

Transformative Pedagogy: Creative Explorations in Acoustic Ecology and Sonic Art

Thomas Ciufu

Mount Holyoke College
Massachusetts, USA



TTI Conference: Transformations of Musical Creativity
in the 21st Century

Transtraditional
Istanbul

Course: Acoustic Ecology and Sound Art

acoustic ecology
sonic art



[info](#)

[syllabus](#)

[schedule](#)

[Resources](#)

[students](#)

spring 2021

Acoustic Ecology / Sonic Art

links



Mount Holyoke College

M 12:45-2pm, T/TH 12:45-1:45pm, W/F 12:45-2:30pm

Thomas Ciufu - tciufu @ mtholyoke dot edu

office hours - during class meeting hours or by appointment

[class blog](#)

[everyday listening](#)

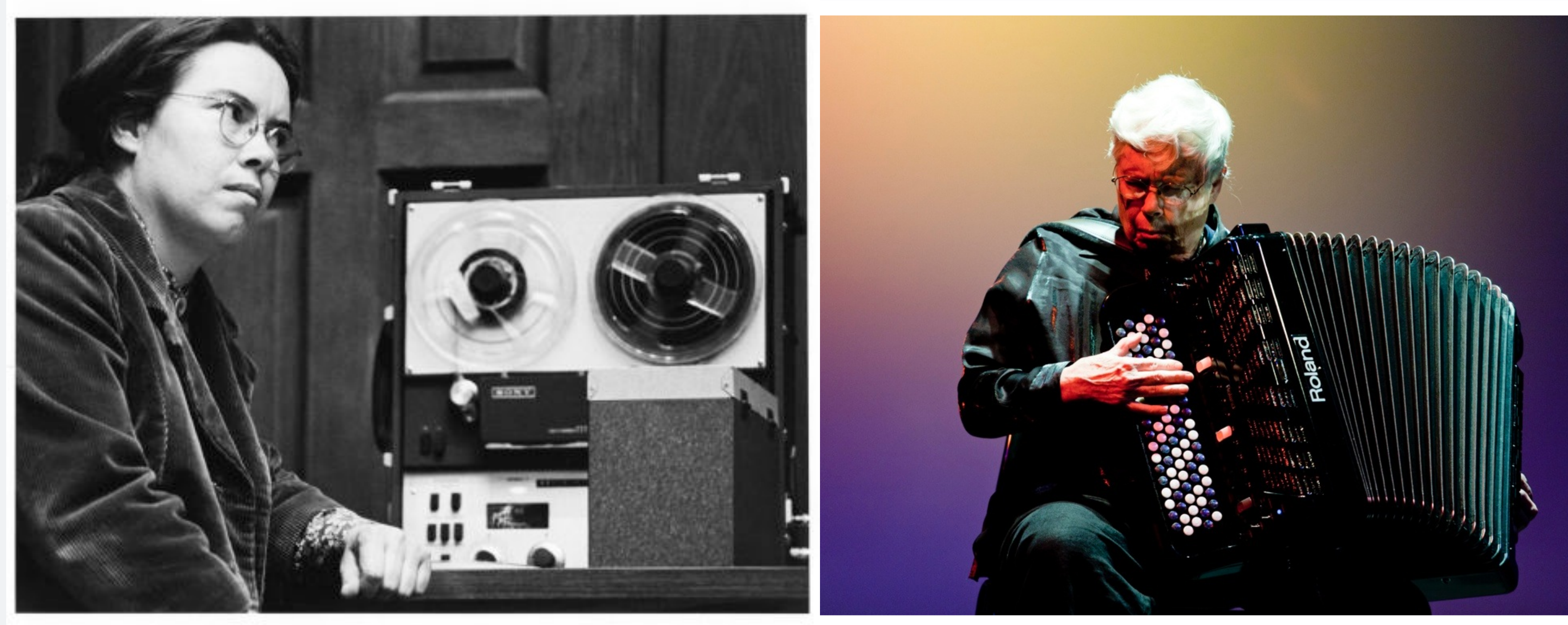
[ubuWeb sound](#)

[forum for AE](#)

[handbook for AE](#)

Background and Influences

Pauline Oliveros - Deep Listening



Background and Motivations

R. Murray Schafer - A Sound Education - 100 Exercises in Listening and Sound-Making / The Thinking Ear



Teaching Philosophy / Course Focus

- Listening
- Creativity
- Critical thinking
- Problem solving
- Inclusion and accessibility
- Student engagement
- Contemplation / reflection

Definitions? Acoustic Ecology

- “The study of the effects of the acoustic environment or soundscape on the physical responses or behavioral characteristics of creatures living within it”
(R. Murray Schafer)
- “an area of education, research and practice that focuses on the scientific, social, and cultural aspects of natural and human made sound environments”
(World Forum for Acoustic Ecology)

Definitions? Sound Art...

- Sound / sonic art...?
- *Music* - and everything else / all sounds? (including non-human sounds)
- “If the word ‘music’ is sacred and reserved for eighteenth and nineteenth century instruments, we can substitute a more meaningful term: organization of sound” (Cage)
- “Let us throw ‘music’ out of the window but bear in mind ‘musical’; something with phrases, starts, ends, middles, highs, lows, louds, softs, breaths, pace, shape, form, emotion and energy...” (Moore)

Design and Structure

- **Hybrid design** - combines seminar, lab, studio, and contemplative approaches
- **Hybrid content** - combining acoustic ecology, sound art, experimental music, audio technologies, and contemplative practices
- **Extensive listening practice** - to the world around us and to sonic art recordings
- **Accessible** - no prerequisites and no assumptions about students background -
*this is not a course designed for 'musicians'
- **Engaged learning** - projects start very simple, build over the course of the semester
- **Student-centered** - students have personal responsibility and a strong voice in the class

Design and Structure

acoustic ecology
sonic art



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fall 2019

Course Schedule --- *subject to change - please check back often
Any significant changes will be announced in class

Week 1 - Introduction to the Course

thur sept 5

course introduction, description, logistics (web site, blog, lab tour)
listening session

Hardware / software intro

browse (on your own, as needed): Basic ecology review resources [here](#) (browse ch 1-2)

or [here](#) (browse for key terms)

browse: this [NASA site](#) on global climate change

*fill out this [questionnaire](#) - this needs to be emailed to me by sept 9th (or before)

Week 2 - Introduction to Acoustic Ecology

tues sept 10

read: Wrightson, [Intro to Acoustic Ecology](#)

read: Schafer, [The Music of the Environment](#) - please refer to this [blog post](#)

browse: additional references for this weeks readings are [here](#) (as needed)

listen: start listening to these [materials](#) (focus on the first section)

in class: Intro to critical listening + [Oliveros exercise](#)

do: join the [course blog](#). (info about joining and posting to the blog is [here](#))

thur sept 12

read: Westerkamp, [Soundwalking](#)

do: go on at least one soundwalk; write up a reflection about this experience (*you will post this reflection to the blog during our class meeting, or before)

listen: continue listening to these [materials](#) (focus on the first section)

tech reading - please browse this online [acoustics book](#), chapter one, sections 1-3

Introduction to field recording + demonstration of [tascam audio recorders](#)

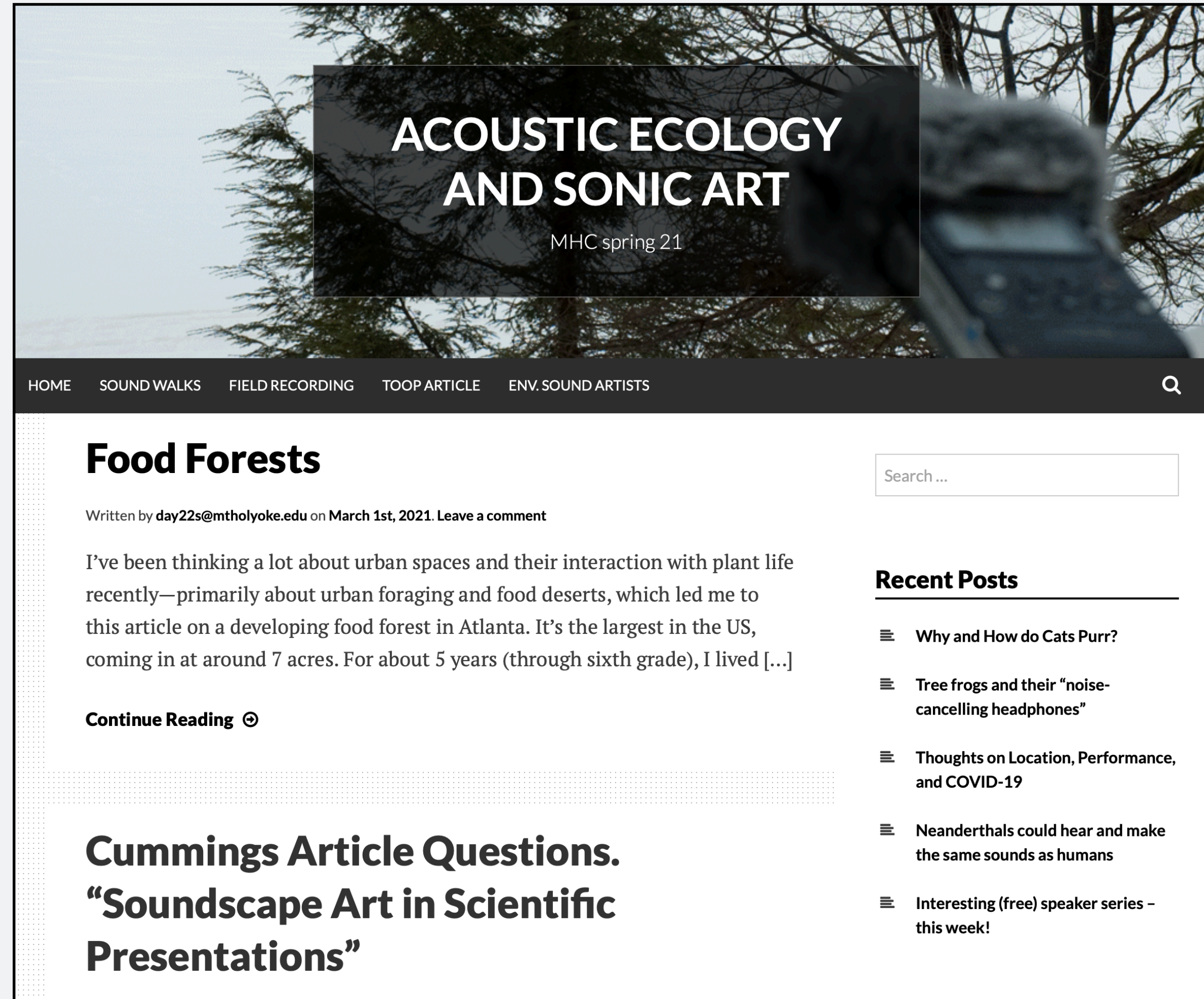
online manual for recorder is [here](#)

Sharing / Group Process

- All course materials are online - no cost for books or materials
- All technologies are free and available beyond the academic environment
- Group authored course blog allows for sharing and exchange outside of class meetings
- All student work is posted to SoundCloud (free sound sharing web site)
- All projects are presented and discussed in a supportive group setting
- Self discovery and reflection through group process and peer learning

Sharing / Group Process

Course Blog



The screenshot shows a website header with a dark background and white text. The main title is "ACOUSTIC ECOLOGY AND SONIC ART" in a large, bold, sans-serif font. Below it, in a smaller font, is "MHC spring 21". The background image shows a close-up of a person's hands holding a smartphone, with trees and a sky in the background. Below the header is a dark navigation bar with white text: "HOME", "SOUND WALKS", "FIELD RECORDING", "TOOP ARTICLE", "ENV. SOUND ARTISTS", and a search icon. The main content area has a white background. On the left, there is a large heading "Food Forests" in bold. Below it, there is a line of text: "Written by day22s@mtholyoke.edu on March 1st, 2021. Leave a comment". The main text of the article begins with "I've been thinking a lot about urban spaces and their interaction with plant life recently—primarily about urban foraging and food deserts, which led me to this article on a developing food forest in Atlanta. It's the largest in the US, coming in at around 7 acres. For about 5 years (through sixth grade), I lived [...]". Below this is a "Continue Reading" link with a right-pointing arrow icon. On the right side of the main content area, there is a search bar with the placeholder text "Search...". Below the search bar is a section titled "Recent Posts" with a horizontal line underneath. It contains a list of five items, each with a hamburger menu icon to its left: "Why and How do Cats Purr?", "Tree frogs and their 'noise-cancelling headphones'", "Thoughts on Location, Performance, and COVID-19", "Neanderthals could hear and make the same sounds as humans", and "Interesting (free) speaker series - this week!". At the bottom of the screenshot, there is a large heading "Cummings Article Questions. 'Soundscape Art in Scientific Presentations'" in bold.

ACOUSTIC ECOLOGY AND SONIC ART

MHC spring 21

HOME SOUND WALKS FIELD RECORDING TOOP ARTICLE ENV. SOUND ARTISTS

Food Forests

Written by day22s@mtholyoke.edu on March 1st, 2021. Leave a comment

I've been thinking a lot about urban spaces and their interaction with plant life recently—primarily about urban foraging and food deserts, which led me to this article on a developing food forest in Atlanta. It's the largest in the US, coming in at around 7 acres. For about 5 years (through sixth grade), I lived [...]

[Continue Reading](#) ➔

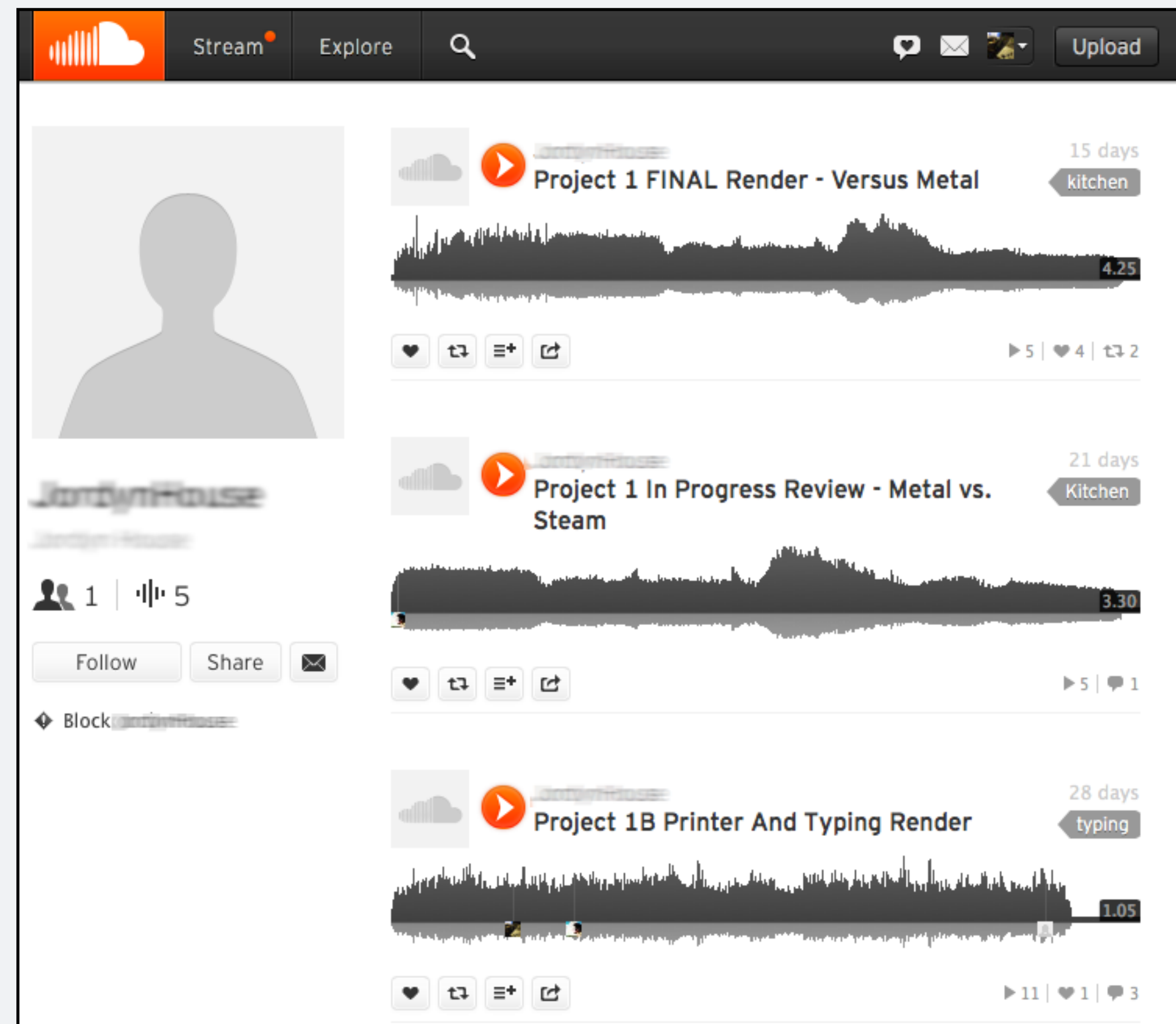
Recent Posts

- Why and How do Cats Purr?
- Tree frogs and their "noise-cancelling headphones"
- Thoughts on Location, Performance, and COVID-19
- Neanderthals could hear and make the same sounds as humans
- Interesting (free) speaker series - this week!

Cummings Article Questions. "Soundscape Art in Scientific Presentations"

Sharing Sounds

SoundCloud - sketches, work in progress plus finished pieces



The screenshot displays the SoundCloud profile of 'JordynHouse'. The profile includes a placeholder profile picture, the name 'JordynHouse', and statistics showing 1 follower and 5 tracks. Below the profile information are three audio tracks, each with a waveform and interactive icons for play, like, repost, and share.

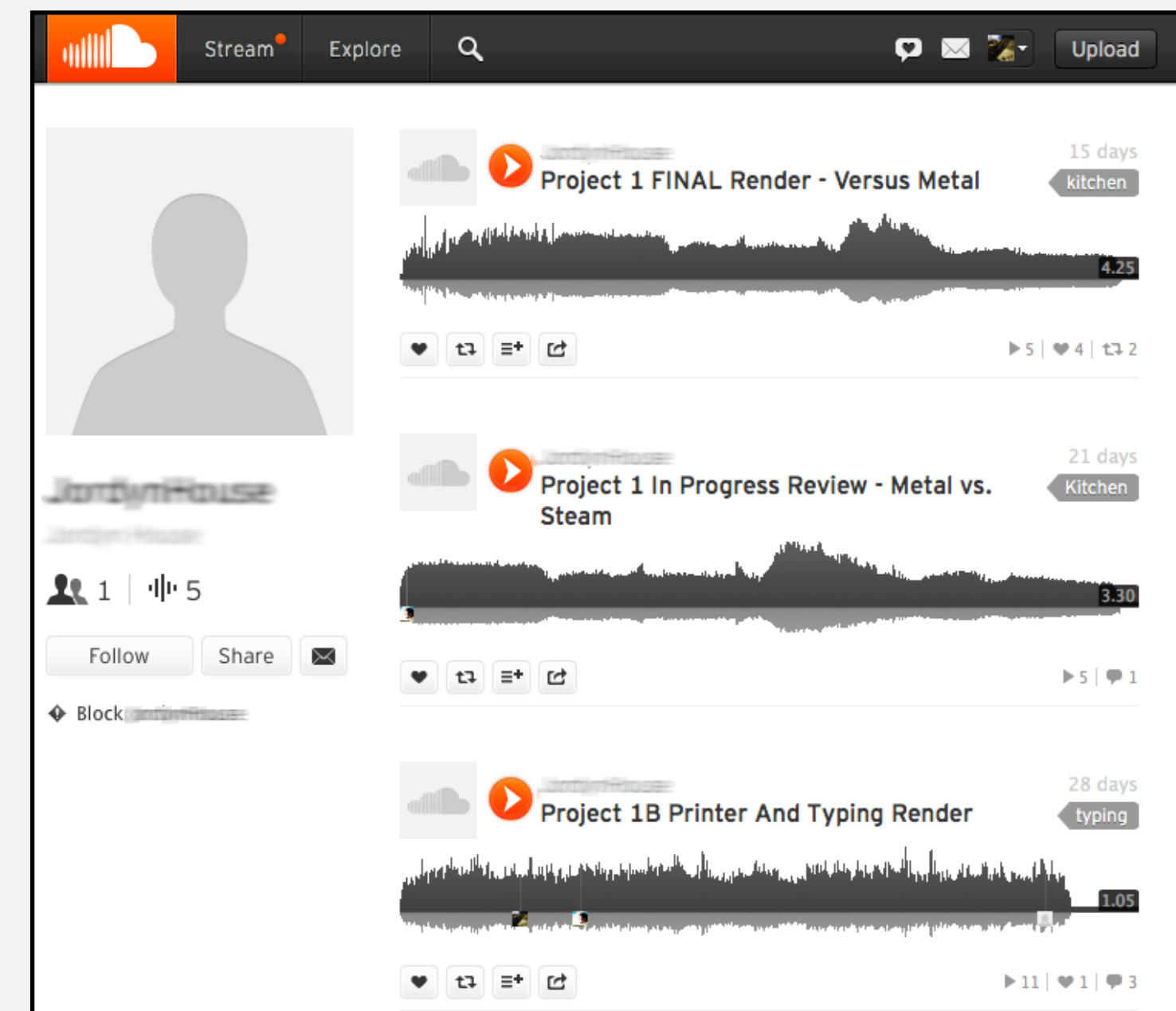
- Track 1:** 'Project 1 FINAL Render - Versus Metal' (15 days old, kitchen tag), duration 4:25. 5 plays, 4 likes, 2 reposts.
- Track 2:** 'Project 1 In Progress Review - Metal vs. Steam' (21 days old, Kitchen tag), duration 3:30. 5 plays, 1 like.
- Track 3:** 'Project 1B Printer And Typing Render' (28 days old, typing tag), duration 1:05. 11 plays, 1 like, 3 comments.

Projects

Field recording - exploration of place = sound collage / soundscape composition

Sonic transformations / recontextualization - focus on environmental or social justice issues

Open project - creative or research (or both)



Research Projects

Recent project topics

- Student Soundscape Lessons - a Second Grade Curriculum
- Effects of Noisy Classrooms on Student Learning
- The Effects of a Cat's Purr on Health
- Bio-Acoustics and Noise Pollution
- Data Sonification Related to Climate Change

Listening Approaches

- **Pauline Oliveros:** Deep Listening Practice
- **R. Murray Schafer:** Sonological Competence (A Sound Education: 100 Exercises in Listening and Sound-Making)
- **Hildegard Westerkamp:** Soundwalks
- **Thich Nhat Hanh:** Compassionate (Deep) Listening
- **Michael Stocker:** Excerpts from, Hear Where We Are; Sound, Ecology and a Sense of Place
- **Dave Aftandilian:** Meditation on Place
- plus others (Pierre Schaeffer, John Cage, W.A. Mathieu, Francisco Lopez, Brian Eno, Jason Corey ...)

Listening Approaches

Pauline Oliveros: Deep Listening Practice (various sources)

Pauline Oliveros, from *Software for People*
selected writings 1963-80

The Poetics of Environmental Sound

Listen to the environment for 15 minutes or a longer but pre-determined time length.

Use a timer, clock or any adequate method to define this time length.

Describe in detail the sounds you hear (heard) and how you feel (felt) about them.

Include internal as well as external sounds.

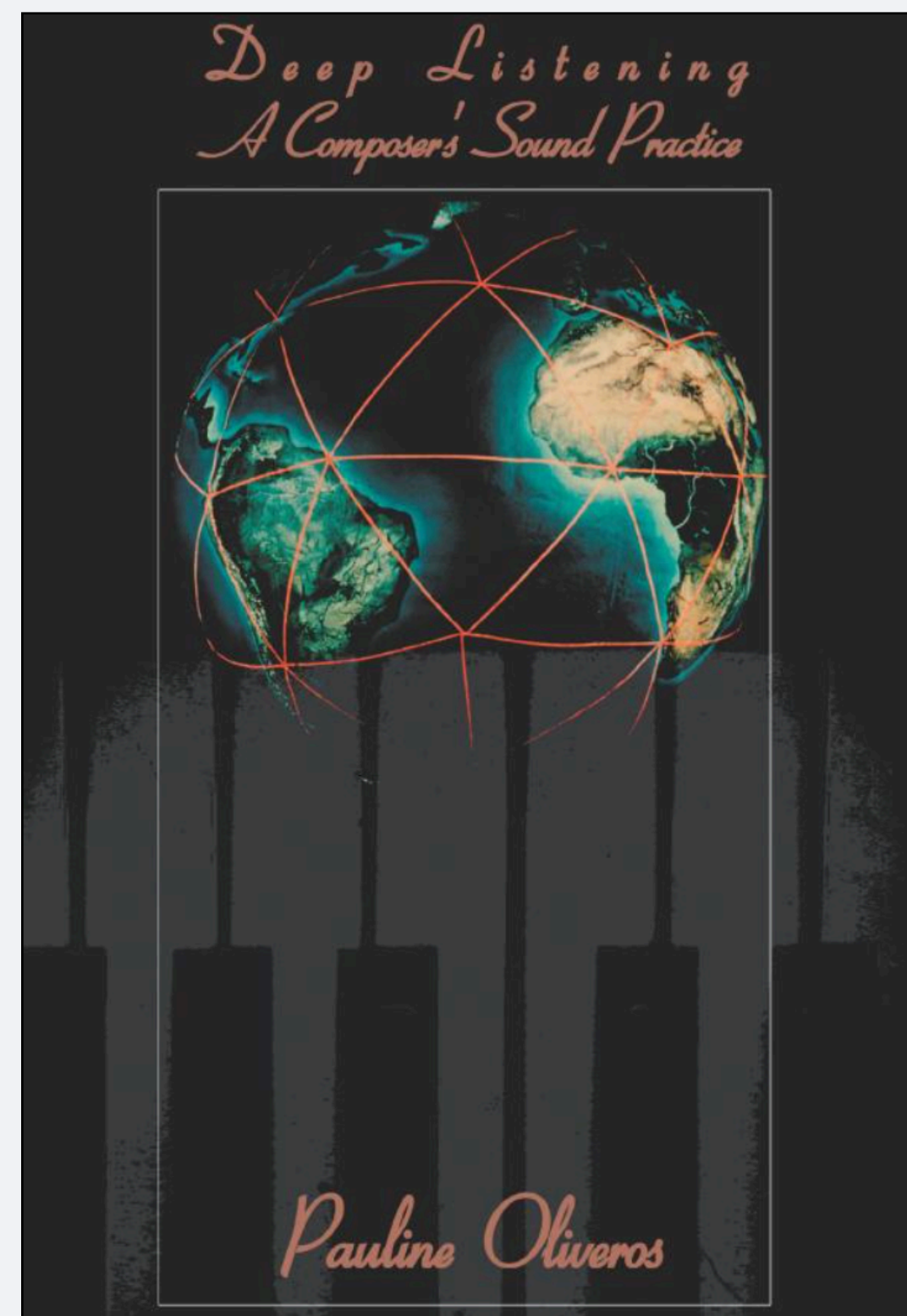
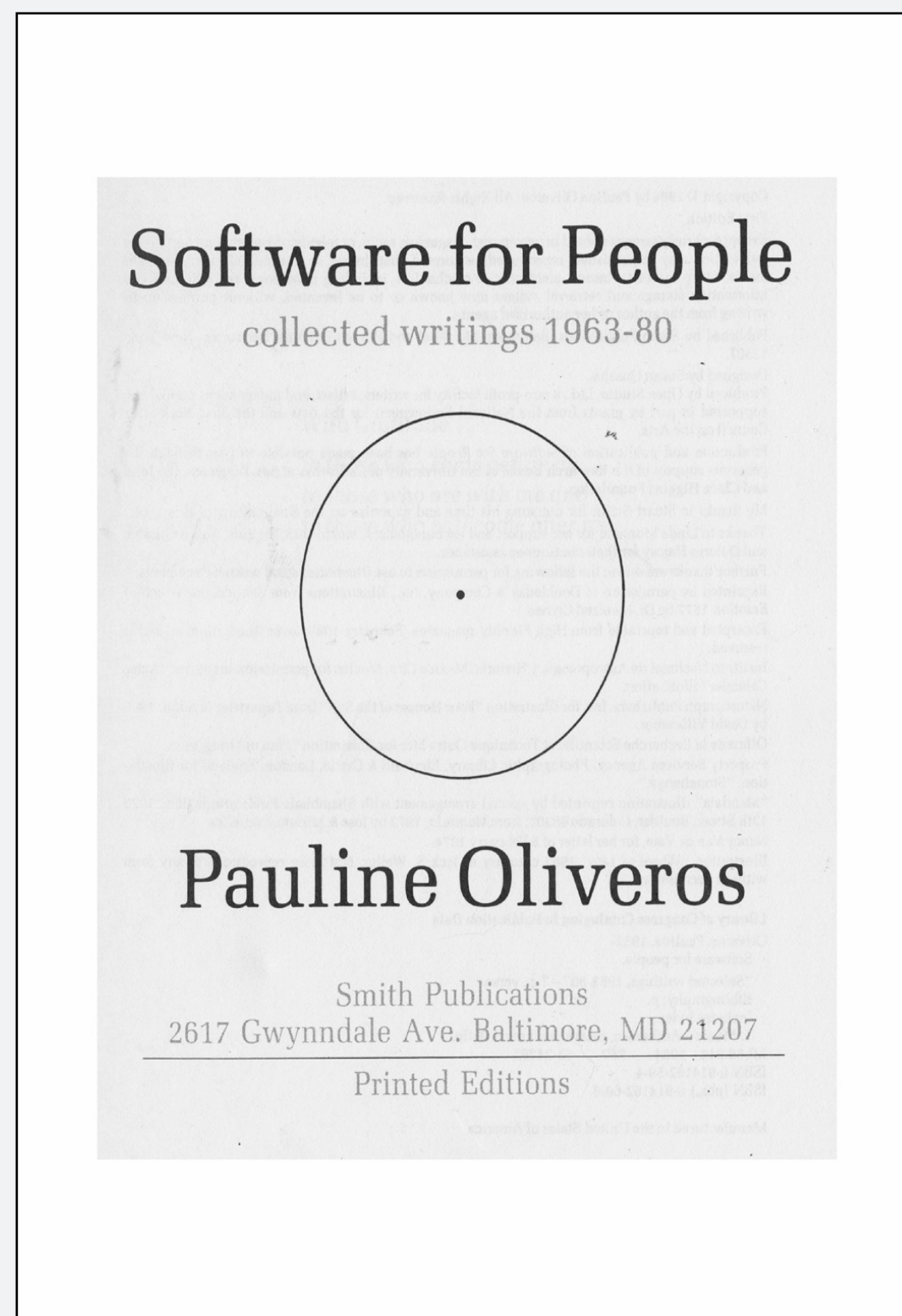
You are part of the environment.

Explore the limits of audibility:

(highest, lowest, loudest, softest, simplest, most complex, nearest, most distant, longest, shortest sound)

Listening Approaches

Pauline Oliveros: Deep Listening Practice (various sources)



Listening Approaches

Pauline Oliveros: Deep Listening Practice (various sources)

- **Deep Listening:** to heighten and expand consciousness of sound in as many dimensions of awareness as humanly possible (Deep Listening, A Composers Sound Practice)
- **Practices can include:** energy work, bodywork, breath exercises, vocalizing, dreamwork, and listening meditations
- **Listening practices:** focal / global attention, sound / silence practices, whole body listening, multi-dimensional listening, listening journals, recording exercises

Listening Approaches

R. Murray Schafer: Sonological Competence
(A Sound Education: 100 Exercises in Listening and Sound-Making)

1.

We begin with a simple exercise. **WRITE DOWN ALL THE SOUNDS YOU HEAR.** Take a few minutes to do this; then, if you are in a group, read all the lists out loud, noting differences.

Everyone will have a different list, for listening is very personal; and though some lists may be longer than others, *all answers will be correct.*

This simple exercise can be performed anywhere by anyone. It would be a good idea to try it several times in contrasting environments in order to get into the habit of listening.

Listening Approaches

R. Murray Schafer: Listening walk (A Sound Education)

13.

On our way back to the class we are going to take a Listening Walk. In order to ensure that each person has the best opportunity to listen we will walk in single file and in such a way that each person is just out of earshot of the footsteps of the person ahead. If you hear their footsteps you are too close and should slacken your pace. Returning to the classroom the group is asked to write down answers to the following questions (or those most appropriate to the occasion).

- a) What was the loudest sound heard on the walk?
 - b) The softest sound?
 - c) A soft sound destroyed by a loud sound.
 - d) The highest-pitched sound heard.
 - e) Three sounds that moved past you.
 - f) Three sounds that moved with you.
 - g) Three sounds heard from above.
 - h) One sound that changed direction as it moved.
 - i) One sound made in response to another.
 - j) The ugliest sound heard.
 - k) One sound heard twice only.
 - l) A sound made by something opening.
-

-
- m) A different sound heard through the opening.
 - n) The most remarkable (memorable) sound you heard on the walk.
 - o) A sound with a distinctive rhythm. (Can you notate or repeat the rhythm?)
 - p) The most beautiful sound heard.
 - q) The sound that came from the greatest distance. How far?
 - r) One sound that either slowly rose or slowly fell in pitch.
 - s) The sounds you would like to have eliminated from this soundscape.
 - t) One sound you missed that you would have liked to have heard.

Discuss the various replies.

Listening Approaches

R. Murray Schafer: Topics / approaches (A Sound Education)

- Listening: describing, analyzing, categorizing, seeking out particular sounds
- Sound (listening) diaries - “what was the first sound you heard today?”
- Using tape recorders for investigation
- Aural illusions, sound paradoxes, aural memory, interviews, architectural acoustics
- Soundscape design or soundscape composition

Listening Approaches

Dave Aftandilian: Meditation on Place (from his course, Anthropological Approaches to Nature and the Sacred, Texas Christian University)

- Choose a place where you can be free of distractions and in contact with nature
- Take a moment to breath slowly and center yourself in this place
- Take 10-15 minutes to observe what plants, animals, and non-living features of the landscape are around you
- Close your eyes and listen in silence for a time...
- Explore your surroundings with your senses of **touch** and / or **smell**
- Journaling - record the results of each of the sensory exercises and briefly answer the following questions
 1. how does using different senses reveal different aspects of a place
 2. how has your relationship to this place changed as a result of this meditation?

Listening Approaches

Thich Nhat Hanh: Silence: The Power of Quiet in a World Full of Noise

- Take time each day to be with your breath, to bring your mind back to your body
- Take some time each day to listen with compassion to your inner child, to listen to the things inside that are clamoring to be heard. Then you will know how to listen to others
- Practice deep listening in order to relieve the suffering in us, and in the other person.

Tech Resources - hardware

Field Recording / Phonography

simply carrying a recorder changes our sonic awareness

*Smart phones / tablets can work, but are not ideal



Tech Resources - software

Editing and production

- Many options for both Mac and PC (and tablets / phones)
- Audacity (free)
- Studio One Prime (free)
- Reaper (free trial period, inexpensive to buy)
- GarageBand (Mac / iOS only)
- Logic, Ableton Live, Protools... (professional digital audio workstations - 200.00+)

Tech Tips

- Don't be intimidated - you do not need to be a tech expert
You can all explore and learn together / from each other
- Lab not always required - some students can bring laptops / tablets / phones
- Students can share recorders and other equipment
- Many free software options
- *Much of this work can be done without any technology at all...

Strengths

- Introduces students to an interdisciplinary field of study and practice
- Provides an accessible entry point for creative sound work, without the barrier of 'instrument' or 'music'
- Helps students discover or reconnect to their innate creativity
- Many students grow to appreciate the freedom (and responsibly) involved in student-centered / self-directed learning
- Encourages students to develop a deeper awareness of sound and our shared sonic environment
- Increased self awareness / mindfulness, at least pertaining to listening
- Students report positive learning experiences and significant changes in perspective

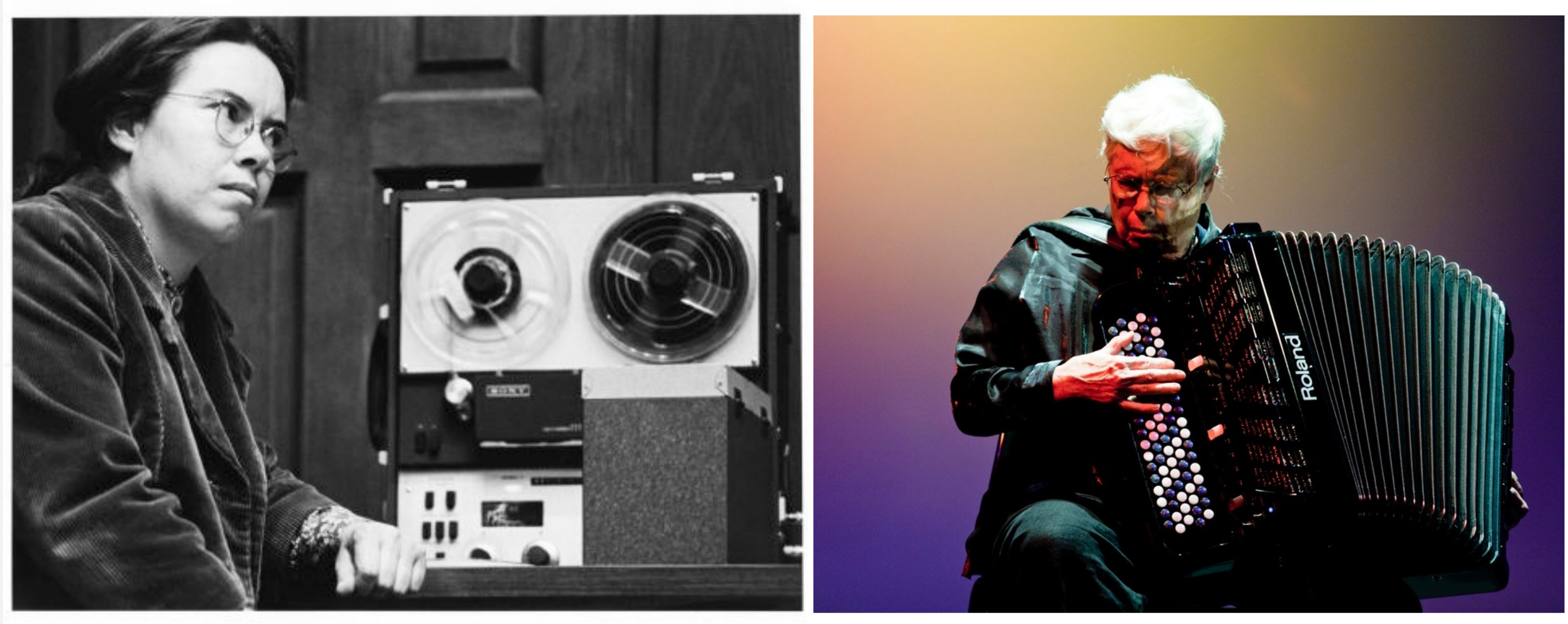
Adaptability...

- Much of these pedagogical methods can work with any age group / demographic - with some adaptation...
- Course can be broken down into smaller modules to accommodate different schedules / time frames / interests / needs
- Readings can be chosen to match students abilities (or eliminated...) focus on hands-on activities / sound journals / add special topics
- Include more performative / sounding exercises - some could involve instruments and group improvisation or collaborative composition
- Many resources freely available online

Challenges / Open Questions

- A lot to explore in one course... probably too much! how to balance breadth / depth?
- Both fields are messy and problematic - this creates challenges and learning opportunities
- Where can interdisciplinary fields thrive? (music, environmental science, communication studies, art...?) perhaps best if team taught?
- How to defuse grading tension / increase exploration, discovery, risk taking?
- How to more deeply integrate contemplative aspects without alienating students?
- How to foster community involvement and integrate environmental justice work into the course ?
- How can this all lead to lasting engagement / action / change?

Influences, Inspiration and Gratitude



Thanks for Listening!

- Comments / ideas / dialogue would be welcome:

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