Voices
A WORLD FORUM FOR MUSIC THERAPY

OPEN ACCESS

RESEARCH | PEER REVIEWED

Entering the Ambient

A Performative Collaborative Autoethnography of Music Therapists' Improvising with Digital Music Technologies

Michael Viega [1*], Victoria Druziako [2], Josh Millrod [3], Al Hoberman [4]

[1] John J. Cali School of Music, Montclair State University, USA
[2] Brooklyn, NY, USA
[3] Merrick, NY, USA
[4] Vienna, Austria
* viegam@montclair.edu

Received 9 January 2022; Accepted 14 August 2022; Published 1 March 2023
Editor: Carolyn May Shaw
Reviewers: Nicole Hahna, Simon Gilbertson

Abstract

Since the 1980s, there has been an interest in the clinical benefits and challenges with the use of digital music technology in music therapy, yet there is still little information about the experiential potentialities of digital music technologies from relational, psychodynamic, and ecological frameworks. The ambient mode of being presents a heuristic approach to clinical listening when using digital music technology. Performative collaborative autoethnography was utilized by a group of four music therapy clinicians who wanted to understand their shared experience of *entering the ambient* while improvising using digital music technologies. Seven video excerpts from six different improvisation sessions were chosen to explore this topic and its implications for being a music therapy clinician. In keeping with the values of performative collaborative autoethnography, the results and discussion of this study are presented as a dialogue between the researchers. Each group members' experience of *entering the ambient* was unique, but they shared a common reverence for how they were able to create an ambient space using digital music technology, which acted as a co-agent within their group process. The group members discuss clinical implications for this research including the benefits, challenges, and the role of gender/identity when using digital music technologies.

Keywords: music therapy; improvisation; digital music technology; performative collaborative autoethnography; ambient mode of being; therapeutic soundscape

Publisher: GAMUT - Grieg Academy Music Therapy Research Centre (NORCE & University of Bergen)

DOI: https://doi.org/10.15845/voices.v23i1.3510

Literature Review

Digital Music Technologies in Music Therapy

Music therapists have advocated for the use of digital and electronic music technologies with an array of clinical communities since the 1980s (Hasselbring & Duffus, 1981; Krout & Mason, 1988). In 2013, Wendy Magee's edited text *Music Technology in Therapeutic and Health Settings* thoroughly explored the clinical use of digital music technologies in music therapy. Magee's edited textbook stressed the adaptive qualities of music technology, providing a variety of clinical applications for adults in cancer care (Kubicek, 2013), Autistic youth (Krout, 2013), and within school settings (Zigo, 2013) to name a few. Surveys of practice conducted by Magee (2006) and Hahna and colleagues (2012) have addressed music therapists' biases, misconceptions, and lack of training with music technologies. More recently, researchers and academics have stressed the complex aesthetic, socio-cultural, clinical, and musical relationships that are important considerations within music therapy (Crooke, 2018; Crooke & McFerran, 2019; Knight & Krout, 2017). Exploring the health-related benefits, contraindications, therapeutic relationships, and educational competencies related to the use of music technology in music therapy is multifaceted, and seems dependent on the desired clinical outcomes, and therapist's theoretical orientation, competency, and ability to be culturally responsive (Werger et al., 2021).

Research and case reporting on the use of music technology in music therapy has focused primarily on music therapy's assistive qualities and outcome-oriented practice (Crowe & Rio, 2004; Werger et al., 2020). Conversely, Crooke (2018) and Crooke and McFerran (2019) contextualized music technology within cultural traditions, especially Hip Hop and electronic dance music. For instance, Crooke focused on the cultural significance of various typologies such as drum machines, samplers, and MIDI triggers. Wei (2020) noted that modern popular dance culture originated in Black and Brown communities as an act of necessary resistance against white[1] supremacy towards reclaiming joy and community on the dance floor. Authors such as Crooke (2018), Travis et al. (2019), and Viega (2018) have stressed the importance of cultural responsiveness and reflexivity as central to clinical practice, especially when working with Black, Brown, Indigenous, and people of color and whose preferred music is created with the use of music technologies. Therefore, as the use of various music technologies increase in daily practice there is a need to nurture cultural humility and responsiveness, and to take an anti-oppressive stance within training, supervision, and practice.

In March 2020, many music therapists found themselves expanding their services via telehealth at the onset of COVID-19, and music technologies such as audio interfaces, digital audio workstations (DAWs), and USB microphones suddenly became commonplace necessities (Knott & Block, 2020). As Werger et al. (2020) pointed out, the use of digital and electronic music technologies in music therapy continues to evolve and expand, with implications for use in a variety of clinical, educational, and training settings. Even though technology is a daily part for many music therapists, there are still many misconceptions about how to implement music technology fluidly in practice (Crooke, 2018; Hahna et al., 2012). Specifically, the use of music technology is experientially, culturally, aesthetically, and relationally very different than using acoustic instruments, and little is known about how these elements impact clinical decision-making in music therapy (Crooke, 2018; Jonassen, 2021; Stensæth, 2018; Viega, 2018).

Subject/Object Relationship

In addition to the primacy of cultural responsiveness, authors have noted the importance of understanding and developing cybernetic relationships[2] with the technology used in

practice, seeing it as a co-agent within the therapeutic relationship. Stensæth (2018) described a meta-theoretical approach to co-creating interactive digital musical media with the family of a child with disabilities. The author stressed that non-human objects like music technology can have agency in that they impart change and transformation within a chain of actions. This is most apparent with generative music technology, which acts as an improviser with its own agency and interacts with participants as a co-creator. Both Stensæth and Noone (2020) noted that music therapists can develop health-promoting relationships with music technology. In addition, Jonassen (2021) reported that technology can act as a nonhuman co-agent within a therapeutic relationship, as he focused on the use of iPad as a co-creator. Crooke and McFerran (2019) discussed specific room arrangements, frequency settings, and instrument placement for improvising that does not just offer functionality, but instead showcases the relationship therapists need with various music technologies to best promote health in a way that is individualized and intentional.

Our relationship with music technologies can also reveal collective and cultural histories relevant to therapeutic rapport. The idea of a symbiotic relationship between humans and technology is prevalent within the histories of dysphoric music of Black popular music cultures as seen in Afrofuturism[3], and Queer music cultures (De Kosnik, 2019). The role of music technology has been central in resisting heteronormative, patriarchal, and white supremacy dominance (Waugh, 2017). Norris et al. (2021), slaughter (2021), and Leonard (2020) have all expressed how Black aesthetic and liberatory freedom is embedded and encoded within the soundscapes presented in Black contemporary music. Within Queer theory, Haraway (1990) described how cyborg imagery in art and music offers a utopian look at a post-gender identity, working to resist heteronormative discourse. The examples above suggested the importance of being reflexive about relational and cultural dynamics when using music technology in music therapy and clinical decision-making.

Soundscape and Ambient Listening

Ambient listening provides one heuristic approach to help therapists become reflexive about the multidimensional use of music technology in music therapy. Soundscape is a broad term denoting any sonic environment, which can include non-musical sounds within physical space or the music metaphors we use to describe the aesthetic components of musical compositions (Schafer, 1977/1994; Smith, 1994; Viega, 2014). The term soundscape has impacted ecological and health studies, and had been used to understand imaginative listening practices in music therapy (Viega, 2018). James (2019) has noted that the lived experience of Black identity is built into the acoustic resonance, and by understanding and engaging with what is coded into the sound can reveal biopolitical patterns for Afro-diasporic peoples. Farinati and Firth (2017) supported the notion that the act of listening takes intent and commitment, and can be used as a political tool for wider social change. Therefore, by exploring soundscapes created with music technology, music therapists and the people they work with can nurture imaginative and clinical listening towards fostering agency and reclaiming cultural identity for those marginalized group members whose histories were ripped away due to settler colonialism (Crooke 2018; Leonard, 2020; Travis et al., 2019; Viega, 2018).

Viega (2014) offered a theoretical model for engaging soundscapes created with music technology in music therapy that is based on Jaaniste's (2007) concept of the ambient mode of being. Jaaniste wrotes that

> The ambient mode involves engaging with our surroundings as an ambient pervasive all-around field, without anything being prioritized into foreground and background. Without the salience of the foreground, what would need to become salient is the pervasive ambience itself (p. 43).

This theoretical model created a psychotherapeutic approach to nurturing relational and ecological presence with therapeutic relationships when using music technology in music therapy. The major characteristic of ambient listening is the intentional immersion into sound, defamiliarization of everyday sensorial practices, nomadically traversing the sonics within a soundscape, and allowing for new information to emerge within that experience. It is suggested that this mode of listening allows for therapists to attune to the multiple contextual dynamics encoded in the sonic experiences in music therapy. It is important to note that the term ambient is not only a genre or style of music, but relates to any creative experience where ecological context is considered within the creative process. Therefore, the ambient mode is an experiential approach to listening that engages the multiple layers of ecology within any soundscape experience. Though the ambient mode of listening provides a useful theoretical framework for developing reflexivity when engaged in soundscapes created by music technology, it would be helpful to bridge theory with practice and see how it is understood when creating music with health-related intent.

Statement of Purpose

This study sought to explore the ambient mode of listening through group improvisation using music technology. Four music therapists from different backgrounds explored this topic. The purpose of this study was to gain an experiential understanding of the ambient mode using our collective knowledge as music therapists to guide our investigation. A collaborative autoethnography research design was utilized to honor the multiplicity of our shared experiences, ideas, and perspectives. The research was guided by the following question: *What is our collective experience of "entering the ambient" in group digital improvisation experiences?* Sub questions include

1. What is the possible role of the therapists when intentionally inviting the ambient mode of being?

2. What do our experiences tell us about the possible role of the people we work with when engaged in the ambient mode of being?

3. What is the possible role of the various technologies in creating and sustaining the ambient mode of being?

Method

Methodology

Performative Collaborative Autoethnography

Autoethnography evolved as a response to ethnography's tendencies to promote colonial agendas, and stresses the importance of researcher's reflexivity of their role within culture and community instead of othering those being researched (Blalock & Akehi, 2018). Collaborative autoethnography stresses co-constructed, dialogic, shared meaning-making of a social phenomenon. It values multiplicity of voices, ideas, and perspectives, finding both commonalities and divergent viewpoints in the process of collaboration (Chang et al., 2012; Kalmbach Phillips et al., 2009). Performative collaborative autoethnography (Chang et al., 2012) is a type of interpretative research methodology where researchers have used performative arts to collectively explore social or theoretical concerns (Kalmbach et al., 2009; McMillan & Price, 2010). Purposeful and structured dialoguing, journaling, and reflection are used in conjunction with performance to help (re)construct meaning about a social phenomenon. The epistemological nature of performative collaborative autoethno-

graphy is transformative, as it looks to challenge common assumptions about the nature of knowledge constructed in research including how data is generated, analyzed, shared (Chang et al., 2012).

For this project, we used digital music improvisation as the central, performative means of exploring the research questions. Our ongoing group process was essential in developing interpersonal rapport (between each other and with the technology), deciding on referential themes to be explored, and contemplating our experiences in relation to the research questions. The collaborative nature of this project required us as authors to consider the use of voice in the writing of this article. There will be moments when we write individually, at which point we will note which author is talking. Otherwise, the reader should assume we are speaking from a collective voice. We hope to maintain the dialogic nature of our research in this writeup, since our shared group process was essential in generating meaning in relation to the research questions.

Situating the Researchers

Victoria *(she/her):* I am a white, cishet female of European and South American heritage, abled-bodied, and neurodivergent (ADHD). I experience the varied benefits of many privileges due to my presenting identity. I have been a Board-Certified Music Therapist (USA) since 2017 and Licensed Creative Arts Therapist (NY) since 2019, and currently work on an adult psychiatric inpatient unit at a hospital in Brooklyn. My female identity has shaped much of my life experience. I focus on gender roles, identity and expression, as well as allyship with the LGBTQIA2+ community, with whom I occupy many spaces. I started attending rave events during my undergraduate years at New York University. Since then, experiencing the creativity, dynamism, diversity, and inclusion of the underground Brooklyn electronic dance music community has empowered me, my most beloved part of living in New York City for the past 12 years. My desire to provide further access to music technology, particularly for those whom electronic dance music is an authentic aspect of identity, informs my perspective of the role of music technology in music therapy. Music technology is instrumental in my work in New York City, the birthplace of Hip Hop, as well as in my personal songwriting and producing.

Al *(he/him):* I am a white, cishet male of Eastern and Central European Jewish heritage who is non-disabled, neurotypical, and the beneficiary of systemic privilege as a result of my presenting identity. I am also an immigrant in a non-English-speaking country with a history of persecuting Jewish people. I have been a Board-Certified Music Therapist since 2013 and Licensed Creative Arts Therapist since 2015. My interest in music technology stems from my background in free improvisation and audio engineering, which influenced my conception of how I engage with music as going beyond the tenets of western/colonial traditions. I began using digital music technologies in music therapy while working within a community where Hip Hop was the predominant music culture and digital beat making was the primary compositional form. Entering this world as an outsider led me to see digital and electronic music not as a single genre or concrete set of techniques, but as necessarily a product of the contexts and cultures in which it is created and used.

Josh *(he/him):* I am a white, cishet male of Eastern European Jewish heritage who is non-disabled, neurotypical, and the beneficiary of systemic privilege as a result of my presenting identity. As a young person, I was the victim of a hate crime and, early in my career as a music therapist, I experienced a significant traumatic event while leading a music therapy group. Both of these events were foundational in how I relate to identity and trauma in my music therapy work. I have been a Board-Certified Music Therapist (USA) since 2016 and Licensed Creative Arts Therapist (NY) since 2017, and currently work in

private practice with adolescents and adults with histories of relational trauma and/or trauma stemming from their gender, sexual and/or cultural identity. I've always considered digital music technology to be my primary instrument and beatmaking, songwriting, and recording are at the core of my therapeutic work. Outside of my therapeutic work, music technology has been instrumental in my own personal music making and performance. First-hand experience as both a performer and therapist have inspired me to further explore the expressive and therapeutic potential of music tech.

Michael *(he/him):* I am a white, cishet male who is non-disabled, neurotypical, and holds multiple points of power and privilege within societal norms. I have been a Board-Certified Music Therapist (USA) since 2001, working primarily with youth within limited resourced communities who have experienced complex childhood trauma. I began to work primarily with digital music technologies around 2005, engaging youth in beatmaking, songwriting, and music production. I was first introduced to rave and electronic dance music culture in the mid-1990s and highly influenced by the collective and transformative mindset of the people within the culture. It was in this scene that I was first introduced to the core tenets of feminism, Queer culture, ecological thinking, and community-oriented practices. These experiences and perspectives have had a lasting influence on me and serve as the guiding orientations when considering the role of digital music technology in music therapy.

Procedures

Improvisation Sessions

A total of six improvisation sessions occurred between April 2019 and March 2020. Sessions occurred at the John J. Cali School of Music at Montclair State University. The structure of each session was open with decisions being made based on our collective discussions and sharing.

1. Set-Up: Setting up equipment played an essential role in the process and in rapport-building, including problem-solving strategies, e.g., how to record, the best way to set up speakers, etc. In addition, we often shared cables, advice, and support.
2. Open Processing/Check-in: Group members shared any thoughts and feelings they were bringing into the session that day at the start of each session. Discussions over the six sessions deepened as personal processes between each session were discussed. Group members shared their intentions for how they would like the various technologies to help them on that day and how the group might be able to best support each other. Opening discussions usually last up to 20 minutes.
3. Improvisation: Music improvisation either began non-referentially after our discussion or with a music reference to start. For instance, session 2 consisted of an open-ended non-referential improvisation, with each of us starting randomly after our check-in with no reference to tonality, rhythmic pattern, or theme. Conversely, at the start of session 3 we discussed the idea of improvising over a pre-set dance rhythm in order to get a sense how that was experientially different then the free-formed start of session two. We did not give a set time to how long improvisations should last, but they ended up being between 40 minutes to 1 hour and 15 minutes.
4. Processing: The group would share their immediate reactions following the improvisation. Processing lasted about 15 minutes. We purposefully did not want to over analyze the session, instead allowing the music experience to sit with us over time and then checking-back in when we saw each other next.
5. Closing: Putting away equipment and cables began another important ritual for rapport building and planning for subsequent sessions.

Equipment Used

A variety of digital music instruments were used by the group throughout the six sessions (Table 1). Each participant chose instruments that they either felt comfortable with and wanted to expand their skill set and workflow, or ones that they did not know well and wanted to gain experience with. The term digital music is used to denote the use of electronic instruments that utilize computer software to process, organize, and layer sounds, pitches, and rhythm, or standalone electronic instruments that output digital audio signals. For an introduction into typologies of music technology equipment used in music therapy see Crooke (2018), Knight & Krout (2017), and Werger et al. (2021).

1. Digital Audio Workstations (DAWs): DAWs such as Ableton Live and Logic Pro are computer application software that allow for real-time improvisation and music-making. Typically used for recording purposes, many DAWs also allow for real-time improvisation by triggering and altering loops, effects, as well as other digital instruments connected to the software.
2. Drum Machine Sequencers, Samplers, and Synthesizers: Many of these instruments do not require software in order to be played. However, most have digital systems within the hardware and they were all processed through a DAW during our improvisations. We used the following instruments: MicroKor; Akai MPC Live; Black Corporation Kijimi Analog Synthesizer; Korg Electribe-ESX.
3. MIDI Controllers: MIDI controllers interpret sound data from the computer, allowing us to play a variety of virtual instruments. We used the following brands: Novation Launchkey MINI; Arturia Keystep; Keith McMillen QuNeo; DJ Tech Tools MIDI Fighter Twister.
4. Virtual Studio Technology and Software Plug-ins: The virtual instruments are opened within DAWs and provide a large selection of sound experiences to individualize and play with.

    A. Arcade by Output sample playground providing loops from a variety of genres that can be individualized. It is a software plugin that is compatible with all major recording programs, and can be used as a standalone Desktop app.
    B. Sonic Charge Synplant is a generative virtual synthesizer with randomized artificial intelligence (AI) element.
    C. Addictive Keys is a keyboard sample library/instrument plugin.
    D. UHE Tyrell N6 is a virtual analog synthesizer.
    E. Ableton Creative Extensions provides generative sound processing options.

Table 1. Participant Instrument Choices.

Session	Session 1: April 2019	Session 2: June 2019	Session 3: August 2019	Session 4: October 2019	Session 5: December 2019	Session 6: March 2020
Michael	Akai MPC Live	Korg Electribe-EXS, MicroKorg Synth	Arcade by Output, Logic Pro X, Akai MPK MIDI Controller	Arcade by Output, Logic Pro X, Akai MPK MIDI Controller	Arcade by Output, Logic Pro X, Korg MIDI controller	Ableton Live with Push 2
Victoria	Not present	MicroKorg Synth	MicroKorg Synth	MicroKorg Synth	MicroKorg Synth	MicroKorg Synth
Al	Ableton Live with MIDI controller	Ableton Live with MIDI controller	Not present	Ableton Live with MIDI controller, bass guitar	Ableton Live with MIDI controller	Ableton Live with MIDI controller
Josh	Ableton Live with MIDI controller	Ableton Live with MIDI controller	Ableton Live with MIDI controller	Ableton Live with MIDI controller	Ableton Live with MIDI controller	Ableton Live with MIDI controller, Kijimi synthesizer

Date Generation

Our improvisation sessions were recorded, including our pre and post conversations. The videos became a primary source of data. Each group member individually engaged in multiple viewing of all sessions, followed by conference meetings on Zoom to collectively discuss the data and make decisions on how to proceed with the analysis. As a group, we decided to follow Ramey et al.'s (2016) standards for qualitative analysis of video data:

Working on Transcriptions

First, we worked through questions of how to transcribe the material in the videos. Each video was watched and rewatched multiple times, with each group member creating their own transcriptions, summarizing salient themes from each session, and then discussing collectively. During this phase, discussions about our process remained open, meaning we talked about salient themes freely allowing ideas to emerge unimpeded. During this phase the group felt overwhelmed with the number of possible topics that emerged. As a group we had to decide how to narrow the data that would be coded and discussed.

Defining the Unit of Analysis

We decided to focus on analyzing salient moments in each video. This phase, we engaged in a more focused watch and discussion of the videos. We each choose 3-4 minutes of salient material from each session. On a shared Google Excel document, we each created codes for the smaller clips we picked. We then met collectively to discuss each code until we all agreed on the final six clips that would represent each session.

Representing Context

During this stage, we explored different ways that each clip could be analyzed and

represented. We decided to individually watch and re-watch each clip, this time focusing on the modes of ambient listening (Viega, 2014), as it related directly to our research question (as opposed to open or focused modes of listening in stages 1 and 2 above). We gave each other the following prompts for listening and responding to each clip:

1. Listen multiple times for what is in the foreground of the recording: This could include salient music characteristics (i.e., melody, harmony, rhythm, etc.), a mood or emotion you experienced, or other interrelational dynamics unfolding.
2. Listen multiple times for what is in the background of the recording: Here, the listener attempts to listen for sounds, musical characteristics, and relational dynamics that were not as obvious first. This could also include emotions, images, or other intrapersonal dynamics that emerge during the listening process.
3. Now, combining the first two experiences, listen for the pervasive ambience itself. The following prompts (Jaaniste, 2007; Viega, 2014) were provided for this stage:

    a. Imagine the soundscape as a topographical map.
    b. Immerse yourself in the sounds.
    c. De-familiarize yourself with everyday sensorial practices and try to allow the sounds to take on new characteristics. Think of staring at something so long that something familiar starts to become unfamiliar and fuzzy.
    d. Nomadically drift your attention across the soundscape. Imagine being able to go into a map, experience the forest, pop back up, travel to the water, pop back up, and so-forth.
    e. Sustain this mode of being until something new emerges for you in your experience: an image, feeling, texture, or somatic sensation, the experience of the ambient.

After this was completed, each group member summarized their experience through whatever creative modality felt natural for them, including writing, drawing, and storytelling. We then met collectively to discuss our shared experiences with ambient listening.

Results

In line with a collaborative autoethnography approach, the authors have chosen to present the results of the primary research question, i.e., "What is our collective heuristic experience of 'approaching the ambient' in group digital improvisation experiences," as a dialogical conversation amongst the four of us. Overall, seven clips were chosen. Session six has two clips represented; group members felt like this was a pivotal improvisation based on our own group process and in relation to the research question. The authors would also like to note that we are aware, and welcome, the heuristic and pluralistic takeaways and knowledge that readers will take from reading our discussions and watching our clips. The authors are not laying definitive claim as to what constitutes "entering the ambient," but instead are sharing and honoring their own multifaceted experience of this phenomenon after improvising using digital music technologies.

Clip 1: Entering the Ambient

Video 1: https://youtu.be/tKx4OnHvves

Victoria*:* The image that summarizes this one for me is: *A housewife, sitting alone on the*

couch, flipping through the channels, only to be inundated with negative and terrifying news on tv while her newborn cries in the background causing her extreme overwhelm and anxiety. She takes a pill and slowly it quiets the noise, filling her with tenuous hope, the fear lurking just beneath the surface.

Josh: Wow! I think you and I had slightly different takes, but a similar vibe. I wrote: *For a moment I felt pulled into the struggle of the boy, my whole body tensed and I began to swirl. I want to open my eyes to get away but I try to stay with the sound. I feel all the ways that I was a challenge and all the ways that I struggled as a boy. The feeling lingers even beyond the sound and then I'm soothed by the repetitive tone that feels steady and grounding. I get on a really visceral level how attachment plays out.*

Al*:* The repeating tone was an anchor for me; it was the bell tolling in the mist. Throughout all of these I got a lot of birthing, childbirth imagery, and this one was kind of like this "baby's first cry coming out into the world." The world is confusing and undifferentiated, there's no background, it's all just foreground. It's like, here I am in the world and I don't know what any of it is, and it's scary but it's also beautiful. There's a delicateness about it that I'm really drawn to in the light texture, in the restrained playing. There's more space in this one than in maybe any of the others. To me it's sad but beautiful. There's something about the newness that I love really deeply. We're just putting everything there and we have no idea what to do with it.

Michael: I had this image of this giant cave that broke open at the beginning. There was a giant screen with an authoritative figure telling us how things should be done. Suddenly, like what you said Al about birthing imagery, water broke into the cave and flooded into the space with this very intrusive bang! Meanwhile, the sound of the "ping" was the only thing keeping us together. These newborn entities, small alien-like water creatures, started circling around trying to break free of the controlling authoritative figure.

Al: The ping is like the mother's voice calling out, right? Or was it anchoring?

Michael: For me, it was comforting, like a heartbeat.

Victoria: Tenuous hope, the fear lurking beneath the surface. Is anyone else getting Willy Wonka references?

Al: "There's no knowing where we're going…"

Victoria: (sings) "Come with me and you'll see…"

Josh: That's so funny, I had a Willy Wonka reference in the next clip.

Clip 2: Feeling Dread in the Ambient

Video 2: https://youtu.be/usMwY6AYVGk

Josh: For me, we were speeding through a tube with dancing images projected all around us. I imagined that part in Willy Wonka where the ride got really scary, and there were chickens' heads getting ripped off. At first, I felt excited, "Where is this going?" But then I start to feel ashamed, and everything becomes grotesque. We finally reach somewhere that is lonely and baren, and our movements slow to a crawl.

Michael: Yeah, this one felt so claustrophobic to me. I had an image of being in Times Square but under a futuristic apocalyptic dome. The dome was shaking and lights were buzzing and swirling all around us. The roof was collapsing and trying to keep us there and away from our journey. The overall sense was that we were being marched into the mouth of a giant machine that wanted to eat us.

Al: Yeah, there's a self-loathing feeling about it. My image was fullness, dense soup, bursting at the seams. Like a giant machine, producing at breakneck pace, all industrial. We can't help ourselves though, we go in more and more. How far can we go? What are the limits here? Is this even ok?

Josh: The textures vary wildly but there is no discernable moment of change. Everything seems to slowly transform at different rates without creating noticeable shifts, but each section feels unique.

Al: This one is all background.

Victoria: My imagery was, a bear falling off the side of a mountain, and swirling in the wind like the leaves form the song "Colors of the Wind." The bear arrives at the bottom and walks into a cave. The internal claustrophobic feeling that Michael was referencing, I felt that here. The bear is on solid ground now. He becomes more and more sure of himself, walking to the rhythm of the bass with some swagger. He passes other animal characters like Donald Duck. The bear gets into a mining trolley and he is on a roller coaster in the mine shafts of the mountain. It looks like the inside of a tornado, or falling into an abyss like in *Alice in Wonderland*. Everything goes back before the bear starts to hear his own heartbeat, which wakes him up from his nightmare.

Al: It's the organic, biological, meeting the industrial, inanimate; bear falls into the mine.

Michael: The fear of humanity being completely eaten by the machine, by technology. The fear of being lost and losing our sense of self completely.

Clip 3: Conforming to the Ambient

Video 3: https://youtu.be/aAxskpCM4UA

Josh: For this one, my image was, *I'm in a dark nightclub full of people yet somehow sparse enough to walk around. I am trying to make connections but not able to find anyone. The tension builds and my anxiety is ratcheted upwards, as the intensity builds, I feel more and more detached. It seems to linger forever, and then there's a sudden burst of light and things begin to depressurize. The beat is novel, I feel very responsible for the group's experience and scrambled to create a beat that we can work with. Eventually it becomes so dense that I can't find my way through it and I need to slow it down even if it means disrupting the group experience.*

Victoria: Wow, that's so funny, I never would have known that. I mean, the beat you laid down did provide for me because I felt in my comfort zone in this one. My image was, *I'm a fish swimming along, confidently and expertly, seamlessly maneuvering around coral and schools of fish and other aquatic beings. I am surrounded by glimmering blue hues. Eventually the fish remains in the water but my point of view shifts to above the water. The surface of the waves becomes choppier and choppier, panning outwards until I see a pirate ship riding the choppy waves, into a setting sun on the horizon. A seagull sitting on the ship's mast; others*

squawk from the air. The water glimmers, a carrier ship blows a foghorn. Gold coins explode off of the pirate ship and fly into the water like gold glitter shimmering everywhere as they sink through the depths of the ocean; falling and falling until they start to slow as they eventually reach the bottom of the ocean, where we meet our fish again.

Michael: Where are you in all of that?

Victoria: Maybe I'm the fish vibing to the rhythm? Being in my comfort zone? But I was curious about that also, because, like, the effect of being in it versus playing in it is very different for me. My background sounds really feel like something I would dance to. I love the synth melody, it's like the bass is freestyle rapping, like a driving game or video game music. I noted the dynamic. I know that me and Michael are big EDM lovers, so I felt like we had a majority in the dynamic here. Our sound took over the aesthetic.

Michael: This was definitely the one where we were, I felt like the beat demanded (and I use that word on purpose) conformity, and anything entered into the space must bow to the beat first. So, there was a playful bouncing rhythm that you were doing, Victoria, that was completely swallowed by everything else. I got this image of mid-aughts EDM, which always felt too testosterone-driven for me.

Victoria: I mean I got that, I had the racing game, race-car-driver-cruising-along image.

Al: I was really glad, Josh, when you talked about anxiety, and Michael, when you talked about feeling the demand to conform. I wrote: "The beat is everything, all hail the mighty beat." I tried to write to this one when analyzing the videos, and there was a panicked claustrophobia about it; I felt the need to escape. So, I chose to move my body to it, and it brought me to the floor, on all fours, and it felt like there was something about to crush me. Like, submit and obey. Until that moment when that arpeggio…

Michael: Yes! That changed everything for me too.

Al: Moving to the music, all of a sudden there was space. There is almost this polyrhythm happening, I don't actually hear it as two different tempos anymore; it's like this rocking 3/4 time signature instead of a pounding 2/4. I physically got up from the ground, and as the tempo slowed it was like a deep breath.

Victoria: I feel it's significant, the different responses we're having to this one. My listening and the improvisations got less cohesive for me where it started to separate into three distinct landscapes that I was visualizing. But yeah, I was able to be in it and fully experience the music without contributing something to the foreground.

Al: Your image reminds me in some ways of the psychedelic experience or a GIM journey, you dive into an altered space and then come out again.

Josh: Whereas, the rest of us are more like, "We're in a horrible place and we find our way out!"

Michael: Yeah, for me, I was fighting conformity while also participating in it, which left me feeling resentful.

Clip 4: Crystalizing in the Ambient

Video 4: https://youtu.be/5cgZIkddkRg

Al: Here is the image I had from this clip.

Figure 1. Al's Image from Session 4.

Victoria: Al, your image reminds me of how I heard the clip. For this one I imagined a baby growing inside the womb: A *baby grows inside its mother's womb, experiencing the world from the inside of a garbled, liquid-filled sack, shielded by layers of fat and skin, insulated, but not completely so that sounds still get in, some beautiful sounds and some menacing, like the sound of hospital equipment at the mother's checkup, or construction on the sidewalk. People's voices and conversations come and go. My point of view changes to the sky, a plane flying overhead. We zoom into the sky to look at the plane as it zips through the blue cloud-filled heavens. Eventually, the plane must land, and the sound of its landing gear moving into place is rapid and terrifying as it descends back onto the world. The wind is whizzing by, and the plane lands in a hopeful crescendo in a beautiful but strange land.*

Michael: I love terrifying soundscapes that offer glimmers of hope that you have to search for and find. It's devastating, everyone's going to die, but there is a sense of hope and humanity here that brings comfort in the midst of destruction.

Al: That supports how I felt about playing those growly bass sounds: "Will there be space for this big ugly sound? Will there be room for it in all of these sounds?" And then Victoria, when you played that even bigger, growlier sound, it felt like you were just demanding it, saying "I will be supported, I will be held!" And when it's over, the music does continue with the soft chimes and the bells, sounding like, "Yes, we will catch you." Like an infant being born, it felt like hands were being held out saying, "When you emerge, we'll be there to receive you."

Josh: The bass made so much sense to me in my imagery. I just wrote: *A peaceful temple in the shadow of a volcano. The volcano grumbles and groans but cannot disturb the peace found in the shrine. The volcano's sounds eventually blend in with the peace of the temple, and the volcano erupts and fills the air with ash and lava but the peace remains*. This is the one where it shifted for me, where I started to see more hope and positivity. I also felt like this is the one where people started to really branch out of their comfort zones. There was a sense of us saying, "I want to find the ways to be the fullest version of me in this soundscape."

Victoria: When reviewing this clip I wrote, *I can make noise too!* That feels significant, maybe in response to the last session; maybe I was picking up on all the testosterone unconsciously. There is an overarching theme and feeling for me: "God, I'm so tired of trying to find my fucking place." I want to enter the ambient with you guys, but to have the subtlety of the sound that I want, that would be aesthetically pleasing for me, just feels unobtainable. So, the drone sound felt like the way that I could access this ambient space with you guys.

Clip 5: Discovering Group Agency in the Ambient

Video 5: https://youtu.be/rcrngrZhI_s

Michael: I felt like this was the one where the cave we were once in finally breaks open and we find ourselves in a room where the sound is vibrating the walls, and the whole environment is playing with us. It feels like we broke the fourth wall, where we were only pretending the sound only relates to the technology. Instead, the whole room was vibrating; the lights flickering and the electricity noticeable everywhere. I needed to stretch and move around in the sound, swim in the sonic environment, detach myself from the equipment.

Al: Here is my image. I was seeing each of us as a planet or comet, tearing through space.

Figure 2. Al's Image from Session 5.

Josh: This clip exists in the ambient. I find my attention drawn to individual voices but then it drifts to something else, seems to rise to a peak and then fall back. Nothing ever really takes up any more space in your attention than anything else. I wrote: *We are a small ship on a big ocean. A storm rolls in and the boat is cast about by the waves and the rain. It's unclear what will happen to us, but eventually it dies down and we're left with the fear and anxiety. We're all with it, but eventually we find our way to a cave where light reflects and dances on the walls. Who knows where it will go?*

Victoria: My imagery for this one was: *I was walking around a medieval castle in a video game, holding a bright lantern. The lantern starts to become bright and the light consumes my point of view. I am walking around underground caverns. The sound of a coffin screwed shut from the inside echoes in the cavern. This is the underground boss level of Super Mario Brothers, where there's lots of lava, fire, and treacherous traps to die in. I try not to fall in the lava. I can see the prize I need to end the level shimmering in the distance. It is getting closer and closer but it stays out of reach, like it's moving further away as you near it.*

Michael: This clip feels like an inversion of session two, where the sound is claustrophobic but we are in more control. There is space within the claustrophobia to move around in, negative space providing us freedom and control.

Josh: There's definitely a level of mastery I felt too. There's a new level of connection and mutuality in this one; we're navigating it together rather than acting as individual voices in tandem.

Al: The struggle for me was collectively working towards something new. Not a product exactly, but taking all that we have learned and experienced to create a new way of being together.

Clip 6a: Becoming One Entity in the Ambient

Video 6a: https://youtu.be/liztguuPtyg

Michael: This felt like a continuation of session five. When the drums come in, they glue all the sounds together. Everything starts to move, instead of just hanging out in the air. The drums unleash the sounds in a way that feels like they were coming after us! Our cave walls start to move around with small creatures crawling around. Being that we were just a few days from the first COVID-19 lockdown, I had an image of the sounds being viruses crawling on the walls and moving in to attack us. Despite the drums connecting the sounds, I felt like we were without a protagonist; no one was going to be able to rescue us from the virus.

Josh: Your experience was organic, and it shifted from being a mechanical monster to a biological monster. I had the reverse experience though. I was running from some hulking mechanical horror. It was looming over us and if we looked back it would be all over. We run and run, eventually we run out of energy and realize we just have to face it.

Victoria: I had a similar thing to you, Michael, where science fiction meets organic. My image was: O*ur group is at an alien opera and the orchestra is warming up their instruments from the pit. The conductor says something about the piece they're about to play. An alien singer takes the lead and all of their voices sound like machinery; the instruments sound like machinery, and the aliens sound like our electronic instruments. Out of nowhere, a woodpecker joins the*

orchestra, beginning to drill into the wall of the performance hall, which is unusual because there are no earth beings on this alien planet. The bird introduces organization through its pecking. The alien musicians and singers are inspired by the new concept of rhythm and integrate it into their opera piece, until the woodpecker starts to slow down for the first time, becoming aware of the aliens who are following him. The woodpecker is afraid that he is intruding.

Josh: It is interesting that you imagined an alien orchestra, because in this one several of us used new equipment. This is the only session that I had no concept of what I played; the sounds are totally new and strange to me.

Al: Here is my image of the alien orchestra from this clip.

Figure 3. Al's Image from Session 6a.

Clip 6b: Nesting in the Ambient

Video 6b: https://youtu.be/KVsBMqdiy38

Al: I think I had the same experience that Victoria did in session three. There's a freedom here to just move and feel feelings that are not pleasant but are empowering. It's this big explosion right in the middle of this shadowy cloud. Finding this space together feels so good. I don't really have any imagery around this clip other than, "Whoa, we're here." It's like we are collectively roaring and dancing in a wild powerful dance. Here is my image.

Figure 4. Al's Image from Session 6b.

Victorial: I wrote, "Sounds like fireworks or rage." It's both.

Josh: I wrote, "Everything feels left footed, which seems to create space for others to take on roles that have been mine for many sessions." Personally, this was a hard one to reflect on because I was really torn between pure joy and this looming horror in the world with COVID-19 just starting.

Michael: Yeah, I feel like the sounds are emulating my worst fears of real bio-political terror in the world, while at the same time we can dance to it. We have gone into some terrifying bio-political sonic spaces but we have totally enjoyed the whole process.

Josh: For me, the whole thing permeates with quiet strength and resolve. This is an acceptance of what came before but moving on. It's not a resignation by any means, but instead a glimpse of what is next. My imagery was, A *mother holds a baby and nurtures it. The world around is awful and broken; it tries to intrude on care and love but never succeeds. The mother stays in connection, holding back the brutality of the world.* I wanted to keep playing and not stop!

Al: Yeah, for me, this experience felt like the moment right after a big cry. Here is the picture I drew: *The sun is coming after a rainstorm. There is calm and my body feels empty like a baby after crying and my mother's comforting. There is peace, not resolution, just peace.*

Victorial: It reminds me of how Michael was playing the Push 2, like petting a cat! Calming. The act of that tactile experience mirrored how the music sounded for me. My image here was, A*n astronaut steps out onto an alien planet. The vast, blending vibrant colors of the stratosphere seem to echo into forever. Strips of color are splitting across like the rings of Saturn. The astronaut's movement is slow, steps effortless due to zero gravity, yet filled with purpose and*

meaning. There are feelings of love and comfort and arrival. Time has slowed down. Exploring an unfamiliar yet beloved landscape, when the astronaut spots signs of life. Fear and uncertainty and hope.

Michael: I was just left with the feelings of things fading, everything starting to fall away. I felt emptiness and loneliness. We are still in the cave together but we're nesting and preparing to be there for a while. Maybe this is a post-COVID projection that I'm putting on it now, but it did feel like each of us are soothing ourselves in some way. I know I was definitely self-soothing.

Al: Well, the fear of COVID-19 was with us. We were talking about before our session and how things might change quickly.

Josh: This session was one of the last times I did anything with other people before the lockdown in mid-March.

Discussion

In this section, the authors discuss our collective experiences of "entering the ambient," as well as implications for the possible role of therapists when improvising with digital technology; the possible role of the people we work with when improvising with digital technology; and the possible role of the various technologies. We hope to expand upon our thoughts and ideas that emerged from the results in relation to our research questions. Again, we are not proposing a definitive answer to the questions above, but rather continuing our dialogue to propose new thoughts, theories, and questions for later exploration. Our voicing in this section purposefully strives to maintain a dialogical quality, with each author discussing salient points from within their own style and approach.

How We Experienced Entering the Ambient

Michael: Jaaniste's (2007) definition and my own heuristic experience of ambient listening (Viega, 2014) was used to guide our discussions and examination of the data. Jaaniste describes ambient as an experiential state of listening and creating where the foreground and background are not differentiated. As a collective of creative arts therapists who work with people in a variety of clinical communities, I believe that health is performed within music experiences and relationships (Ansdell, 2016). Therefore, for me, the experience of entering the ambient is a relational process that deeply depends on ecological context; as a collective research team we did not see being in the ambient as a clear definitive goal to achieve but rather something that emerged relationally within our group process.

From our results, it appears that the phrase entering the ambient suggested a specific ecological and relational approach to clinical listening in which a therapist navigates between various experiential modes, which might include the following considerations:

1. What is in the foreground: For our group this meant moments that direct conscious attention. This could include a musical moment that is salient; a technical issue that needs to be solved; insight or feedback provided by a performer while playing; and/or an environmental signal that needs attention.
2. What is in the background: For our group, background experiences consisted of inter/intrapersonal dynamics that occurred between group members and within the music, which we were not aware of at the time we were improvising. This could be unconscious material revealed through spontaneous play and improvisation; sociocultural dynamics between us; and sounds hidden within the soundscape that are only revealed when listening back to the improvisation.

3. Blurring Foreground/Background (Ambient): There were a handful of times when we did discuss our collective experiences where background and foreground dissolved (session 5 specifically). In these moments the music we created became a living entity, detached from the gear as it appeared to morph without input from us as performers. Here, our music became a natural part of our environment, taking on characteristics of augmented reality where the real physical world was enhanced through digital sound. This aligns with my (Viega, 2014) first-person report of experiencing the ambient, in which I felt simultaneously altered and grounded.

As music therapists, we often navigate between various modes of consciousness within the therapeutic relationship between the people we work with, therapist, and the music, including empathizing and attuning to the client's world, becoming self-aware of our own personal reactions, and considering clinical outcomes and process as the therapist (Bruscia, 1998; Muller, 2008). Our experiences with entering the ambient using music technology feel aligned with these psychodynamic practices, but are also distinctive in that we are also considering relational dynamics to the environment and technology.

This study represents a progression of examination of what *being in the ambient* means within the context of music therapy from my first-person encounters (Viega, 2014) to this collective autoethnography. As a group, we believe that entering the ambient has clinical potential for groups and individuals to experience agency and group belonging, as well as contain expressive potentials afforded by music technologies. However, there are also several contraindications to consider: First, music technology can generate intense somatic and emotional soundscapes that could cause harm for those not used to or prepared for these experiences. Second, a therapist could cause harm by not being able to navigate the music technology due to lack of training and competencies. Third, therapists must approach the technology by being culturally responsive to the history, rituals, and experiences afforded by various instruments. More experiential research is recommended before invoking this experiential state in a clinical setting, conducting research that prioritizes the experience, voices, and culture of those who might receive the most benefit from being in the ambient.

How We Experienced Clinical Listening in the Ambient

Michael*:* For me, the heart of our experiences has been environmental ambient listening. The soundscapes we created held our collective joys, fears, nightmares, exhilarating adventures, dreams, and fantasies. The more our sounds morphed and became non-representational and ambiguous the more excited we felt that something new was going to emerge (see all the birthing imagery). There were moments when the sounds we made impacted the physical space; for instance, a low frequency activated a motion sensor for a light we tried to turn off before we played. So, to be able to learn how to navigate all these ecological contexts as a therapist and base clinical intentions within these shared sonic environments is really important. Our experiences were filled with science-fiction, bio-political, and extra-terrestrial soundscapes that were both anxiety provoking and exhilarating. However, there are real possibilities for people to have adverse reactions to being in these sonic environments and therapists must be aware of that within this type of digital music improvisation.

Victoria: Getting to have these otherworldly adventures in sound felt significant. The imaginative possibilities provided by digital music technologies doesn't feel as accessible through acoustic instruments for me. I felt like our improvisations expanded the possibility for having transcendent, peak, and otherworldly experiences just because of the breadth of sounds available to us. I also want to make a point about how my listening experience was different from my experience of actually being in the music. I feel like the whole was

greater than the sum of its parts. The soundscapes were transcendental and existential. However, when I was playing, I was focused on myself most of the time. Listening back, I could hear it as a piece of art, better able to find the beauty and the cohesion. So, there are possibilities for both improvisation and receptive experiences here, and both will provide different experiences for the people we are working with.

Josh: I listened with headphones during one of my listens. There were all these subtleties that I, like, random sounds in the back that dissipate, reappear, and then become extinct. All these little spatialized sounds that happen that you can miss if you're not just fully immersed. Immersion is central, and consideration of quality speakers and/or headphones is a must.

How We Experienced Group Process in the Ambient

Al: The ambient space was like an additional player that we created out of the collective soundscape. Like Victoria said, we could relate to the ambient space almost as a separate entity, "greater than the sum of its parts." The digital tools we were using provided the ability to perpetuate sounds without direct effort using looping, drum machines, and automatic arpeggiators. The stability this provided sometimes caused inertia that was hard to break away from, but also could feel more contained as compared to using live instruments where one can be thrown off quickly when something unexpected occurs. In fact, in the digital domain there is often a greater likelihood of something unplanned or unexpected happening, as digital tools lend themselves to being used in ways that embrace randomized or unpredictable results. We didn't need to be as focused on the traditional mechanics of music such as rhythmic entertainment or volume balance. Instead, there was a general consensus that we trusted the ambient space to hold its part. This gave us more opportunities to focus on our intrapersonal experiences, from the mechanistic questions such as, "How do I make the sound I hear in my head?" to the interpersonal "What sound of mine do I want to offer to the ambient space?"

With the seemingly limitless creative potential within the digital medium we were using, we were continually provided opportunities to become conscious of and question the hierarchical structures that we carried with us into this project. For example, we were often unconscious of how we conformed to a basic beat and conventions of tonality and volume balance. The ambient mode allowed us to challenge these norms, and that is often when something new emerged. For example, when discussing session 3, many of us shared how we saw the pre-established beat as immutable, even demanding conformity. Then, when a new motif emerged, set randomly to a different tempo, it provided us an opportunity to adjust our listening and meet the musical offering presented. Looking back, I see that moment described in session 3 as a turning point in our group process, after which there is a sense of trust and cohesion from which we are working less on establishing the shared space, and more on exploring our places within it. The ambient mode allowed us to be adaptive, malleable, enhancing our musical presence. Once we felt adapted and stable in the ambient space, which for me was after session 4, we could be freer within it to be purposefully relational.

Michael: Yes, reminds me of a group of painters, who know their canvas, have the type of paints and combination of colors ready, and then can play with all the variations freely. We were aware of both the canvas, the paints, and our creative technique and process all at the same time. For us though the canvas is a sonic environment and the paints are the options within our digital instruments. We were definitely in relationship with these ecological elements, and they certainly impacted our group process!

Al: Absolutely, and I really got to know and understand these materials on a much deeper level through our process. Just like a painter uses oils differently from watercolors, I think it's a mistake to treat these tools as just a way to simulate acoustic instruments, like a "band in a box." Within the limits of this heuristic exploration, we've only just begun to uncover what is unique about how the digital-ambient impacts group dynamics. It will be exciting to see how further research informs how we implement this knowledge in both clinical contexts and music therapy training.

The Benefits That We Experienced in the Ambient

Josh: At the start of this study, I had a palpable feeling of coming home. So much of my career as a music therapist has been spent trying to evangelize for the types of musical experiences we co-created during the study. In my clinical work, I've seen how powerful and transformative it can be to help my clients create their own ideal soundspaces. From my clinical experiences, these spaces have the potential to be everything trauma is not; they can be safe, predictable, attuned, holding and accommodating of whatever a person needs to bring to them. In my own life, these sound worlds are where I feel the most potent connection to who I am at my core. My experiences with this group deepened my clarity and insight into why.

As Al mentioned above, the ambient space was a third entity we created that held us, regardless of what we brought to it. There were sessions where we each discussed moments of euphoric trance-like states, and where we all seemed to entrain to the ambient space, something we both created and existed outside of. There was a session after experiencing something deeply traumatic in my personal life, where I felt held by the group and the ambient space, despite bringing incongruent and unspoken feelings to it. In our final session, we all discussed feeling held in the sonic environment as the looming dread of the COVID-19 pandemic approached. The deep flexibility of the ambient accommodated the fullness of who we were moment-to-moment, and when created mindfully can give the people we work with the opportunity to explore the fullness of who they are within the ambient container.

To extend upon a point Al made earlier, the mediating technology that helped us create these ambient spaces also allowed for something that was ours, but also existed apart from us. We could loop, layer, arpeggiate, echo, delay and utilize other digital effects to create music while also allowing us to step away for moments or minutes and perceive the sound, move to it or reflect on what was happening in between us. This ability to create without necessarily always actively engaging with the creation allowed us to do things we couldn't normally do in a music therapy group. We could step away and perceive the sound, while still helping create it. We could move and dance to the music we were creating. We could hide, get lost, remix or dominate the sound without anyone in the group knowing. These myriad ways of being created a freedom that would be impossible in an acoustic music therapy group.

The Challenges That We Experienced in the Ambient

Josh: Throughout the process, both in session and in the post-study reflections, each of us reported intense and, at times, overwhelming experiences in the sonic environment. As we experimented with different formats, i.e., complete freeform improvisation versus starting with and maintaining a consistent beat throughout, we found that each had its own unique pitfalls and necessary considerations and accommodations if we were to bring this approach to clinical settings.

While freeform improvisation extended us maximum freedom and fluidity, I saw this openness as a projection screen or magnifying glass for my past traumas. Conversely, when we had a consistent and steady beat, which was meant to ground the entire experience,

we actually experienced a feeling of an authoritarian otherness that we had to conform to in ways that constricted full expression of our identities. In each case, as trained music therapists with advanced understandings of both trauma as a concept and in our own individual histories, we were able to navigate and hold the discomfort that helped us process our individual and group experiences. However, this potential was only unlocked by a familiarity with these sound spaces and musical tools that can only come from inhabiting them and experiencing their power to trudge up past hurts and help us heal.

Without deep first-hand experience in these expansive sonic experiences, we have collectively discussed that we would not recommend bringing this approach to clinical settings, especially related to trauma work. Our experiences reinforced that these tools are as potent as any other music therapy method, and have the potential to become overwhelmingly intense due to the ability to create multiple layers of simultaneous sound even with only a few group members. In short, these tools are awesomely powerful and necessitate deep familiarity and mastery to effectively wield.

For music therapists to effectively tap into these strengths and benefits and navigate challenges that arise there is a real need for formal training, especially within music therapy degree programs. These programs often require proficiency in either guitar or piano and provide extensive training to help students achieve this proficiency as well as fluency and comfort with the voice and other acoustic instruments. Meanwhile, if music tech or production skills are part of the curriculum, they are treated as novelties or adjuncts to other methods. This study further underscored that the tools we used are first and foremost instruments and require all of the training and expressive exploration that music therapy training programs afford to guitar, piano, acoustic instruments and the voice.

Gender Considerations: Expert Men, Novice Women?

Victoria: The opportunity to engage in group music-making using music technology was, and remains, so exciting to me, as a self-proclaimed music tech novice, enthusiast, and generally insecure musician within the realm of music therapy. My insecurities joining the research group likely stemmed from the same insecurities I felt embarking on a music therapy career without a music degree or a strong grasp on music theory, like many of my peers, and lacking the traditional “I was in a band” or other clout-worthy experience. I perceived my fellow group members to be experts, which, upon reflecting, might have had a lot to do with their male identities. I feel that I missed out on a lot of the traditional music-making experiences where one might engage with music technology that I felt were more so afforded to boys, which in hindsight I would have totally loved but was not brave enough to try to engage with. I recognize that I am speaking in very heteronormative and generalized terms, but that was my perspective at the time. I hope that other music therapists will read this and locate themselves within my share, and feel seen and equally excited about taking a risk and daring to try something new in their music therapy practice that creates opportunities for immense healing and growth for both client and therapist, regardless of gender, as engaging with music tech has for me.

I also want to note that each one of us in this group holds privilege within a variety of intersectional norms, and that we all express gender within our cis identities. Considering that sound can be malleable and non-representational using digital music technology, being in the ambient can provide people the opportunities to explore the pluralistic nature of gender expression through soundscape. For Queer musicians and artists, digital technologies provide platforms that help free them from constricted binary ideologies that uphold white, cis-heteronormative supremacy (Waugh, 2017).

I have personally benefited from the opportunity to try on the role of producer that is so heralded in my personal music community. As someone who loves to go to raves where

the producer/DJ is celebrated, I felt powerful to be able to try it on, as a novice, and as a woman. I have witnessed the power of music therapy to afford opportunities to develop and expand our identities, to feel empowered. The identities of expert and novice often came up during our research experience, as they relate to gender and otherwise. I recognized immediately that my experience with music tech was different from the other group members. The group shared the idea that music technology has traditionally existed as a male-dominated space during group discussion, and our group's gender disparity in familiarity with the ins and outs of music technology reflected that. Michael, Josh, and Al, cis-males, consciously and unconsciously took on the bulk of technology set-up and instrumentation, which I, a cis-female, was not as experienced with. I remained on one synthesizer, the MicroKorg, for each session, a comfort zone of sorts, while other group members explored and experimented with a variety of different technologies throughout the group process. For our group, it was important to consider the role of gender within our group process, especially related to set-up/breakdown, instrument choice, and musical decisions such as providing a beat, staying in the foreground, or retreating to the background of the soundscape.

The social construct of gender impacted the way that group members viewed each other, and how we interacted with each other in and out of the music. I viewed Al, Michael, and Josh as music technology experts, regardless of whether they themselves identified that way. In our discussion about the results, I reflect on how I anticipated Al, Michael, and Josh would interact with our music.

> I was even thinking about how we would pay attention to different things […] and you guys having more of the technical knowledge to describe what is happening. Meanwhile, I'm describing something like a "whirly swooshy zip sound." You know, I feel like I don't know how you guys would be describing it but I was imagining that you would know the key signatures or you would know certain theory stuff that I wouldn't necessarily know.

It was important to consider aesthetic identities to create safety for all group members and to maximize opportunities for expression upon formulating this group. As I mentioned during a moment of processing, "[…] it becomes political to have access to your aesthetic." Given group members' mutual willingness to grapple with trauma and sensitivity to gender as a social construct, group members were able to explore into emotional depths that provided great relief and an empowered sense of identity. Entering into an ambient space provided us an incredible opportunity for people to settle into and expand our concepts of identity, be them gender, or otherwise. Messiness in the ambient space, our messiness, was not only allowed, but welcomed, and for that I am so grateful.

Coda

As noted above, our last session occurred only a few days before COVID-19 pandemic brought us into a global health crisis. Our group remained connected during this time via Zoom, presenting our work a few times, completing our data analysis, and even attempting to make music online together a few times. We often asked ourselves how different this research and our experience might have been if done online, an avenue for future exploration. Below are some final statements from each author, two years after our last session together:

Michael: I must admit that there have been many moments when I think of our research process and I grieve the loss of what we created, and blame COVID-19 for taking that away from us. I imagine us all in that cave together still, nesting and preparing to be in this pandemic space for a while. Looking back at the last session, I feel like I was trying to sooth the apocalyptic dread I was experiencing. I am grateful to have shared that cave

with each of you for sure. I know we could have moved our improvisations online, and I am not sure why we haven't…perhaps our attention was rightfully adjusted after the pandemic…but I do look back at the ambient space we created and revere our time together. Part of me is afraid that would be lost virtually, even though I am a huge proponent of making music that way! I guess ultimately it would not be better or worse, just a different experiential space and therefore this would have been a completely different research project.

I hope that our experiences entering the ambient provide readers with more questions than answers, especially when it comes to cultural responsiveness when using music technology in practice, education, and training. Although each of us has variety in our backgrounds, we are homogenous racially and each hold intersectional positions of power and privilege in our lives. Therefore, we cannot directly speak on how others, especially those who are oppressed and minoritized in society, might experience entering the ambient and what this would mean in regards to practice and training. However, we have talked extensively about the need for deep understanding, knowledge, respect, and reverence, for the cultural history of music cultures that center technology (which is really most, if not all, of current popular music in one degree or another). Understanding that the gear we used has been central for political resistance, joy, and liberation within BIPOC and LGBTQIA2+ communities has always been front and center for us, instead of using it solely for a means to an end.

Victoria: The complexity of what we were creating mimics the complexity of our experiences. Just being alive is complex. What are modern ethics and morals and how do you choose your path within that? The breadth of life's options was reflected in our choices. It mirrored our experiences, held us, and allowed us to access our own resources. You can sample anything you'd like to explore, like a current news story. You can make your improvisation socially and politically relevant to your lived experience, and access that level of intensity. There's something very empowering and humanistic about that.

Al: It feels fitting that our last session took place right before COVID arrived in full force. It was such a perfect container for all that I was experiencing at the time, and a powerful segue into the types of online digital music that became my daily reality so soon after. It's also painful to realize that this was also the last time I made music in person with others for more than a year, and only very few times has it happened since. There's a part of me that remains frozen in that moment, filled with the sense of potential that we were uncovering, excited to take our ideas even further. Nevertheless, there is some healing in the process of returning to this music as we prepare for publication. It connects me to my roots as a music therapist, as well as the journey I've taken in these past two years, navigating a pandemic, moving to a new continent, and committing myself to the still-nascent world of online music therapy. Like Michael, I would love for us to make music together again, but I wonder how much of that desire is wishing to return to that past time. Nevertheless, I imagine that it could hold more healing for me, too.

Josh: I came into this research intending to prove a point about technology. I've never felt fully at home in a music therapy built around guitar, piano and drum circles. I believe anyone who watches the clips and reads our reflections will agree that these instruments have the full expressive potential of most primary instruments and can open up new experiences that need further research. However, I came to realize that the point of this research was the meeting in the spaces created by these tools. I experienced deep states of togetherness, loss of boundary between myself and others, fear of the non-human, birth and death, swirling chaos and cathartic swells of sound that engulfed the group. In short, I feel a bit like we helped each other prepare for what was coming: the complete and total

disruption of connective experiences. I know that I felt bolstered by the fact that the last time I saw anyone other than my partner for more than a year was gathering with my fellow researchers to be in the ambient together.

Acknowledgements

The authors acknowledge that many of the digital music technologies we have addressed in this article have been historically utilized by BIPOC and LGBTQIA2+ communities as an integral part of their lived experiences. As such, we endeavored to regard these resources in historical and cultural context, remaining mindful of what it means for those of us not of these communities to engage with these technological resources in both research and practice. In addition, the authors would like to thank Dr. Brian Abrams, Associate Professor of Music at the John J. Cali School of Music at Montclair State University, who took part in two improvisation sessions described in this article.

About the Authors

Michael Viega, PhD, LCAT, MT-BC, is an Associate Professor of Music at the John J. Cali School of Music at Montclair State University, and a Fellow in the Association for Music and Imagery. Visit michaelviega.com for more information.

Victoria Druziako, MA, LCAT, MT-BC, is a licensed, board-certified music therapist who specializes in working with adolescents and adults with acute mental health and substance use issues. In addition, Victoria is an active singer-songwriter and producer, and maintains a private teletherapy practice.

Josh Millrod, MA, LCAT, MT-BC, is a music psychotherapist in private practice in Merrick, NY and cofounder of Therapy For Dads. He also leads a working group focused on exploring music's role in ketamine-assisted psychotherapy.

Al Hoberman, MA, LCAT, MT-BC is a music psychotherapist based in Vienna, Austria and working in private practice internationally. His clinical and research interests include the use of internet and digital technology in music therapy, Music and Imagery, and GIM.

References

Ansdell, G. (2016). *How music helps in music therapy and everyday life.* Routledge. https://doi.org/10.4324/9781315587172

Blalock, A. E., & Akehi, M. (2018). Collaborative autoethnography as a pathway for transformative learning. *Journal of Transformative Education*, *16*(2), 89–107. https://doi.org/10.1177/1541344617715711

Bruscia, K. (1998). *The dynamics of music psychotherapy*. Barcelona Publishers.

Chang, H., Ngunijiri, F., & Hermandez, K.-A.C. (2012). *Collaborative autoethnography.* Taylor & Francis.

Crooke, A. (2018). Music technology and the Hip Hop beat making tradition: A history and typology of equipment for music therapy. *Voices: A World Forum for Music Therapy*, *18*(2). https://doi.org/10.15845/voices.v18i2.996

Crooke, A. & Mcferran, K. (2019). Improvising using beat making technologies in music therapy with young people. *Music Therapy Perspectives*, 37(1), 55–64.

https://doi.org/10.1093/mtp/miy025

Crowe, B. J., & Rio, R. (2004). Implications of technology in music therapy practice and research for music therapy education: A review of literature. *Journal of Music Therapy*, *41*(4), 282–320. https://doi.org/10.1093/jmt/41.4.282

De Kosnik, A. (2019). Why it matters that Black men and Queer women invented digital remix culture. *Journal of Cinema and Media Studies, 59*(1), 156–163. https://doi.org/10.1353/cj.2019.0069

Fansler, V., Reed, R., bautista, e., Arnett, A. T., Perkins, F., Hadley, S. (2019). Playing in the borderlands: Transformative possibilities of queering music therapy pedagogy. *Voices: A: World Forum for Music Therapy, 19*(3). https://voices.no/index.php/voices/article/view/2679/2817#T2011

Hahna, N. D., Hadley, S., Miller, V. H., & Bonaventura, M. (2012). Music technology usage in music therapy: A survey of practice. *The Arts in Psychotherapy*, *39*(5), 456–464. https://doi.org/10.1016/j.aip.2012.08.001

Haraway, D. (1990). A manifesto for cyborgs: Science, technology, and socialist feminism in the 1980s. In L. Nicholson (Ed.), *Feminism postmodernism* (pp. 190–233). Routledge.

Hasselbring, T. S., & Duffus, N. A. (1981). Using microcomputer technology in music therapy for analyzing therapist and client behavior. *Journal of Music Therapy, 18*(4), 156–165. https://doi.org/10.1093/jmt/18.4.156

Jaaniste, L. (2007). *Approaching the ambient: Creative practice and the ambient mode of being* [Unpublished doctoral dissertation]. Queensland University of Technology, Queensland, Australia.

Jonassen, K. H. (2021). Music technology tools–A therapist-in-a-box?. *Voices: A World Forum for Music Therapy*, *21*(2). https://doi.org/10.15845/voices.v21i2.3308

Kalmbach Phillips, D., Harris, G., Legard Larson, M., & Higgins, K. (2009). Trying on—being in—becoming: Four women's journey(s) in feminist poststructural theory. *Qualitative Inquiry, 15*(9), 1455–1479. https://doi.org/10.1177/1077800409347097

Knight, A., & Krout, R. (2017). Making sense of today's electronic music technology resources for music therapy. *Music Therapy Perspectives*, *35*(2), 219–225. https://doi.org/10.1093/mtp/miw025

Krout, R. E. (2013). Engaging iPad applications with young people with autism spectrum disorders. In W. L. Magee (Ed.), *Music technology in therapeutic and health settings* (pp. 181–199). Jessica Kingsley.

Krout, R. E., & Mason, M. (1988). Using computer and electronic music resources in clinical music therapy with behaviorally disordered students, 12 to 18 years old. *Music Therapy Perspectives*, *5*(1), 114–118. https://doi.org/10.1093/mtp/5.1.114

Kubicek, L. (2013). Creative adaptations of music technology in adult cancer care. In W. L. Magee (Ed.), *Music technology in therapeutic and health settings* (pp. 263–278). Jessica Kingsley.

Leonard. H. (2020). The arts are for freedom: Centering black embodied music to make freedom free. *Journal of Performing Arts Leadership in Higher Education*, *11*, 4–25. https://cnu.edu/jpalhe/pdf/jpalhe_volume11.pdf

Magee, W. L. (2006). Electronic technologies in clinical music therapy: A survey of practice and attitudes. *Technology and Disability*, *18*(3), 139–146.

https://doi.org/10.3233/TAD-2006-18306

Magee, W. L. (2013). *Music technology in therapeutic and health settings.* Jessica Kingsley.

McMillan, S., & Price, M. A. (2010). Through the looking glass: Our autoethnographic journey through research mind-fields. *Qualitative Inquiry*, *16*(2), 140–147. https://doi.org/10.1177/1077800409350696

Muller, B. J. (2008). A phenomenological investigation of the music therapist's experience of being present to clients. *Qualitative Inquires in Music Therapy 4*, 69–112. https://www.barcelonapublishers.com/resources/QIMTV4/QIMT20084_3_Muller.pdf

Noone, J. (2020). Inclusion and empowerment in music therapy research. *Polyphony: The Journal of the Irish Association of Creative Arts Therapists.* http://polyphony.iacat.me/words/promoting-creativityinclusion-and-empowerment-in-practitioner-research-with-peoplewith-disabilities

Norris, M., Williams, B., & Gipson, L. (2021). Back aesthetics: Upsetting, undoing, and uncanonizing the arts therapies. *Voices: A World Forum for Music Therapy, 21*(1). https://doi.org/10.15845/voices.v21i1.3287

Ramey, K. E., Champion, D. N., Dyer, E. B., Keifert, D. T., Krist, C., Meyerhoff, P., Villanosa, K., & Hilppö, J. (2016). Qualitative analysis of video data: Standards and heuristics. In C. K. Looi, J. L. Polman, U. Cress, and P. Reimann (Eds.). *Transforming Learning, Empowering Learners: The International Conference of the Learning Sciences (ICLS) 2016,* Vol. 2. Singapore: International Society of the Learning Sciences. https://repository.isls.org//handle/1/370

slaughter, k. (2021). "River Run" (Nancy Maker Brown song) revisioned and reimagined. *Voices: A World Forum for Music Therapy, 21*(1). https://voices.no/index.php/voices/article/view/3250/3137

Stensæth, K. (2018) Music therapy and interactive musical media in the future: Reflections on the subject-object interaction. *Nordic Journal of Music Therapy*, *27*(4), 312–327. https://doi.org/10.1080/08098131.2018.1439085

Travis, R., Gann, E., Crooke, A., & Jenkins, S. (2019). Using therapeutic beat making and lyrics for empowerment. *Journal of Social Work,* 1–24. https://doi.org/10.1080/08098131.2018.1439085

Viega, M. (2014). Listening in the ambient mode: Implications for music therapy practice and theory. *Voices: A World Forum for Music Therapy, 14*(2). https://voices.no/index.php/voices/article/view/2228/1983

Viega, M. (2018). A humanistic understanding of the use of digital technology in therapeutic songwriting. *Music Therapy Perspectives*, *36*(2), 152–160. https://doi.org/10.1093/mtp/miy014

Waugh, M. (2017). 'My laptop is an extension of my memory and self': Post-Internet identity, virtual intimacy and digital queering in online popular music. *Popular music*, *36*(2), 233–251. https://doi.org/10.1017/S0261143017000083

Wei, W. (2020). Electronic music is Black protest music. *Electronic Beats.* https://www.electronicbeats.net/electronic-music-is-black-protest-music

Werger, C., Groothuis, M., & Jaschke, A. C. (2020). Music-based therapeutic interventions 1.0 from music therapy to integrated music technology: A narrative review. *Music and Medicine, 12*(2), 73–83. https://doi.org/10.47513/mmd.v12i2.687

Werger, C., Groothuis, M., & Jaschke, A. C. (2021). *Navigating music technology: Implementing a practice-based application of music technology into music-based therapeutic interventions and professional training.* ArtEZ.

Zigo, J. (2013). Access to music making through switch and voice output technology for

young people with multiple and complex needs in a school setting. In W. L. Magee (Ed.), *Music technology in therapeutic and health settings* (pp. 149–164). Jessica Kingsley.

[1] We have chosen to capitalize all races besides white for political reasons. We do this because white people do not claim being white as an identity, whereas Black culture is strongly rooted within historical context, especially related to Black diaspora and colonization. Whiteness is rooted in white supremacy, which serves to protect itself through colonization and racism. For precedence in music therapy, see Fansler, Reed, bautista, Arnett, Perkins, and Hadley (2019).

[2] In the late 20th and 21st century, Queer and Black authors and artists have led the way in exploring posthuman cybernetic relationships when using music technologies. Digital music technologies have allowed for people to explore the multiplicities of gender, bodies, and sexuality in sound. In these instances, a person is in symbiotic relation with machine, which generates a new entity free from the constraints of the gendered biopolitics of white heteronormative, patriarchal systems.

[3] Afrofuturism as a cultural aesthetic stems from Black diasporic artistic movements that envisions a post-colonial utopia that celebrates and centers Black liberation and joy. Musicians like Sun Ra, Janelle Monáe, and Erykah Badu have all explored Afrofuturism in their music.