Nicolas Collins  
_Resonance Comes Between Notes And Noise_  
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**Abstract**

Alvin Lucier was at the epicenter of a paradigm shift in music that took place between 1965 and 1975, in the backwash of John Cage, and his work from this period served as a roadmap for new music. Reaching back to a pre-hominid time before the divarication of music from other sound, Lucier invented something that re-connected music to physics, architecture, animal behavior and social interaction. These pieces implied that one could make music “about” anything, not just some finite set of concepts handed down the European classical lineage; that composition was not an activity bound by five lines, but a more amorphous “glue” for unifying the larger world.

**Presentation**

I’d like to discuss some of the “axiomatic” musical concepts embedded in Alvin Lucier’s compositions from 1965 through the years during which I was a student of his at Wesleyan University (1972-79). These observations are drawn from four decades of listening to, and performing, these pieces, rather than from any systematic analysis, and they do not lead to any central “big idea” on my part. They may nonetheless be of some value to those seeking to understand why Lucier’s work from that period has aged so well over the past half century.

I met Alvin Lucier at the end of August, 1972, on the second day of my freshman orientation at Wesleyan University. I had arrived from New York City unsure of my long-term goals, but suspecting I would spend a fair amount of time in the Music Department. In my senior year of high school I’d built my first electronic circuit, and earlier that summer I had taken a course in synthesizer technique at Manhattan School of Music. I hadn’t heard of Alvin Lucier, but was overly confident of my own electronic abilities. At the suggestion of my fortuitously assigned advisor, Jon Barlow (a formidable pianist, Ives expert, and polymath music theoretician), I called Prof. Lucier to discuss opting out of his “Introduction to Electronic Music” and proceeding directly to his more advanced composition seminar.

When I walked into Lucier’s small house on Miles Avenue I noticed, in a living room that suggested I had missed one hell of a party the night before, a conspicuous absence of the obligatory composer’s piano. I made my pitch. His answer to my request: “I’m sure you know much more about synthesizers than I do, but I like my students to have an understanding of the music that’s already out there; I really hate having to say the words, ‘that’s very nice, but it’s been done before.’” Begrudgingly, I signed up for Music 183, “Introduction to Electronic Music”.

Twice a week for the next nine months I sat in a large lecture hall, listening as Lucier played records and tapes, passed around scores, and talked. The first
semester was devoted to John Cage, Morton Feldman, Earl Brown, Christian Wolff and David Tudor, covering a period from around 1939 until the mid-1960s. The second semester brought us up to the present day, and focused on composers of Lucier’s generation who had been radicalized by Cage and his colleagues: Terry Riley, LaMonte Young, Pauline Oliveros, Steve Reich, Phil Glass, Robert Ashley, Gordon Mumma, David Behrman, and Lucier himself. I was smitten from the first class; mid-way through the second semester I had my epiphany, and chose my major and specialization. For better or for worse this course is the reason I’ve done what I’ve done for the past 39 years.

In the spring of 2011, on the occasion of Lucier’s 80th birthday, I gave him my notebook from the course, recently unearthed from my mother’s attic. As I scanned the pages I was struck by a pair of realizations that had never occurred to me so succinctly before. First, I was reminded of the degree to which this course immersed me in primary sources. Instead of reading a textbook, I listened to David Behrman tune up his homemade synthesizer and perform a brand new composition. I followed Pauline Oliveros as she guided the class through her Sonic Meditations. I prepared ten minutes of John Cage’s Cartridge Music from the score’s array of transparencies and performed it in my first public concert. When Lucier discussed Cage’s music he talked about events he attended or assisted in that caused him to question all the beliefs he had held sacrosanct as a young composer. My notebook was filled with photocopies of unpublished scores. Some might have faulted the lectures as being too anecdotal, but as far as I was concerned these were daily dispatches from the avant-garde.

Secondly, I realized that, without a doubt, this was paradigm-shifting music, taking place at the very time I was studying it. It’s hard to exaggerate the impact of Cage on Lucier and his contemporaries, or the profound changes that Lucier’s generation introduced into America’s musical landscape. The period between 1960 and 1972 was, in the words of David Behrman, an era in which “established techniques were thrown away and the nature of sound was dealt with from scratch”. Indeterminacy, Minimalism, live electronic music, computer music, Fluxus, sound installations, free improvisation, prose scores, graphic notation and a host of other novel techniques for composing and performing – these movements were still in their early stages of development and proliferation while I was a student. Steve Reich’s Come Out, David Tudor’s Rainforest, Lucier’s I am sitting in a room, Terry Riley’s In C, Philip Glass’ Music in Parallel Fifths, Robert Ashley’s Wolfman, and Gordon Mumma’s Hornpipe were all less than ten years old at the time Lucier played them for the class.

Lucier was at the epicenter of this paradigm shift, as both a teacher and a composer. His work from 1965 to 1975 served as a roadmap for rewriting music history. When Lucier introduced the music of Philip Glass he spoke of it as “taking music back to the year zero”: returning to the first rule of Western counterpoint (no parallel fifths), violating it, and seeing what kind of music would evolve along this new branch (only parallel fifths). But Lucier himself reached back even further, to a pre-hominid time before the divarication of music from all other sound, and he invented something that re-connected music to physics, architecture, animal behavior and social interaction. Compositions like
his bat-inspired Vespers (1968) seemed to imply that one could make music “about” anything, not just some finite set of concepts handed down the European classical lineage; that composition was not an activity bound by five lines, but a more amorphous “glue” for unifying the larger world. This path eventually led Lucier back to a slightly displaced version of “chamber music” (in several senses of the term) – an acoustic music rooted in two decades of electronically enabled acoustic experiments --, much the way Steve Reich’s work with tape loops formed the core of his rhythmically idiosyncratic ensemble compositions, but at the time I felt I was living in a laboratory where any musical outcome was equally possible.

Lucier’s compositions from this time provided some of the most enduring axioms of the post-Cagean avant-garde – they established new models for making music that still feel fresh, even radical, today. For example:

- Chambers (1968), born of holding one’s ear to a sea shell, bridges the 20th Century’s glaring gap between Pitch – systemized to death by the Second Viennese school and its followers – and Noise -- the thorny domain of Varese, the futurists, John Cage, et al. Lucier subsequently built a whole body of work around the twilight zone of resonance – from Chambers, to I am sitting in a room (1970), to Quasimodo the Great Lover (1970), to Nothing Is Real (1990), to Music For Cello and One or More Amplified Vases (1992), to Opera With Objects (1997). After so many years of the primacy of the psychoacoustical “laws” of Pythagorian harmony and overtone-derived pitch relationships, Cage’s indeterminacy stood in harsh contrast; Lucier’s focus on resonance represented a third path: locally significant relationships of pseudo-pitched sounds, indeterminate of the composer’s will, yet very much determined by the physics of one’s surroundings.

- In I am sitting in a room Lucier combines an exploration of the phenomenon of resonance – creating what is in essence an “architectural raga”, a site-specific intervallic system – with the innovation of a self-explanatory work whose outcome is nonetheless unexpected: no matter how many times we hear the text tell us what is happening, what happens still comes as a surprise. In an era of conceptual art and overtly pedagogic music, I am sitting in a room stood apart by virtue of this irrational richness – what you hear is not always what you get.

- Vespers is conveyed by the archetypal “task score,” in which the sounds are produced as the byproduct of a pointedly non-musical process. These sounds are not the result of self-expression on the part of the composer or the performer, but arise from trying very hard not to bang into things as you navigate blindfolded across the room. This is sound-as-information, so minimal as to be almost anti-music, gradually building up a stippled time-lapse portrait of a room that trumps both the imagination of the composer and the control of the performer.
In *Music for Solo Performer* (1965) Lucier introduces the concept of the loudspeaker as an activator, rather than as the end-point of music playback. The speaker is not producing sound for you to listen to directly, but rather is conveying pulses of energy to play something that exists beyond the speaker – what we hear is percussion music, not electronic music. David Tudor used to say, “the loudspeaker is not a window for sound, it is a musical instrument in its own right” – in Lucier’s case the speaker is his drumstick.

Similarly working “beyond the speaker”, in *Still and Moving Lines of Silence in Families of Hyperbolas* (1973-74) Lucier harnesses the acoustical phenomenon of standing waves to produce real spatial movement of sound in architectural space (as opposed to amplitude-based panning effects that simulate position by adjusting the relative loudness between a pair of speakers). The vividness of the movement is heightened by its dependence on the singular vantage point of the individual observer: each listener hears the wave front move by her or his ears at a different moment.

Lucier’s work from this era was characterized, at the time, as “live electronic music”, but it was “inaudibly-electronic” electronic music. His pieces have never emphasized the sound of electronics for its own sake (as an instrumental timbre), but rather for its acoustic or psychoacoustic effect: the audio essence of *Bird and Person Dyning* (1975) lies neither in the swoop of the electronic Christmas ornament nor in the strands of feedback, but rather in the phantom tones that the interaction of those two sounds produce in your inner ear. Similarly, in *Music For Solo Performer* we listen to the percussion, not the amplified alpha. In a good performance of *In Memoriam Jon Higgins* (1984) we are conscious of neither the slowly sweeping sine wave nor the painfully-held clarinet notes, but rather our attention is focused on the resulting beat frequency spinning past our head.

Most composers assume that their responsibility ends on the page of the score. The performer’s obligation in turn typically ends at the bell or soundboard of the instrument, after which it’s all up to the architect. But Lucier composes for what happens in the architectural space (and inner ear) after the sounds leave the instrument or speaker (consider *Vespers* or *I am sitting in a room*, to name two examples.)

Lucier’s compositions from this time are conveyed through prose scores. In the 1980s Lucier returned staff notation, but during the 1960s and 70s his utilitarian (albeit frequently quite poetic) typewritten instructions were hugely influential on an emerging generation of composers, many of who were only semi-literate in terms of conventional notation and orchestration. Twenty years after leaving Wesleyan I began teaching music in an art school, and in the age of “Sound Art” these early Lucier scores still demonstrate so clearly how fundamental musical concepts can be communicated in ordinary language.
Lucier’s music has always been based on trust and listening. The nature of his notation is such that you cannot produce a good performance without both being in sympathy with the aesthetic of the composer, and listening with extreme attentiveness to what was actually happening in the room. Although he has never been comfortable with the term, his early work depended on keen skills of improvisation. In his 1980 book, *Improvisation*, Derek Bailey coined the expression “non-idiomatic improvisation” to describe certain music taking place in England at the time; by the second edition (1992) he concluded there was no such thing as non-idiomatic improvisation: if it’s not an idiom already, it becomes one almost as soon as you start to play. Faced with his prose scores, Lucier’s musicians had to invent a new, non-idiomatic way of improvising; eventually it became an idiom, and one that remains important even to the interpretation of his more conventionally notated scores of the past three decades, as well as those by other composers who embrace a similar aesthetic of trust.

A former student of mine evaluates the essential “goodness” of a piece of art or music in terms of its “generosity.” For him, generosity in music has to do with what the composer gives you, versus what he only shows you. Lucier’s music is poignantly generous in the sense that, no matter how many people are in the audience, the nature of his mechanisms are such that you are always getting a “concert for one,” music for your inner ear.

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³ I remember Lucier once telling me that John Cage had a fundamental objection to the predominance of cause-and-effect in his music, an almost inevitable result of the role of physical acoustics in Lucier’s work.