

CREDIT WHERE IT'S DUE

A research network studying the history, practice, and broader significance of live audio production.

by **Nick Reeder**

When an aspiring audio tech goes to a production trade school or a university, there are a few areas in which they might be educated about live sound production. One is from a how-to perspective.

When I attended recording school in the mid 1990s, only the big trade schools like Full Sail University had live sound programs, but now many of them include it in their curriculum. However, if that same person takes a music class in an arts, humanities or social sciences department, it's much less likely that he/she will be educated about the historical or socio-economic significance of live sound production.

From the teacher's perspective, if you're working with college students on the history of popular music, jazz or world music, it's actually somewhat difficult to find material about live production in textbooks. There's not much about the history of live sound technology either, despite the fact that the development of tangential technologies such as the phonograph, the loudspeaker, the synthesizer, and even the recording studio have all been documented in well-researched books.

STARTING A RESEARCH NETWORK

When Chris Dahlie, Jos Mulder, Sergio Pisfil and I first started sharing ideas about 10 years ago, it was just four guys finishing PhDs in three different countries. Our first collaborative effort, a chapter titled "Live Sound Matters," was published in the book *Researching Live Music: Gigs, Tours, Concerts and Festivals* (Routledge 2021).

Using case studies, it provides a brief account of the social history of live sound since the formation of the touring industry in the 1960s. We found ourselves having to fill a gap in mainstream academic narratives that ignore the historical role of live music production, instead equating it with amplification.



Jeff Hawley of Allen & Heath USA was among many who presented at the first annual Live Sound Symposium earlier this year.

In most accounts, amplification/live sound is passively added to a performance, with little changing as a result. Accordingly, our chapter contrasts early 20th Century uses of PA systems for sound reinforcement purposes with the progressively sophisticated roles performed by modern live personnel and technologies.

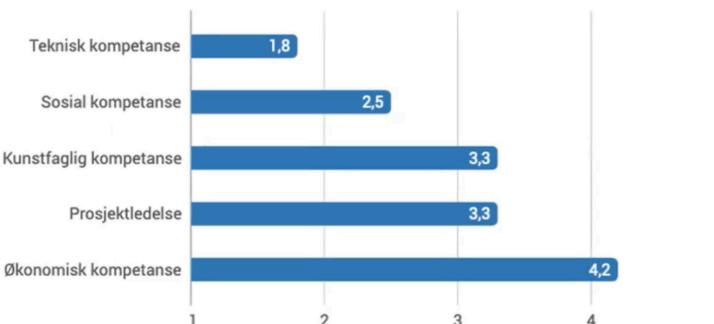
Fast forward to early February of this year, and we held the first Live Sound Studies Online Symposium. Nine presenters shared their research on a range of topics, and many more joined from around the world.

Presenters agreed that while the academic community has finally recognized the economic relevance of the live sector, its social significance remains understudied. A central theme was the need to study and to showcase the roles that audio professionals play in producing live events, both for the benefit of the academy and the general public.

In my talk, I argued that the focus and methodology of live sound studies should be inclusive and should encompass its full range of participants. Drawing from ethnomusicology and musicology, I introduced interchangeable models of music culture and genre that allow us to draw basic parallels between the musical settings associated with a particular genre, for

Artistic or Technical?

- When asked what competences they consider most important to do their work; technical expertise is considered the lowest.
- NB: 87% are self employed



Results of Daniel Nordgård and research partner Oystein Flemmen's survey of Norwegian engineers. (You mean you don't happen to speak Norwegian?)

example, and the technologies developed to facilitate it at different scales.

The sociologists at the symposium made similar points, stressing that an essential first step for live sound studies is to use ethnography (asking people about their lives, making observations and sometimes participating) to study audio production in its cultural and social context. Jacob Danson Faraday, for example, argued that we should study the cultures of local stagehands, exemplifying the sociological view that everyone contributing to sound at a live event plays an essential part.

Many also pointed to sound's central function in facilitating communication at an event, and cited recent work in live music studies and festival studies as evidence of the need to focus on sound. For example, sociologist Andy Battentier painted an account of a concert as a ritual exchange. He characterized engineers as technical intermediaries, who have the dual role of technically mediating interchanges between artists and audiences, while also having to satisfy the commercial production demands of particular industry genres.

This resonated with Daniel Nordgård's study of Norwegian sound engineers. Asked by the manufacturer Kulturrom to better understand work conditions, training, education and recruitment processes, Nordgård and his research partner, Oystein Flemmen, conducted a survey of Norwegian engineers who rated economic competency to be the most necessary skill, with technical competency actually factoring the lowest (87 percent of Norwegian engineers are self-employed). Significantly, engineers also revealed in interviews that they desired to be recognized as being part of the artistic process.

IMPROVEMENTS IN PEDAGOGY

A second major theme of the conference revolved around developing new tools and systems for educational use. Brett Leonard described a virtual live sound mixing system that he and his colleagues have been designing for students and young pro-

fessionals using Max MSP. They conceived of it as a low-cost, low-rent alternative to in-demand and costly equipment, facilities and hired performers.

The system currently offers multitrack and HD video playback and can be set up in a small space using an eight-channel controller and an individual monitor. It records live audio/video and plays it back for the student, who must react to sudden events like level changes.

Like Leonard and his colleagues, Jennifer Jester would also welcome collaboration and feedback on an ongoing project. She described an exciting new research project that draws on her experiences running a School of Rock program and teaching in a commercial band and live audio program. She's also surveying teaching professionals in similar programs to identify standardized production techniques and to establish a database of best practices for large-scale educational show productions.

IN THEORY & AROUND THE GLOBE

Other talks at the symposium covered geographic and theoretical aspects of live sound that further illustrate the potential for research and collaboration. Pierre Prouteau, for example, described a range of sound systems in Thailand and provided details about their cultural context and use.

Using ethnography, Prouteau established there to be a cultural equivalence in the Thai language between music that is well known and loud music. He gave the example of sound trucks that can be hired for funerals, parties or other public processions. A live band (another cultural preference for Thais) plays on one level of the truck and the other level is filled with amplification and speakers. Ideally, people will easily be able to hear that a famous group or song is playing because of the system's high volume.

Bringing further attention to the importance of the sonic environment, Jeff Hawley provided a fascinating look at his PhD research on the philosophy of sound, which concerns

CURRENT SYSTEM PROTOTYPE

- MULTITRACK CAPTURE & ANALYSIS OF LIVE PERFORMANCES
 - INCLUDES ACOUSTIC SOUND FROM STAGE TO ACCURATELY CAPTURE LOUDER SOURCES
 - SIGNIFICANT MUSICAL EVENTS ARE NOTED
- SYSTEM BUILT IN MAX MSP
 - MULTITRACK PLAYBACK & BINAURAL RENDERING
 - HD VIDEO PLAYBACK
 - TRACKING OF ALL USER MIX CONTROLS
 - FEEDBACK GENERATED WHEN SIGNIFICANT EVENTS OCCUR WITHOUT A RESPONSE FROM THE USER
 - FEEDBACK PRESENTED VISUALLY ADJACENT TO THE SOURCE
 - SELECTABLE DIFFICULTY LEVELS BASED ON REACTION TIME



The virtual live sound mixing system that Brett Leonard and colleagues have been designing for students and young professionals.

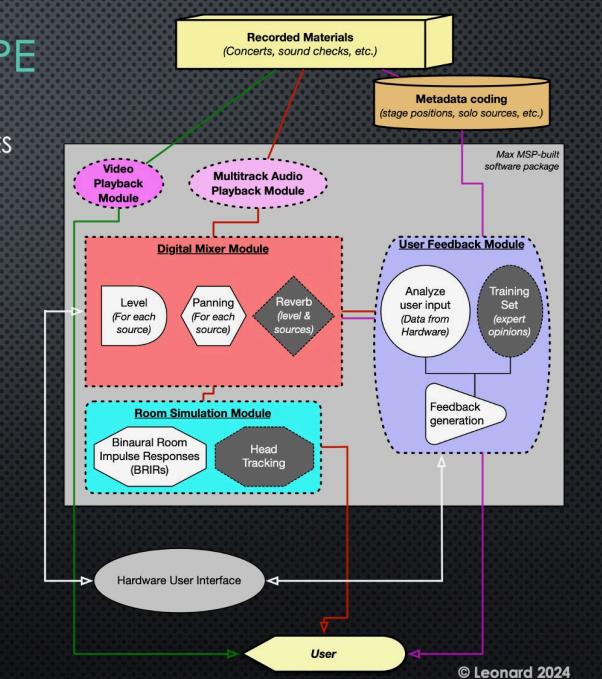
where and how sound happens and is experienced by listeners. Hawley reviewed four spatial definitions of sound (distal, medial, proximal and a-spatial) and described his research as in search of a fifth category, where sound would be considered "ambiguous with multiple interrelated aspects." He challenged the sonic experiments of leading philosophers, grounding his points with real-world examples such as a snare drum excited multiple times in a walled environment.

PAYING ATTENTION TO TERMS

Finally, although the symposium did not feature any scientific contributions regarding technology or practice (the AES database is a leading platform for this type of research), ethnomusicologist Whitney Slaten described a new line of research in which he has been examining dialog in post 1950s electronic engineering texts regarding terms like "microphony" or "microphonic," used to describe unwanted resonances or impurities in electrical systems.

He thinks that these terms may pathologize certain kinds of music by giving the reader the sense that there is something scientifically lacking or "amiss." This is because the way they are used reminds Slaten of the way that disciplines like ethnomusicology once held the pentatonic scale system to be evidence of a musical society not having a comparatively developed tonal system.

In his earlier research working alongside New York City jazz and Broadway engineers, Slaten made another interesting connection. He found that engineers valued transparency, or the ideal of making invisible the engineer's role in facilitating the music and/or the connection between the artist and the audience.



However he also observed that this concept carried over to the low visibility, undervalued labor conditions historically experienced by African American sound engineers. He found this condition of invisibility could also be observed in the dress and stationing of others in the industry, who are often hidden from view to preserve the illusion of an unmediated performance.

WANT TO JOIN THE CONVERSATION?

In order to make the case for Live Sound Studies as a new interdisciplinary field, and to develop a wider research network, we have modeled ourselves on the Association for the Study of the Art of Record Production (ASARP), which similarly tries to foster dialogue and collaboration between a diverse group of academics, audio practitioners, artists and others interested in music production.

To encourage dialog with established interdisciplinary fields like sound studies and popular music studies, we opted for the identifier "live sound studies," which can be also seen as an entry point into this larger conversation.

Anyone interested in joining the Live Sound Studies network and receiving more information about these and future events is welcome to email us at livesoundstudies@gmail.com. **LSI**

Nick Reeder is an ethnomusicologist, popular music scholar, and recording engineer whose current research focuses on the early history of live sound. He received a Ph.D. in ethnomusicology from Brown University in 2014, and prior to becoming an academic, worked in recording studios in San Francisco, Reno, and Nashville. Most recently, he recorded master drummer Martin Obeng's new CD, *Africa's Moving Forward*, and is currently helping produce a podcast for the Smithsonian Folk Festival.