

LIVE ELECTRONICS

- * Real-time performance of electronic equipment or instruments
- * Live Electronics offered dramatic new sound worlds which could be integrated into the live performance needs of experimental dance and theatre much better than static tape works.
- * Live Electronics offered a high level of unpredictability which suited the artistic temperament of the 60s.
- * Live Electronics demanded a new way of thinking about sound/performance and composition/notation. It allowed electronics to enter into the often volatile and exciting world of performance.

The ONCE Group

- * Gordon Mumma, Robert Ashley, Roger Reynolds, George Cacioppo, Donald Scavarda and Robert Sheff.
- * A characteristic of the group was the design of electronic instruments and apparatus that created sonic environments creating sound in unpredictable flux.
- * They staged weekly performances of live electronic music and avant-garde theatre.
- * They created the ONCE festival, prior to which the only showcasing for new music was in Darmstadt and in the early 60s this had become an aesthetic battleground.

Cage, Tudor, Mumma with the Merce Cunningham Dance Company performing Variations V at the Lincoln Centre, New York, 1965.



“There were so many cables and what-not that it was like walking on a forest floor” - Robert Moog, who was the audio engineer for the performance.



- * The last ONCE concert was presented in Michigan Union in 1968.
- * Gordon Mumma's Hornpipe was performed.
- * Mumma played French horn, while walking around the hall, his instrument's notes were modulated by circuits housed in a metal box strapped to his belt. The circuits influenced in turn by the acoustic standing waves of his environment.
- * Used custom-build electronics capable of semi-automatic response to sounds generated by the performer or resonances of the performance space.



Improvisation

- * Improv in electronic music goes back to the late 50s when the possibilities of live performance in this idiom were first being explored. Cage and Tudor were working with the Merce Cunningham Dance Company, while Mumma and Ashely were performing live improvised electronic music in Ann Arbor, Michigan.
- * Improvisation in electronic music is largely based on the spontaneous modification of non-pitched aspects of sound: the shape of the envelope, timbre rhythm, filtering, effects, amplitude and duration.

Pauline Oliveros

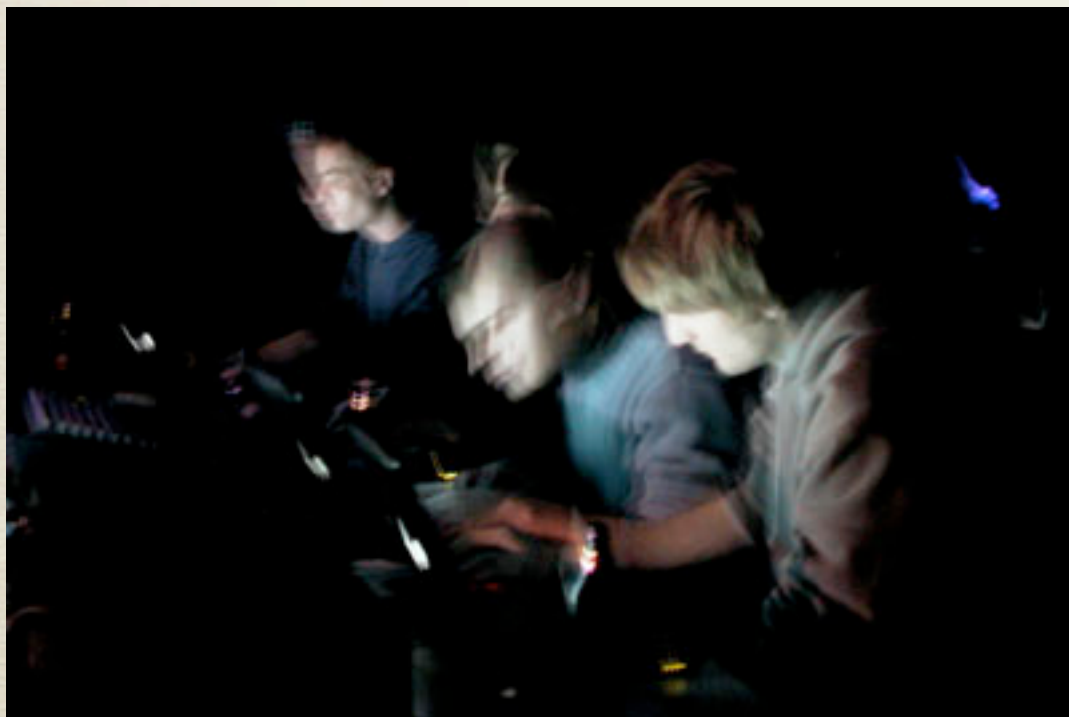
- * Oliveros has focused on the art of improvisation for many years. Instrumentation is much less important to her than the art of practiced listening
- * “The central concert in all my prose or oral instructions is to provide attentional strategies for the participants. Attentional strategies are nothing more than ways of listening and responding in consideration of oneself, others and the environment. The result of using these strategies is listening. If performers are listening then the audience is also likely to listen.”

Current Trends

- * Many artists now are 'doing electronics in software', through the use of platforms such as MaxMSP, Pd and SuperCollider.
- * Using MIDI controllers, custom built hardware, Arduino boards, smartphones, tablets, HID's, other controllers communicating over bluetooth, etc.

Farmers Manual

- * Founded 1995, from Vienna.
- * They sit behind their macbooks, concentrating on LCD screens and making small adjustments via the trackpad on the laptop. The minimal setup and performance style is in direct contrast to their music, which is a rich mix of noise and granulated sonic clouds which every now and then form complex rhythmic loops. Many find this minimal approach to live performance unsatisfying however.



- * Relationships to sound are in part physical. Musical instruments typically require the performer to blow, strum, hit and bow. This gesture determines the amplitude, pitch, timbre and duration of a sonic event.
- * Electronic music dissolved the embodied relationship between the musician and instrument, while simultaneously introducing a broad range of possibilities beyond the limits of the human body, raising questions about the role of gesture in musical performance and the value of haptics in successful musical instruments.

* “When the computer is used as a musical instrument, this disjunction between interface and function is a dramatic diversion from the fixed morphology of traditional instruments where each element of the interface (the keys on a wind instrument for instance) has affordances for a limited set of clearly understood/defined function(s), and where the gestures evoked through engaging with the interface have a functional musical association which may also be communicated to and understood by an audience (for instance, the quality of the movement of fingers or movement of bow or the force of a percussive attack).”

- R.T. Dean. Gesture and Morphology in Laptop Music Performance

- * Spectacle is the guarantor of presence and authenticity, whereas laptop performance represents artifice and absence, the alienation and deferment of presence. ... Laptop music adopts the quality of having been broadcast from an absent space-time rather than a displaced one.
- * The laptop musician broadcasts sounds from a virtual non-place; the performance feigns the effect of presence and authenticity where none really exists. The cultural artifact produced by the laptop musician is then misread as "counterfeit," leaving the audience unable to attach value to the experience. The laptop performer, perhaps unknowingly, has appropriated the practice of acousmatic music and transplanted its issues.
- (Cascone 2000)

- * What characteristics of human movement are meaningful when controlling and/or creating live electronic music on a laptop computer?