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The Acoustic City

MATTHEW GANDY, BJ NILSEN [EDS.]

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PREFACE

Matthew Gandy
BJ Nilsen

This essay collection and its accompanying CD have emerged from a sense that the field of sound, and our understanding of it, are undergoing a set of changes. The starting point for the idea emerged from a Leverhulme Artist-in-Residence Fellowship held by Benny Nilsen in the UCL Urban Laboratory during 2012. Other points of connection include the regular Stadtklang events organized by the Urban Laboratory, and emerging intersections at UCL between architecture, acoustic ecology, and the study of urban soundscapes.

Our critical engagement with sound has been facilitated through the development of interdisciplinary fields such as "acoustic ecology" and "sound studies," yet the topic is nonetheless extremely difficult to accommodate within existing approaches to the organization of knowledge. The study of sound is marked by a series of intersecting domains derived from history, physics, law, musicology, and many other areas—each bringing its own set of intellectual concerns and institutional entanglements.

The Acoustic City comprises five thematic sections: *soundscapes* with an emphasis on the distinctiveness of the urban acoustic realm; *acoustic flânerie* and the recording of urban soundscapes; *sound cultures* arising from specific associations between music, place, and sound; *acoustic ecologies* including relationships between architecture, sound, and urban design; and *the politics of noise* extending to different instances of anxiety or conflict over sound. In putting together this collection, we have also sought to de-centre some of the implicit assumptions underlying earlier approaches to the study of sound by including feminist insights, post-colonial threads, and other approaches that necessitate a more nuanced reflection on the sensory realms of modernity.

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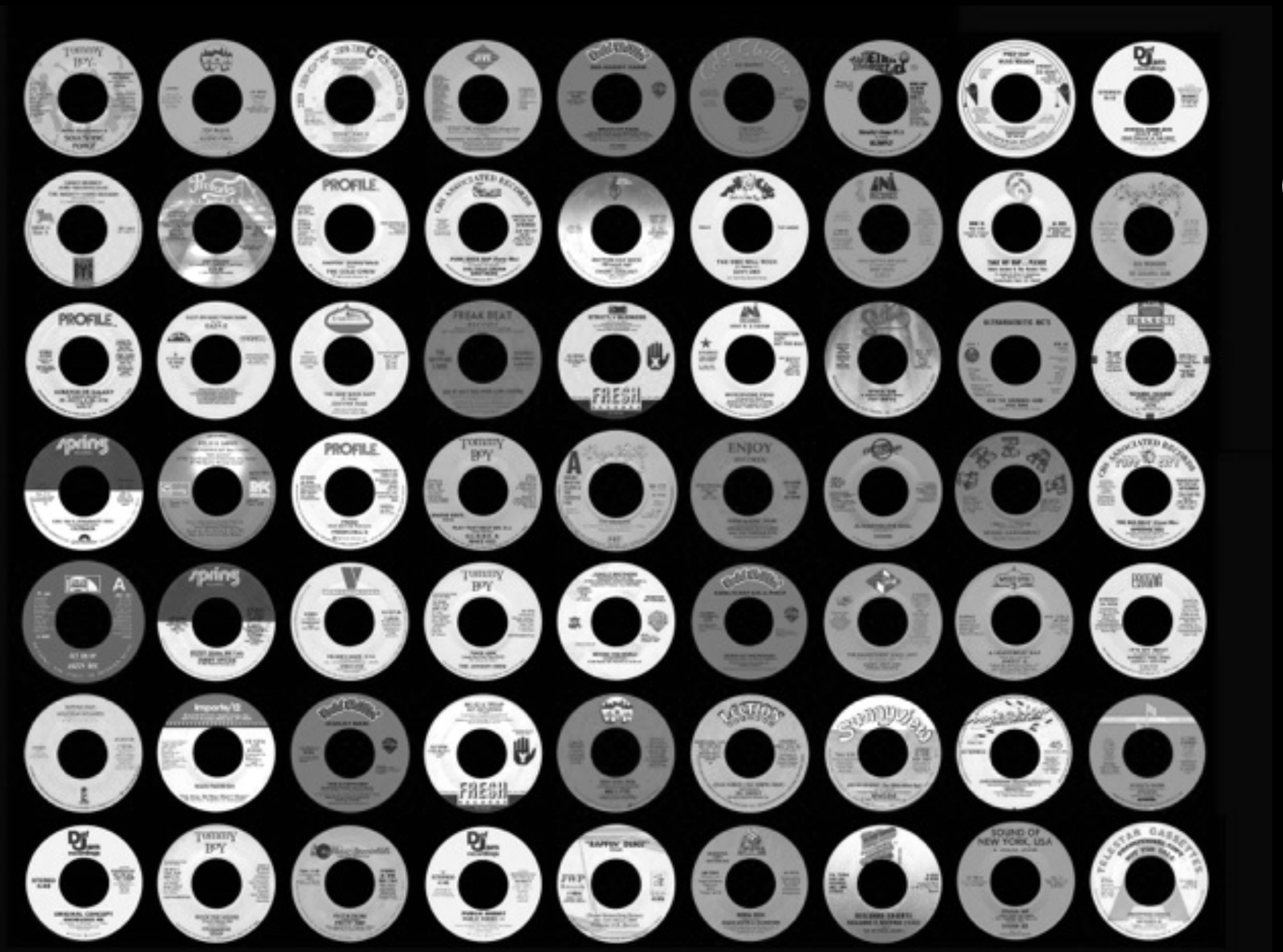
SOUND CULTURES



OF LONGITUDE, LATITUDE, AND ZENITH: LOS ANGELES, *VAN HALEN*, AND THE AESTHETICS OF "BACKYARDISM"

John Scanlan

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Writing in 1971, Reyner Banham suggested that one of the many reasons that the culture of Los Angeles was remarkable, and worthy of celebration, was that its aesthetic sensibility was driven by unconventional approaches to creativity that were not so evident elsewhere. Citing the city's custom car phenomenon as one example of a vernacular culture that emerged from "delinquent origins," Banham marvelled at the "wonders wrought in backyards by high-school dropouts" offering up for the public gaze vehicles that were transformed into "wild extravaganzas of richly coloured and exotically shaped metal."[1] But as interesting as the car was to understanding the human ecology of Los Angeles, it is in the backyard that creativity often begins. And so, out by the Pacific Ocean at Venice Beach in the 1970s, a gang of young surfers with no waves to catch after the sea had gone out for the day decided they would reinvent surfing as skateboarding. Skateboards had already existed, of course, but what the new innovators did was to throw out its dull show-pony origins, with its rules and performance set pieces, and open the way to the idea that the skateboard was a means for some kind of self-invention. They sought out the curved concrete swimming pools of empty residential properties—drained of water and left to dry out in the long summers—which soon provided something akin to a concrete wave that could be "surfed" all day.

At the other end of the creative scale, from car customizers and skateboarders, we might point to a similar aesthetic at work in some of the Los Angeles buildings of Frank Gehry, which seemed to do no less than celebrate "Metropolitan Los Angeles as an unfinished city."[2] The casual observer driving past Gehry's famous Santa Monica residence would see a construction seemingly thrown together from materials that looked as if they were recovered from the leftovers of a storm that had blown through his property—corrugated metal siding, plywood, chain link fence, and so on—and reconfigured to present the back as the front.

Just as the Gehry residence became an icon of the city, so Edward Van Halen's famous self-built "Frankenstein" guitar and the experiments he conducted with sound and amplification would express the sonic aesthetics of a Los Angeles "backyardism."[3] But in dabbling with his acoustic environment, and arriving at a unique sonic identity that would come to be associated with the city, Van Halen sought to satisfy a more general synaesthetic craving for what he would refer to as the "brown sound." The colour brown here stood for the tonal qualities he was driven to discover; it was variously "warm," "sweet," "fat," or "thick," "wood"-like, as well as "buttery" and "meaty." As the historian Olivia Mattis has written, the correspondence of sound to colour is an important element of how musicians in particular make sense of music:

1 The first publicly seen version of the "Frankenstein" guitar, 1978. It may look like a Fender Stratocaster with a custom paint job, but all elements of the instrument were specially built by, or for, the teenage Van Halen—the wood of the body is about twice as thick as a normal Fender (to aid tonal quality), the neck is broader and slimmer (more like a classical guitar than an electric guitar) and has been left unfinished/unlacquered and inlaid with "thick, fat" frets; the pickup was made by the guitarist and dipped in surfboard wax to cut out feedback, and instead of having three control knobs, the guitar has one—which reads "TONE."

Tone color, or timbre, is one of sound's five parameters; the others are pitch, volume, duration, and envelope (the attack and decay of a sound). Tone color is the aspect of sound that allows the listener to differentiate, say, a violin from a clarinet.[4]

And it was precisely this pursuit of tone and sonic modifications that enhanced the remaining parameters of sound, putting them in the service of tonal quality, that would enable Van Halen's backyardism to find expression on the band's 1978 debut album.

As a musician in a rock'n'roll band, one of the motivations for Van Halen's experimentation was to find a way to play at high volumes without losing tonal warmth. But attaining this "brown sound" rested on the matter of how to make an electric guitar "hum" and "blow" at high volume without generating screeching feedback or the sharpness of tone that was characteristic of a fuzz pedal. His models were saxophone, clarinet, and other wind instruments—whose tonal quality he revered and sought to emulate—which were able to maintain tonal characteristics while, for example, increasing volume or modifying the attack and decay of musical notes. This was made possible by the use of breath, which was a very subtle means of articulating musical ideas. Blowing through the notes, a wind player's two hands were free to manipulate the sound that air—breathing—first begins to articulate. But this sense of pushing air did not seem to be a quality of musical articulation that was available to a guitarist; rather, a guitar player's sustain came more obviously via the use of hands to attain vibrato, effects such as fuzz, wah-wah, echo, and electricity. Working in his parents' Pasadena garage in the mid-1970s, Van Halen began work on the instrument and electronics that would produce the sound in his head. The result went some way to imitating the kind of "breathing" quality that he sought.

Amplifiers were (dangerously) modified to allow the voltage feed to source for controlling volume, with a domestic light dimmer switch employed as a means of reducing or increasing the power input to the amplifier. By turning all the amplifier controls up, and "dimming" the voltage, it could deliver maximum "tone" while avoiding feedback and distortion. But this was only one piece of the puzzle. A variety of wood types were tried and tested for the quality of sustain they would bring to the instrument, and the pickups—magnetic poles wrapped in wire coils and housed in those plastic "bars" that rest under the guitar strings and amplify the acoustic sound of the strings—were broken down and rebuilt to exacting specifications. Breaking up many store-bought pickups and then reassembling them by laboriously winding the coils on each magnet, he figured out how to stop the coils vibrating in a way that lent itself towards achieving the favoured "brown sound." He soaked each of the modified pickups in stove-heated surfboard wax—which would solidify when taken off the heat—until he thought they had absorbed an amount sufficient enough to prevent the wire coils from vibrating.[5]

None of these elements on their own, however, would have brought to fruition the sound that emerged, completely realized, from Sunset Sound Recorders in Los Angeles during the sessions for the first *Van Halen* album during the autumn of 1977.

The studio at Sunset Sound had been established in the 1950s by the Walt Disney producer Tutti Camarata, who demonstrated some backyardism of his own in seeing in this property—an auto-repair shop—the perfect acoustics for attaining the quality of sound he required. Its sloping concrete floor, designed to let engine oil and other automotive fluids run into a gutter, along with the dimensions of its interior created a unique reverberation sound field, and turned out to be perfect for capturing a "live" and vibrant sound on tape. And so, for much of its early existence, this was the studio where Disney's movie soundtracks were recorded, edited, and mixed.[6] But what made it attractive for Camarata was equally what would characterize the sonics of *Van Halen* in 1977—namely, the studio's characteristic "live" sound, which itself led the band to record something akin to a stage performance that employed the ambience of the room (which can be identified in the marked evidence of instrument bleed).

This made Van Halen something of a throwback to the way records had been made up until about a decade before; recording more basically and cheaply than even their punk contemporaries, and using a fraction of the kind of million-dollar budgets that performers such as Fleetwood Mac or Bruce Springsteen were spending at the time, as they took up a kind of permanent residence in the studio. With the band keen to spend as little time in the studio as possible, and in pursuit of a performance spontaneity, a devil-may-care attitude prevailed.

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2 Sunset Sound Studios
Photo by Lucie Baratte

The approach, as singer David Lee Roth once said, was to aim for a kind of "hodgepodge" that cut against the overperfection of the studio recordings of the time: "[we] just throw some stuff in and see where it lands."[7] And like the Van Halen live shows, where the songs tended to end rather ragged and chaotic, one quality that characterizes the album is that the tunes, for the most part, don't come to a neat ending or fade gradually. They tend to end with a bang or a crash, a final flash of energy, just as they would do onstage.

What supplemented the qualities of the studio performance rooms, and the innovations Van Halen had already brought to his hardware was Sunset Sound's famed echo chamber, which the long-time recording engineer Bruce Botnick has spoken of as the source of mysterious powers that could only be put down "longitude, latitude and zenith," and as such, its qualities were entirely unique.[8] It was a space that had been constructed as a more or less rectangular room of non-parallel walls—with the walls and floors at differing angles in order to attain the desired room reverb, created by sound bouncing around off the surfaces—and located on a floor above the performance room that was sealed behind a heavy meat locker door. Inside, nothing but wood was visible, which was the cladding on top of layers and layers of drywall, with, Botnick said, "maybe about twenty or thirty coats of resin over it. So it felt like a wooden room. You could go in there, sit down and turn the light off and think you were in the biggest wooden room you've ever been in."[9]

But it was exceptionally small and, at it's widest, only a few feet across. Inside was a speaker channelling sound from the performers, and a microphone set up to record the reverb as the sound from the studio reverberated in the small space. On *Van Halen*, this is the echo that adds depth and a quality of airiness to the sound of the guitar, thus maximizing the desired tonal quality. Its effect was employed by others who used the studio, and in fact, can be heard on The Doors' "Light My Fire" (in the crack of the opening snare), and in the bossa nova-style rimshots played by drummer John Densmore at the beginning of "Break On Through."[10]

The most famous of all examples of how Van Halen's experiments in instrument and electronic equipment modification, which also exemplifies their attachment to spontaneity at this time, was found in track two of the *Van Halen* album, "Eruption." As the title suggests, it approximates, in sound, a force elemental enough that the band's record label, Warner Bros., would take out adverts for the album declaring: "Van Halen – more energy than a nuclear reactor!" What remains remarkable is that it was only recorded by accident as Eddie Van Halen and his brother, Alex, the band's drummer, were warming up in the studio before a show at the nearby Whisky A Go Go. Up until this point in time, it was merely a couple of minutes of exercises that allowed the guitarist to loosen up his fingers before going on stage. On this particular day, the studio engineer had set the tape rolling in case anything interesting happened while the brothers were warming up, and so what appears on record as a result is the one and only "take." On hearing this explosive, souped-up, baroque hot-rod of a tune—punctuated by the sound of dive-bombs, groans and barely comprehensible squeals in between passages that soar effortlessly as if they had found a pathway onto the jet stream, and all demonstrating how the guitarist's experiments had pushed the instrument into new sonic territory—the band's producer, Ted Templeman, knew in an instant that it had to go on their debut album, and it had to be right up front in the listener's face.

For five years after that moment, Van Halen continued to make their albums quickly and cheaply—time in the studio was more usually counted in days rather than weeks—and left in the mistakes other artists would take care to remove or overdub. While major success would ultimately change the dynamics of their creative process, the lure of the backyard still beckoned for Eddie Van Halen. By 1983, just as some of the Los Angeles studios were slowly beginning to switch to new digital technologies (their label-mate Ry Cooder's album, *Bop 'til You Drop*, released in 1979 had been the first digitally recorded album), he would have been found rummaging through the junk of some of the most well-known Hollywood Recording Studios in search of discarded recording consoles to equip the studio he was now building in the backyard (where else) of his new Hollywood Hills home. It was in this studio that their best-selling album, *1984*, was recorded in the spring and summer of 1983, using a salvaged recording console that had previously been used in the United Western studios on Sunset Boulevard. By now a relic of a bygone age, it had the military green look and feel of those metal filing cabinets from the 1950s and 1960s, which were once seen in offices the world over. For all intents and purposes, it looked, Van Halen said, like a "piece of shit … with big old knobs and tubes."[11] But, it had recorded Frank Sinatra, The Beach Boys, Phil Spector, and The Mamas and the Papas—and just maybe, it held the promise of finding that elusive point where latitude, longitude, and zenith intersect, and where the "brown sound" might live.

Endnotes

1 Reyner Banham, *Los Angeles: The Architecture of Four Ecologies* (London: Allen Lane, Penguin Press, 1971) p. 221.
2 Kevin Starr, *Coast of Dreams: A History of Contemporary California* (London: Vintage, 2005) p. 57.
3 See the feature at the Smithsonian Institute: http://tiny.cc/v3of2w
4 Olivia Mattis, "Scriabin to Gershwin: Color Music from a Musical Perspective," in *Visual Music: Synaesthesia in Art and Music Since 1900*, ed. Kerry Brougher, et al. (London: Thames and Hudson, 2005) p. 211.
5 The electric guitar pickup is a device fixed to the body of the instrument beneath the strings that "picks up" vibrations and translates them into an electrical current. The pickup is composed of two main elements that come as stock on most guitars: a coil of insulated copper wire and a magnet, which magnetize the guitar strings. When the strings vibrate—either through picking or strumming them—the vibration causes the flux field of the magnet to move along with the strings. The motion of the flux field creates an alternating current within the pickup's coils. The alternating current then travels from the pickup, through the volume and tone controls, through the output jack, through the cable (or wireless) and finally to the amplifier, where it comes out in the form of tone. Van Halen's painstaking experiments in breaking down and rebuilding stock pickups, as well as the unorthodox use of surfboard wax to prevent excessive vibration in the pickup coil became a key component in achieving his desired, and distinctive, guitar tone.
6 Tim Hollis and Greg Ehrbar, *Mouse Tracks: The Story of Walt Disney Records* (Jackson: University Press of Mississippi 2006) p. 58.
7 Quoted in Geoff Barton, "New Boots and (Stretch) Panties," *Sounds* (28 June 1980): 18.
8 Quoted in William Clark and Jim Cogan, *Temples of Sound: Inside the Great Recording Studios* (San Francisco: Chronicle Books, 2003) p. 49.
9 Ibid. p. 48.
10 James Riordan and Jerry Prochnicky, *Break on Through: The Life and Death of Jim Morrison* (London: Plexus Publishing Ltd., 1991) p. 111.
11 H. P. Newquist, "Edward Van Halen: The Guitar Interview," *Guitar* (March 1995): 121.