate the online arena with content from our everyday lives. Scholars have long been interested in how, as social media grew to ever greater prominence, the boundaries between art and life—between networked and physical communication—became fragile. These examples of networked sonic elongation above throw this process into relief. Real-world sounds and images are uploaded to various platforms; other users download and re-compose them; these re-compositions are then available for others to work with. We are so well versed in remediated content, versions, mashups and remixed culture that we are used to this process of revisiting and re-evaluating content, however mundane, private, low fi and personal it may seem. The networked sonic elongation of real-world sounds plays into this embrace of the ordinary, the normal, the humdrum. Only during the pandemic, of course, the captured sounds and their cascading remediations were anything but ordinary. While some used cyberspace for total sonic escapism in the form of long-form nature recordings, others sought more journalistic information through field-recording projects. But others still wanted to inject their feelings into these recordings, manipulating them to include their fears, frustrations and isolation, but also a joy at attentive listening to sounds abstracted from their locations. New sounds were

generated, smaller sounds acquired greater significance, quieter sounds emerged from beneath louder ones and everything demanded greater aural attention. During lockdown, then, we heard less but we also heard more. But, to return to our original question, did we believe what we heard?

Unlike many forms of soundscape composition, networked sonic elongation is both a peer-produced and constantly evolving form. We can think of examples of networked sonic elongation not as compositions, but rather as ongoing sites of audiovisual activity that offers transitory snapshots into multiple local environments, while at the same time offering a commentary on the original sounds. It arises through multiple authors and encourages others to keep working with the material, taking sounds further and further away from their original destinations. Crucially, this activity is web-based, which enables each field recording to undergo successive forms of creative intervention though multiple voices. That it is streamed matters. That sound artists can connect in real time, matters. And that free licence is given for subsequent transformations: that really matters. It's almost like a sort of post-human form of music-making that emerges through numerous, heterogeneous and sometimes clashing perspectives and identities; a form of sonic citizen journalism. As the real sounds become increasingly distant and abstracted, we hear a sonic remodelling of the emotional and psychological impact of the Covid-19 pandemic. And as it moves through and beyond YouTube, this impact is not stable, but always emergent.