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Reinterpreting the Role of Performer in the Music of Alvin Lucier

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In his definition of experimental music, Michael Nyman writes that "each experimental composition presents the performer with a task or series of tasks…."[1] Nyman builds his concept of task on Alvin Lucier's *Vespers* (1968), in which the players focus on echolocation as the premise of the piece. Nyman describes this instruction to perform a specific activity throughout the piece as a task. Lucier, who has written over one hundred experimental and minimalist works, often asks a player to perform a repetitive task. Lucier frames repetitive tasks in such a way that the performer becomes subservient to the instrument. In such task-oriented pieces, the role of the performer—generator of the musical expression—is fluid. In pieces where the player executes repetitive tasks, the traditional emphasis on the player as a musical interpreter shifts so that the musical force of the composition lies elsewhere—possibly to the inanimate objects associated with the piece. By broadening the roles of what constitutes a performer, Lucier pushes the boundaries of experimental thought.

Three of Lucier's works—*I am Sitting in a Room* (1970), *Silver Streetcar for the Orchestra* (1988), and *Music on a Long Thin Wire* (1977)—present a problem that needs to be solved: a realization of a sonic event. To address this issue, the performer progresses through a series of stages over the course of these pieces: first the interpretation stage, second the catalytic stage, then the machine stage, and finally the eradication stage. The role of the performer is occupied by the individual physical objects drawn from the following: a human, a resonant space, an instrument, and a piece of equipment. I will refer to these physical objects as the components that allow the piece to operate. An analysis of the components involved in a piece reveals which physical object

[1] Michael Nyman, *Experimental Music: Cage and Beyond*, 2nd ed. (Cambridge, New York: Cambridge University Press, 1999), 15.

executes each stage, thus holding the role of performer. Because there are four separate stages of a piece (interpretation, catalytic, machine, and eradication), it is possible that each of the four different components could hold the role of the performer. A piece can therefore be considered as having a progression of the performer role. Through the progression of the role of the performer, the task of each of these pieces is accomplished.

I am Sitting in a Room

I am Sitting in a Room, arguably one of Lucier's most famous pieces, utilizes repetition as a tool to bridge the gap from acoustical phenomenon to music. In his book, *Music 109: Notes on Experimental Music*, Lucier discusses an encounter with Edward Dewan at Brandeis University informing him of a lecture given by Amar Bose, the founder of one of the current leading audio equipment corporations in the world. In this lecture, Bose explained his use of recycling sound as a technique for testing loudspeakers.[2] The concept of *I am Sitting in a Room* is revealed through the process, conducted by Bose, of recycling of sound, not only through the speakers but recycling within the room itself. What this reveals is the audio phenomena concerning standing waves and sympathetic resonance. To explain what the repetitive act of recycling the sound through the room achieves, Lucier states:

> If the dimensions of a room are in a simple relationship to a sound that is played in it, that sound will be reinforced, that is, it will be amplified by the reflections from the walls. If, however, the sound doesn't "fit" the room, so to speak, it will be reflected out of phase with itself and tend to filter itself out. So by playing sounds into a room over and over again, you reinforce some of them more and more each time and eliminate others. It's a form of amplification by repetition.[3]

Herein lies the experimental beauty of *I am Sitting in a Room*: the unpredictable result of a repetitive task.

I am Sitting in a Room consists of one person with at least one microphone and loudspeaker—though Lucier encourages performers to experiment with the placement and number of these devices. The reader of the text records a statement, either the one Lucier provides or one of their choosing, into the microphone(s). This recording is then played back into the room and the resulting playback is recorded. The newly made recording receives the same treatment in a feedback loop setting.[4] The repetition causes the original recording to undergo a process of filtering and conforming to the space until, eventually, the original recorded material becomes distorted to the point of only projecting the resonant frequencies of the room.

Thus, *I am Sitting in a Room* is comprised of several components: the person speaking the initial text, the microphone capturing the text, the loudspeaker projecting the recorded text, and the room in which the sound is resonating. Several factors must be considered when trying to decipher which part acts as the performer of the piece. Typically, when someone is asked what constitutes a performer, their answer is something along the lines of "the person who is playing the piece." In *I am Sitting in a Room*, this definition is not as straightforward. The obvious answer is to consider the person speaking the initial text into the microphone as the performer. When

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[2] Alvin Lucier, *Music 109: Notes on Experimental Music* (Middletown, Connecticut: Wesleyan University Press, 2012), 88-91.

[3] Alvin Lucier and Douglas Simon, "Every room has its own melody," in Lucier, et al., *Reflections: Interviews, Scores, Writings* [*Reflexionen: Interviews, Notationen, Texte*], 2nd revised ed. (Cologne: Musiktexte, 1995), 88.

[4] In this case, the feedback loop is the projection, recording of the project, then projecting the most recent recorded material which, in turn, starts the loop over again.

considering the transitioning of stages throughout the piece—interpretation, catalytic, machine, and eradication—the role of the performer becomes clear.

Lucier instructs the reader of the text to "Choose a room the musical qualities of which you would like to evoke" as the first piece of information.[5] Essentially, the reader's task is to exploit the resonant qualities of a room. In the first, interpretation stage, the reader of the text—without question—takes the role as the performer. Due to the indeterminacy of this work, interpretative decisions made by the performer will affect the entire performance. Those decisions result in an entirely new sound in each performance, as the acoustic properties of each room—coupled with microphone and loudspeaker placement—are different.[6] At this point, once the equipment is set up and the performer records the initial statement, the reader acts as the catalyst by initializing each subsequent recording and repetition. In *I am Sitting in a Room*, the role of the performer stays the same for the interpretation and catalytic stage. When considering the third stage (the machine), the role of the performer shifts. The beauty of this piece comes from the room's manipulation of each repetition played into the space. This repetition reveals a transformative trajectory of enhancing the resonant frequencies that are native to the performance space.

Visually, it is effortless to see what repetition achieves throughout this piece. Example 1 (next page) shows a spectrogram view of the filtering properties of the room. With each repetition—separated by vertical columns of black in the spectrogram—a distinct change in the spectrum can be observed. Initially, the upper frequencies are filtered out of the sound.[7] The filtered results are achieved because of the actual machine—or machines, rather—of the piece: the room coupled with the loudspeaker and the microphone. In *I am Sitting in a Room*, the role of performer shifts to the inanimate components of the piece: the room in which the piece occurs, the microphone that captures the filtering process of the room, as well as the loudspeaker to project the sounds back into the space. The performance role then shifts back to the human in order to turn off the tape at the appropriate time for its conclusion.

Silver Streetcar for the Orchestra

Much like *I am Sitting in a Room*, *Silver Streetcar for the Orchestra* exploits the resonant capabilities of an object—here the resonant object is a percussive triangle instead of a room. The beauty of this piece's indeterminacy lies in the fact that the triangle is considered an instrument without a definite pitch. Neville Fletcher and Thomas Rossing describe the triangle:

> Because of their many modes of vibration, triangles are characterized as having an indefinite pitch. They are normally steel rods bent into a triangle (usually, but not always, equilateral) with one open corner. Triangles are suspended by a cord from one of the closed corners, and are struck with a steel rod or hard beater.
>
> Triangles are typically available in 15-cm, 20-cm, and 25-cm (6-, 8-, and 10-in.) sizes, although other sizes are also used. Sometimes one end of the rod is bent into a hook, or the ends may be

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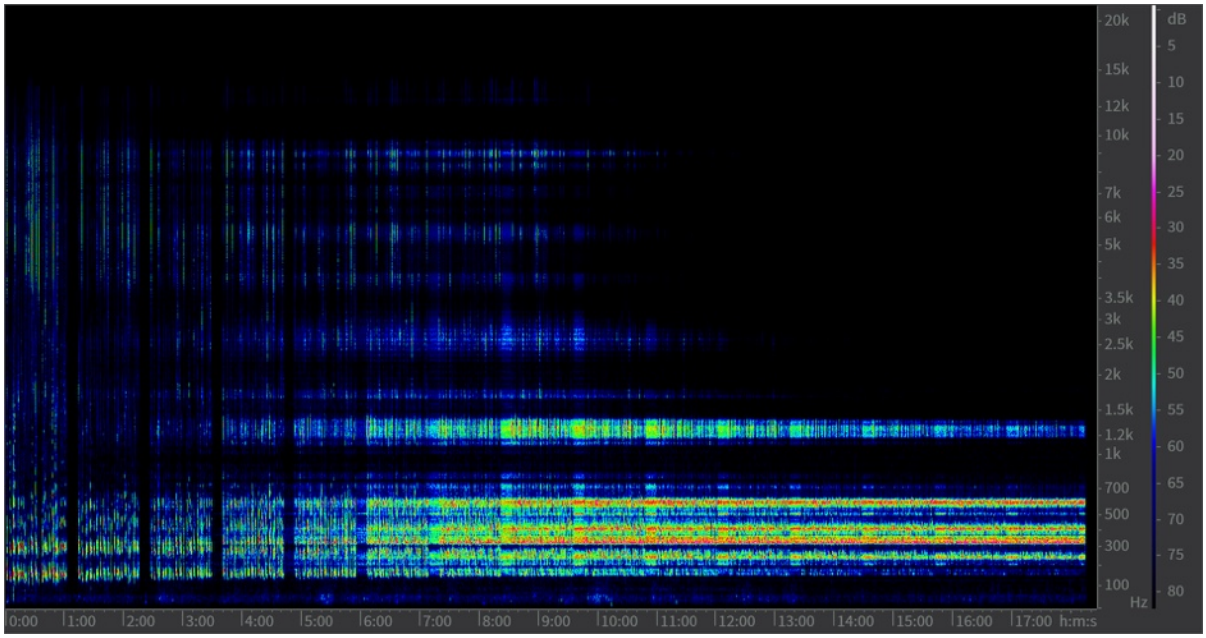
[5] Alvin Lucier and Douglas Simon, *Chambers* (Middletown, Connecticut: Wesleyan University Press, 1980), 40.

[6] Virginia Anderson further describes the task of extracting every detail from a score to sift through the many options for a good and bad performance. Virginia Anderson, "Fluxus: Event Scores and Their Performance," (unpublished liner note for Nicholas Horvath, piano, *X for Henry Flynt: Inspired by La Monte Young* (SubRosa CD, forthcoming), <https://www.academia.edu/17418271/Fluxus_Event_Scores_and_Their_Performance>.

[7] With the exception of the frequency range of 350-500 Hz, these frequencies diminish as the piece concludes.

turned down to smaller diameters than the rest of the triangle to alter the modes of vibration. The sound of the triangle depends on the strike point as well as the harness of the beater.[8]



Ex. 1: A spectrogram analysis of *I am Sitting in a Room* taken from the audio compact disk from Lovely Music.[9]

With its property of indefinite pitch, the triangle is often reserved as a supplement in an orchestral setting. Alfred Blatter even characterizes the triangle in his *Instrumentation and Orchestration* book as an additive texture describing it as a "bright, perky, high-pitched bell sound that can add brightness to any ensemble."[10] In bringing the triangle to the forefront in *Silver Streetcar for the Orchestra*, Lucier exposes the audience to the true intricacies of this relatively unexplored instrument. Lucier gives the player the task of manipulating five performance parameters: muting location, muting pressure, striking location, striking strength, and tempo.[11] The player manipulates only one parameter at a time and does so gradually and imperceptibly, thus allowing different acoustic characteristics of the triangle to emerge.[12] As a result, the repetitive strikes—coupled with performance-specific manipulation of performance parameters—results in a magnification of the stereotypical *ding* associated with the triangle. Moreover, the repetition provides the listener with an experience rich in overtones that swirl around the performance space.

These next paragraphs visit the different stages of a realized performance (interpretation, catalyst, machine, eradication), in light of my concept that the role of the performer progresses through various components (human, resonant space, instrument, piece of equipment). Similarly to *I am Sitting in a Room*, the interpretation stage is carried out by the human and therefore

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[8] Neville H. Fletcher and Thomas D. Rossing, *The Physics of Musical Instruments* (New York: Springer-Verlag, 1993), 551.

[9] Alvin Lucier, "I Am Sitting in a Room," in *I Am Sitting In A Room* (Lovely Music CD/LP, 1013, 1981/1990). All spectrograms in this article were created using iZotope's Rx 6 *Audio Editor* software.

[10] Alfred Blatter, *Instrumentation and Orchestration*, 2nd ed. (New York: Schirmer Books, 1997), 222.

[11] Alvin Lucier, *Silver Streetcar for the Orchestra* (Frankfurt am Main: Material Press, 1988).

[12] Ibid.

attaches the performer role to the human. Because each triangle is unique, the performer must find what produces the most vivid acoustic characteristics of a given triangle.[13] Once the ground work of interpretation is complete, the role of the performer remains with the human as they start the mechanism that runs the piece: striking the triangle. Like the coupled room, microphone, and loudspeaker in *I am Sitting in a Room*, the machine stage in *Silver Streetcar for the Orchestra* distorts our preconceived notions of what can be considered as a performer. The catalytic action of initiating the repetitive strikes of the triangle activates the machine of the piece: the triangle. In *I am Sitting in a Room*, the interaction between the room, microphone, and loudspeaker causes a unique musical outcome depending on the room in which it is performed. *Silver Streetcar for the Orchestra* operates in a similar fashion: the music emerges from the physical composition of the triangle and how it reacts to the sequence of performance parameters. Similar to *I am Sitting in a Room*, the triangle has the role of the performer during the machine stage of *Silver Streetcar for the Orchestra*.[14] *Silver Streetcar for the Orchestra* requires both the human player and instrument to share the performance role. When a performance parameter is shifted, the triangle player takes over the role of performer from the instrument. Lucier alludes to this in the performance notes by stating, "Alterations are made as gradually and imperceptibly as possible in order for the player and the listeners to focus on changes in the acoustical response of the triangle, not on the playing itself."[15] He continues to grant the triangle the authority of performer by instructing the triangle player to perform each parameter shift "only to the point at which a perceptible change in the response is heard."[16] Once the parameter shift has concluded, the triangle resumes the role as performer by emitting a different spectrum resultant of each new parameter chosen by the triangle player. The willingness of the human to accept and execute the fluidity of the performer role allows the triangle to emit a multitude of sonorities. Moreover, when the human enters the performer role, it facilitates the shift of parameters throughout the work while simultaneously being receptive to the triangle. The triangle player's sensitivity to the triangle creates a give and take of the performer role between the triangle and the triangle player. Within the process of shifting performance parameters, the triangle signals the player to cease shifting with the emergence of a new sonic response. Once this response is exhausted, the triangle player resumes the role of performer in order to shift parameters again until the triangle signals the player to stop. This process—a shift of a parameter until the triangle signals the player to stop—repeats until the triangle player resumes the final role of the performer to end the piece once "all the acoustic characteristics of the folded metal bar have been explored."[17]

When the triangle is recognized by the player as the performer, the player pays increased attention to the physical composition of the triangle. In other words, the triangle player is forced to adhere to the properties of the manufactured characteristics of the triangle in order to expose

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[13] Exploring the possibilities of unconventional instruments has a long lineage among experimental composers. For example, Hugh Davies and Max Eastley are known for their inventions in the instrument world. Another article discusses John Cage's use of experimental instruments such as the prepared piano and amplified cactus. Alex Ross, "Searching for Silence: John Cage's Art of Noise," *The New Yorker*, 4 October 2010, <http://www.newyorker.com/magazine/2010/10/04/searching-for-silence>.

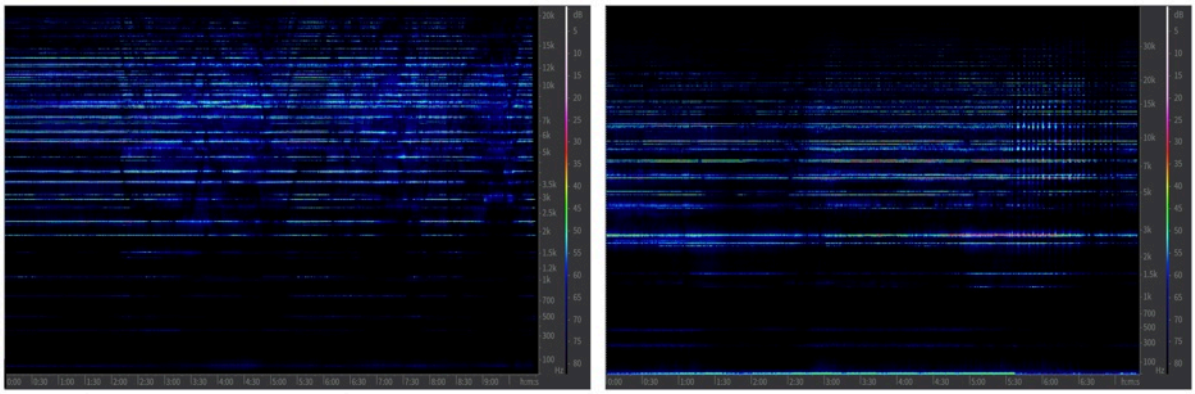
[14] This bears relation to La Monte Young's *Arabic Numeral (any integer), to H. F.* because of the repetition of the consistently spaced striking of the sound source. In Young's case—much like in Lucier's—the machine stage is attached to whatever sound source the performer has chosen in the interpretation stage.

[15] Alvin Lucier, performance notes to *Silver Streetcar for the Orchestra*, score, op. cit.

[16] Ibid.

[17] Ibid.

the overtones to the audience. Example 2 displays two spectrograms of different performances, each featuring a different triangle. The image of the spectrogram allows a visual representation of the beauty of this concept. The image speaks for itself: the spectrogram on the left shows a vastly different spectrum of frequencies than the spectrogram on the right. The unifying observation, however, is that frequencies disappear and reappear as time progresses in the piece. Lucier's task of having a player exploit the triangle's physical composition through continual striking comes to visual fruition in this example. The performance both extricates the preconceived notions of the triangle and reveals a rich inharmonic spectrum of frequencies otherwise lost or covered up by the instrument's contextual restraints. This recontextualization is achieved through the displacement of the triangle from its regular customary punctuational role in an ensemble to a constant stream of sound. Elevating the triangle from an occasional strike to feature a steady stream of attacks accomplishes an important goal: it enables the listener to phase out the attack of the triangle sound in order to focus on the sustained overtones emerging from the triangle's acoustical properties.[18] More importantly, however, the process of repetition plays into the same indeterminacy discussed in *I am Sitting in a Room*: the sonic characteristics of each triangle vary from instrument to instrument. The beauty in each performance of this piece is the surprising emergence of unexpected overtones.[19]



Ex. 2: Spectrogram images of two interpretations to *Silver Streetcar for the Orchestra*. Left: Zeitkratzer's performance on their CD *Lucier & Zeitkratzer: Old School*.[20] Right: my interpretation.

Music on a Long, Thin Wire

Although commissioned by the Crane School of Music at the State University of New York College at Potsdam for a live performance, *Music on a Long Thin Wire* is usually found as an installation rather than in the spotlight of a performance stage.[21] Lucier stumbled upon the idea for this piece while teaching the Pythagorean monochord in a class in acoustics.[22] These teachings inspired Lucier to run a piece of wire, with both ends connected to an amplifier, across

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[18] In this case, the attack refers to the transient of the triangle's acoustical envelope.

[19] Again, La Monte Young's *Arabic Numeral (any integer) to H. F.* holds relevance because the beauty differs from each performance due to the indeterminacy of the materials used in the piece.

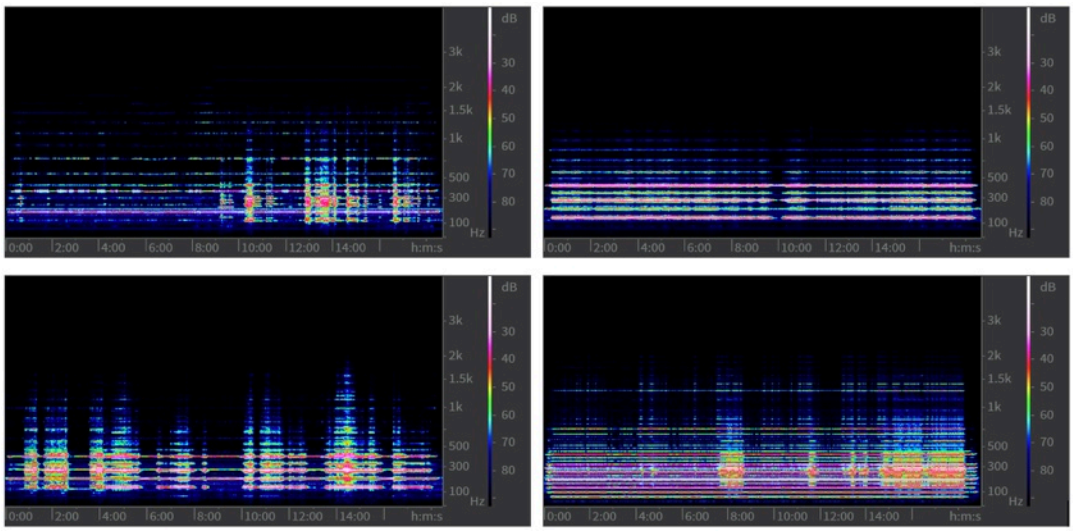
[20] Alvin Lucier and Zeitkratzer, "Silver Streetcar for the Orchestra," in *Lucier & Zeitkratzer: Old School* (zeikratzer Records CD, zkr 0011, 2010).

[21] Alvin Lucier and Douglas Simon, *Chambers* (Middletown, Connecticut: Wesleyan University Press, 1980), 167–68.

[22] Alvin Lucier, "Alvin Lucier: *Music on a Long Thin Wire*," interview by Jason Gross, *Perfect Sound Forever,* April 2000, <http://www.furious.com/perfect/ohm/lucier.html>.

a space through two poles of a magnet. A sine wave is fed into the wire causing it to react and vibrate in indeterminate ways due to the forces of the magnet. The resultant vibrations are picked up by microphones attached to the bridges that elevate the wires. What makes this piece relevant to this discussion is that it blurs the conception of who or what executes each stage throughout the piece. In this piece, the active components include the human, the wire, the magnet, the amplifier, and the sine tone generator. It is among these components that the discussion of what holds the performer role can be applied.

The human component in the role of the performer is very different in *Music on a Long Thin Wire* than in the two previous pieces. Other than the physical set-up of the piece, the only human participation is in setting the sinusoidal frequency and in turning on the electronics to begin the piece. These two steps alone meet the interpretation requirements to facilitate a proper execution of this piece. Once the piece is set up, the human turns on the electronics to begin the performance of the piece. Like the previous two examples, the human takes the role of the performer in the interpretation and catalytic stages. The performance trajectory continues in the same fashion by then transferring to the objects in the piece—in this case, the charge of the wire and the magnet. Without the need of a human to keep the piece in motion, the sine wave oscillator and the magnet serve as the machine component. Example 3 displays four spectrograms of four separate performances of the work. The vast differences between the four images support the notion that the sine tone and the magnet have the role of performer here: across these four recordings, every parameter was consistent—same wire, magnet, room, and amplifier—with the exception of the frequency to which the sine tone oscillator was tuned. Moreover, it is the magnet's distortion on the wire that is responsible for causing the sine tone charge to behave in unpredictable ways. Even when considering that it was the human's choice in which to tune the oscillator frequency, there is no way to know what will emerge from the wire. Therefore, the indeterminate output produced by each performance of the piece becomes the third and final thread that connects the beauty of all three of these pieces. Following the pattern, the human must resume the performance role to turn off the electronics to bring the piece to a close.



Ex. 3: Four spectrograms created from the four tracks found on Lovely Music's *Alvin Lucier: Music on a Long Thin Wire*.[23]

[23] "Music on a Long Thin Wire," in *Alvin Lucier: Music On A Long Thin Wire* (Lovely Music, CD/LP, 1011, 1992).

Conclusions

At this point, I have discussed only three of the many pieces that Alvin Lucier has created; however, the idea of a repetitive task proves strong throughout his body of work. For example, *Nothing is Real (Strawberry Fields)* (1990) for piano, amplified teapot, tape recorder, and miniature sound system, utilizes repetition. The pianist records musical fragments in real time and then plays back the recording through a small speaker inside of a teapot. Although this accounts only for one instance of repetition, the teapot takes the role of performer once it begins manipulating the recorded piano. Another instance of this idea occurs in *Opera with Objects* (1997). The player is asked to hit two wooden pencils together repeatedly. While striking the pencils together, the player is requested to touch the pencils to various resonant objects of the player's choosing. The objects, in this case, act as the performers by amplifying the repetitive pencil strikes. As in *Silver Streetcar for the Orchestra*, there are brief moments where the person striking the pencils takes over as the performer to choose which object becomes the next amplifier.

Music for Solo Performer (1965) presents the clearest form of this transference of roles. The performance consists of various speaker cones attached to different percussion instruments. Brainwaves from the player are then routed through an electroencephalograph into a mixer and sent to the different speakers causing the cones to vibrate against the percussion instruments just as a percussionist would do. Although the title suggests that the solo performer is the human attached to the electroencephalograph, the solo player is in fact not the "solo performer" referenced to by the title. In an interview with Evan Ziporyn, Lucier claimed to see the speaker cones moving back and forth when they were fed the alpha waves and said "… the speaker is the performer."[24]

What does re-evaluating who or what holds the role of performer tell us? A recontextualization of the role of the performer in the music of Alvin Lucier provides increased insight to what component of the music should receive attention. New insights to the importance of the components results in heightened music-making decisions. Moreover, a predictable pattern of human, object(s), then human emerges across the four stages of a piece when analyzing the progression of the role of the performer. Specifically, the machine stage consistently begs for a shift in the performance role from the human to component(s). In every piece discussed in this paper, it was during the machine stage when, not only does the performance role shift, the largest amount of indeterminacy occurs. Moreover, the equipment or instruments react—or perform—in indeterminate ways to execute the piece.

When thinking of a performance of *I am Sitting in a Room*, having in mind that the room, the microphone, and the loudspeaker hold the role of the performer causes a more informed listening. The process of the piece no longer seems lengthy. Instead, the piece is heard as a trajectory or an evolution of a single phenomenon. The same kind of recontextualization is also applicable to *Silver Streetcar for the Orchestra* but, instead of informing the audience for a better listening experience, the triangle player must accept the importance of recognizing the response signals from the triangle. By recognizing and reacting to the triangle's voice, the player is adhering to Lucier's instructions thus producing an accurate and sonically enriching performance. If the player keeps the role of the performer in mind, the approach to parameter shifting changes drastically. By accepting a different role other than the performer, the choices made by the player are more subservient to the triangle. This concept went through a trial-and-error process in the

[24] MIT Arts Press, "Evan Ziporyn Interviews Minimalist Composer Alvin Lucier," Filmed September 2014, YouTube video, 39:19. Posted June 2015, <https://www.youtube.com/watch?v=daDdiITVuWU>.

beginning developmental stages of *Music on a Long Thin Wire*. In an interview with Jason Gross, Lucier states that the piece started with the idea that people would be able to change the oscillator that fed the wire throughout the piece but then it "…developed into a wishy-washy improvisation kind of thing."[25] The players—in this case, the ones tuning the oscillator—did not strip themselves of the role of the performer, resulting in a failed performance. Subsequently, the sine wave was not able to produce the phenomenon properly, rendering it unsuccessful in Lucier's mind. I cannot think of a better example of the importance of understanding the role of player versus performer than what occurs in this piece. By keeping the role of the performer in mind, honest and effective performances of these incredible works can thrive.

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[25] Lucier, "Alvin Lucier on *Music on a Long Thin Wire*," interview by Jason Gross.