Selected repertoire examples:

A. Duncan Chapman (2014), *Decorated Echoes*. http://www.duncanchapman.org/tag/education.
B. Carla Scaletti (2017), *h->gg*. https://vimeo.com/218385292.
C. Keiichiro Shibuya, Norbert Moslang, and Toshimaru Nakamura (2006), *ATAK008*. http://atak.jp/en/recordings/atak008.

By working through the labs for this class, I have come to appreciate how musicians take inspiration from so many different objects, situations, and environments – and sample, synthesize, or build sounds into cohesive works. While listening to the music given in the repertoire document, I realized there were a few compositions where the sound was influenced by an interesting input from a separate medium, or vice versa. These examples reminded me of the Photosounder project discussed in class, which allows users "to transform any sound as an image and to create any possible sound from an image"[1] via editable spectrograms. In this case, pictorial data, and auditory signals, impact each other to create new pieces.

Decorated Echoes is another instance where images and sounds are intertwined; this was a project completed for Spitalfields Summer Festival, involving students from the Phoenix School and the Orchestra of the Age of Enlightenment (see A). Although the repertoire list warned against "watching [videos of the repertoire music] many times – humans are sight-biased in their attention and this course is largely about sound", I did find it fascinating how the "movie [for Decorated Echoes] was made from drawings in response to sounds, [their (students/orchestra)] own playing and listening to live music played by Katie Heller (Violin / Viola) and Ruth Rosales (Bassoon / Contra-bassoon)"[2]. It is fascinating how different people perceive similar and contrasting sounds, and what representations they conjure up. Particularly, 0:15 to 0:55 (see A) shows many diverse images. From a sonic standpoint, there is also an input/output relationship between the musicians themselves. The professional and amateur instrumentalists involved play off one another to create a soundscape. For me, the most interesting section of the music was from 5:45 to 6:30 (see A) – a blend of modern and classical-sounding tones.

Decorated Echoes also reminded me of another project, called The Postcard Project, initiated by performer and composer Sarah Belle Reid. In this project, "[h]andmade graphic scores are composed onto the backs of postcards and exchanged between Sarah and collaborators around the world, forming a series of sonic and visual conversations"[3]. Contrary to Decorated Echoes, where the final presentation relied on images drawn after music, performances for The Postcard Project are based on drawings. Reid was partly inspired to create this project after James Tenney's *Postal Pieces*. In *The Early Works of James Tenney*, composer and academic Larry Polansky writes that "[t]he postal pieces, written between 1965 and 1971, but actually produced in 1971 (with the help of Alison Knowles and Marie McRoy at Cal. Arts), are a series of ten short works printed on post cards. […] His [(Tenney's)] explanation of the set is that he hated to write letters, and since he had a number of very short compositions, what could be easier than to make postcards out of them".[4] There are a myriad of ways the people receiving the postcards could interpret the "graphic scores", leading to many beautiful sonic possibilities. After all, art and music are all about sharing our perspectives – "[t]he moods and qualities of nature and the revelations of great art are difficult to define; we can grasp them only in the depths of our perceptive spirit," as American photographer Ansel Adams once said. *Continued on the next page*.

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[1] Rouzic, M. Photosounder. 2025. https://photosounder.com/
[2] Chapman, D. Decorated Echoes @ Spitalfields Summer Festival. June 27, 2014. https://www.duncanchapman.org/tag/education/
[3] Reid, S. B. About The Postcard Project. (project started in 2017) https://www.sarahbellereid.com/postcardproject#/postcardprojectinfo/ (I also highly recommend watching this video about the project: https://www.youtube.com/watch?v=-UUrl95_X0c&t=112s)
[4] Polansky, L. 1984. "VII. Postal Pieces". *Early works of James Tenney* (P. Garland, Ed.). Soundings Press, pages 193 – 203, https://eamusic.dartmouth.edu/~larry/published_articles/tenney_monograph_soundings/10_Postal_Pieces.pdf

Where Decorated Echoes and The Postcard Project were motivated by handmade ephemera, h—>gg by Carla Scaletti (see B) has its roots in scientific processes. Per Scaletti, h—>gg "mak[es] the invisible audible"[5], bringing a whole new world of awareness to the audience of the composition. Scaletti worked with physicist Lily Asquith on sonification, which is defined as "the use of non-speech audio to convey information or perceptualize data"[6]. A basic example of this is that "the rate of clicking of a Geiger counter conveys the level of radiation in the immediate vicinity of the device"[7]. Scaletti and Asquith mapped data from the Large Hadron Collider (LHC) to sound, so that it was possible "to hear the difference between a collision where a Higgs boson had been produced and the billions of other collisions"[5]. Therefore, the data from the LHC became an input for the final composition – "[t]he parameters of the sounds you hear in the piece were modulated (or controlled) by variables of collision events recorded at CERN [(French acronym for the European Organization for Nuclear Research, where the LHC is)] – in a sense, making the LHC the world's largest data-driven instrument"[5]. The result is a work that I personally describe as eerie and otherworldly; crackles and crunches give way to haunting bells and pads, such as the transitions that occur from 2:40 to 5:30 (see B). I feel like it is fitting that the composition sounds supernatural, as the Higgs boson particle itself has been described as "the God particle." h—>gg takes the idea of making music from a different medium to perhaps the largest scale.

Finally, ATAK008, a disc collaboration between three artists (Keiichiro Shibuya, Norbert Moslang, Toshimaru Nakamura) is another notable example of experimenting with varying inputs to produce sound. Moslang, in particular, "uses his original infrared equipments [sic] to create an unexplored, high-detailed sound"[8]. Moslang had a history of experimenting with infrared receivers, which would convert light waves to sound waves. In the article *How Does a Bicycle Light Sound?*, Moslang writes:

> "To me electronic tools are not merely useful black boxes producing a pre-defined effect; they are rather flexible units that in most cases contain far more (hidden) functions than they were originally designed for. My interest lies first of all in these unplanned and not-pre-defined functions, which through certain manipulations can set off surprising musical actions. […] But what is the sound of a blinking LED bicycle light-that is, a tool the purpose of which could not be further removed from musical purposes, that instead was designed to increase road traffic safety? Although the possibility seems at first odd, one can, indeed, generate very distinct sounds and rhythms with blinking LED bicycle lights-by converting light waves to sound waves with the help of an infrared receiver. Each bicycle light sounds different."[9]

The compositions in ATAK008 have an industrial, glitchy feel – especially tracks 1 and 2 on the disc (see C – titled 3'42 and 3'57 if you listen on Spotify, respectively). It is an interesting exercise to try to imagine how Moslang uses the infrared data to create some of the sounds in these tracks; what exactly is he doing to process this information?

Overall, the three repertoire examples I chose broadened my perspectives on music production – that the sky is the limit on what I can use to create and form signals, and to use as input/output in the production pipeline. I might perhaps do some experiments myself with ultrasonic sensors to create my own instrument like a theremin, or use my computer webcam to map sound to movement.

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[5] Scaletti, C. h—>gg. 2017. https://vimeo.com/218385292

[6] From the Wikipedia page on Sonification (https://en.wikipedia.org/wiki/Sonification#cite_note-kramer-1) - Kramer, Gregory, ed. (1994). Auditory Display: Sonification, Audification, and Auditory Interfaces. Santa Fe Institute Studies in the Sciences of Complexity. Vol. Proceedings Volume XVIII. Reading, MA: Addison-Wesley. ISBN 978-0-201-62603-2.

[7] From the Wikipedia page on Sonification (https://en.wikipedia.org/wiki/Sonification) - Wikimedia Foundation. (2025, January 10). *Sonification*. Wikipedia. https://en.wikipedia.org/wiki/Sonification

[8] Keiichiro Shibuya, Norbert Moslang, and Toshimaru Nakamura (2006), *ATAK008*. http://atak.jp/en/recordings/atak008/

[9] Moslang, N. "How Does A Bicycle Light Sound?: Cracked Everyday Electronics." *Leonardo Music Journal*, vol. 14, 2004, p. 83-83. *Project MUSE*, https://muse.jhu.edu/article/176398.