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The Original Synth

Anyone who has ever produced a film or video knows that sound demands much more post-production work than the image. Often, live recordings of otherwise familiar subjects end up not sounding the way an audience expects. When recording on-site, background noise might interfere as well. Since audiences want sound to be transparent, these things pose problems. Sound technicians can correct them, but the job is labor-intensive. The result of all this work is ideally imperceptible. Not surprisingly, film criticism typically concerns the gaze as an ideological construct, but makes comparatively little mention of sound. Thus, sound assumes the role of second nature. Literally invisible, it can still predispose viewers to see an image the way a director wants. For example, to set the seaside as part of the mise-en-scene, it is effective first to introduce the sound of waves, then cut to a shot of the beach. That way, the image reaffirms what the audience already knows but does not explicitly recognize: that the sea is present.

Sound is not so much subversive as it is intractable. Although the light from a projector or video screen diffuses, it nonetheless creates an image into which the audience focuses a perspective, a cone of vision. Perspective orders an image and makes it memorable. One also can speak of sound perspective – that distant sounds are softer than close ones – but the analogy is rough. Sounds emanate from discrete points, but disperse. Elaborate home theater systems can only do a mediocre job of spatializing it, especially because the flat screen remains the reference. It is impossible to embed real space within a flat representation. Moreover, sound is ambient. For that reason, film editors know that while an audience will immediately identify duplicate film footage, the same sound set in a new context sounds new.

For all these reasons, conventional narrative cinema has become less concerned with replicating a real aural environment (sometimes naively mistaken for mic noise)

than it is with orchestrating an ensemble of more-or-less canned sounds. Although the "part" of the soundtrack stands for the "whole" auditory experience, it is experientially convincing. Through this synecdoche, one senses a presubjective state. In film production, electronically generated sound has overtaken recorded sound effects. It is cheaper, more accurate and easier to manipulate. Ironically, this means of controlling nature – or controlling the audience's sense of nature – first appeared in a movie about nature gone awry. Alfred Hitchcock's *The Birds* (1963) pioneered the synthesized soundtrack. Hitchcock commissioned the German composer, Oskar Sala to do this with his own invention: the mixurtrautonium, a proto-synthesizer.[i] Sala was known for his work with subharmonics: the opposite of overtones. Hitchcock, however, had decided to do *The Birds* without music; Sala used the mixurtrautonium to produce birdcalls and flapping wing effects. Hitchcock later told Francis Truffaut, "Until now we've worked with natural sounds, but now, thanks to electronic sound, I'm not only going to indicate the sound we want but also the style and the nature of each sound."[ii] Even so, as critic Elisabeth Weis observed, "The bird sounds are often so stylized that if the visual source were not provided, the sounds could not be identified."[iii] In his quasi-ecological fable, Hitchcock concocted a Nature that was not entirely natural; it was a vengeful and furious Nature at that.

The impact of synthesized sound became more acute in Stanley Kubrick's film adaptation of Anthony Burgess's 1968 novel, *A Clockwork Orange* (1971). This story puts the question of Nature inside the person of Alex, its sadistic protagonist. The problem was Alex's human nature. Burgess' title had a double meaning. First, a contradiction: clockwork refers to a mechanism while orange (orang-utan) implies human-ness – or at least rising to the level of a primate. The phrase also derives from Cockney slang: "as queer as a clockwork orange," i.e., someone or something that looks normal but is, in fact, bizarre on the inside.[iv] Electronic musician Wendy Carlos had already begun work on her landmark composition, "Timesteps," when a friend gave her a paperback copy of Burgess' novel. She not only immediately felt an "uncanny affinity" to the story, but also believed that "Timesteps" already captured its spirit. Then, the same friend sent her a clipping announcing that Kubrick had begun shooting *Clockwork Orange*. Carlos and her producer, Rachel Elkind, contacted the director and, as soon as he heard "Timesteps," he agreed to use that and synthesized classical music for the film score.

Carlos and Elkind were elated to be working with Kubrick, even though Carlos was already a celebrity in her own right. Almost single-handedly, the twenty-nine-year-old composer had popularized the Moog synthesizer with her 1968 album, "Switched-On Bach." Notably, the title's "switching on" displaces the more expected (this being 1968) "turning on." It implies that the process was automatic – a flick of a switch. Electronic, however, does not necessarily mean automatic. The Moog 3P was an analog, monophonic instrument. Carlos had to record each line of the arrangement separately, each on a separate track. With Robert Moog, she even developed a touch-sensitive keyboard for the project. Carlos's goal was to prove that electronic instruments could be every bit as expressive as traditional ones.[v] This points to the distinction between synthesized music and pure (academic or avant-garde) forms of electronic music. A synthesizer mimics other musical instrument, while purists seek the unique properties electronic sound. They and classical music aficionados initially greeted Carlos' project with skepticism and condescension. For her part, Carlos simply considered avant-garde electronic music to be "ugly." CBS Records simply hoped to cash in on a novelty. Just a few short years before; Bach Rock had been in vogue. The record cover for "S-OB," as Carlos refers to it, played the kitsch card; it showed a portly, middle-aged man in a powdered wig and 18th-century period dress, holding a pair of headphones and standing before a keyboard and a mass of electronic equipment that was the Moog 3P. CBS's gamble paid off; it became the first classical record to go platinum.[vi]

In *Clockwork Orange*, the tenor of this novelty took a darker turn. By far, the most controversial composition was "March from *A Clockwork Orange,"* an abridged version of the Fourth Movement of Beethoven's Ninth Symphony. It consisted entirely of synthesized voices. For this, Elkind and Carlos devised an entirely new instrument: a "spectrum follower," ie., a vocoder.[vii] As Carlos herself recalls, "The first reactions were unanimous: everyone hated it! A playing synth was bad enough, but a "singing" synth? Too much, turn it off!"[viii] The idea of a mechanized human voice seemed menacing. Moreover, behavior modification (aversion therapy) as social engineering was *Clockwork Orange's* principal theme. To make matters worse, the unsympathetic Alex, in stark contrast to his embarrassingly mediocre parents, harbors an abiding and uncompromising love for classical music. When he picks up two teenyboppers at a local record store, his primary mission – even before fucking them – is to treat them to some on a decent stereo system. Kubrick shot the ensuing orgy scene at two frames per second, thereby reducing

twenty-eight minutes of regular footage to just forty seconds.[ix] This, in effect, robotized all three characters – not because the pace of robots is necessarily fast, but rather because their pace can be manipulated. Carlos similarly recorded her rendition of the accompanying William Tell Overture at a slow speed, then sped it up. Her synthetic score seems both to distill the violence and asocial passion Alex finds in Beethoven and, through its technical production, to wrench this music out of its humanistic tradition. The implications of Carlos' original composition, "Timesteps," by de-differentiating music and sound per se, were even more radical. The confrontation with unvarnished (yet artificial) sound roughly corresponds to the oppressive recurrence of Brutalist architecture throughout the film. Although some of these ideas had already appeared in avant-garde music, Carlos' particular genius to make them stick in pop culture. She managed to do this even though her soundtrack suggests two pointedly unpopular ideas: a) the programmability of the human and b) the devolution of music into unorganized sound. Through its self-reflexive look at technology, Carlos' work represents an early apotheosis of the synthesized film score. Despite considerable technological development, none of the many synthesizer soundtracks that have followed since has had quite the same impact. There are two reasons for this. First, better technology has closed the perceptible gap between real and synthetic sound, rendering the latter completely naturalistic. Second, by becoming part of the cultural landscape, synthesizers have lost their initial sense of radical intervention.

In 1972, one year after Kubrick released *Clockwork Orange,* the pre-op Walter Carlos underwent a gender reassignment therapy to become Wendy. No doubt, the questions this film raised about nature and identity held particular significance for her. About the same time, CBS released Carlos' first album of original music, *Sonic Seasonings*. Inspired by Antonio Vivaldi's *The Four Seasons*, this work is a meditation on nature itself. Compared to *Clockwork Orange* especially, the mood is peaceful.[x] Each of its four sections is about twenty-two minutes long, incorporating real and synthesized sound and music. Since she did not change their timbre, Carlos characterizes her use of natural sounds as a "Musique *anti*-Concrete." Moreover, she and Elkind recorded quadraphonically. This spatialized the music and thus emphasized its environmental

qualities. Elkind explains that they sought to create a "sonic tapestry" and were especially concerned with "psychoacoustics," namely how the perception of a given sound changes with its context. Later minimalist composers, Steve Reich especially, would focus on exactly such qualities – and, in turn, punk composers Glenn Branca and Wharton Tiers. As Carlos put it, "It was intended to work on a timbral and experiential level, so the sound could 'flow over you,' not a cerebral exercise like so much of what is now seen to be a wasteland of serious music from mid 20th Century . . . ."[xi] The scope and pacing of each composition lent it an apperceptual – or ambient – character. This brings this music into close proximity with soundtrack music. Carlos was keenly aware of this relation, "[The compositions descend from] what is called: 'programmatic music,' music that sets a mood and can even suggest events and scenes."[xii] With a cyclic structure instead of a story, however, *Sonic Seasonings* suggests itself as a soundtrack to everyday life. It might also suggest viewing everyday life as a kind of film. Ordinarily, music critics say that *Sonic Seasonings* is important because it anticipates minimal, ambient and New Age music so early on. More important, however, is Carlos' radical grasp of music as a kind of spatial practice, in the manner suggested by Henri Lefebvre:

> The spatial practice of a society secretes that society's space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely as it masters and appropriates it. From the analytic standpoint, the spatial practice of a society is revealed through the deciphering of its space.
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> What is spatial practice under neocapitalism? It embodies a close association, within perceived space, between daily reality (daily routine) and urban reality (the routes and networks which link up the places set aside for work, 'private' life and leisure). The association is a paradoxical one, because it includes the most extreme separation between the places it links together.[xiii]

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[i] Online, "Oskar Sala," Wikipedia, http://www.answers.com/main/ntquery;jsessionid=4ja9il5ch2f12?method=4&dsid=2222&dekey=Oskar+Sala&gwp=8&curtab=2222_1&sbid=lc05a&linktext=Oskar%20Sala Prior to this, Louis and Bebe Barron wrote an electronic score for "Forbidden Planet" (1956). Horror films had also already used theremins for sound effects.

[ii] Online, Elisabeth Weis, "The Silent Scream: Alfred Hitchcok's Soundtrack," (1982) http://www.zx.nu/ss/chapter8.htm.

[iii] Ibid.
[iv] Online, Tim Dirks "A Clockwork Orange (1971)," http://www.filmsite.org/cloc.html.
[v] Online, "Wendy Carlos," James Wierzbicki, http://pages.sbcglobal.net/jameswierzbicki/carlos.htm.

[vi] Online, "Switched-On Back," Wikipedia, http://en.wikipedia.org/wiki/Switched-On_Bach. In 1970, the album also won Grammys in three categories: Best Classical Album, Best Classical Music Performance, Instrumental Soloist(s) (With or Without Orchestra) and Best Classical Engineered Recording.
[vii] Online, Blair Jackson, "WENDY CARLOS' MARCH FROM A CLOCKWORK ORANGE," http://mixonline.com/recording/interviews/audio_wendy_carlos_march/.
[viii] Online, Kurt B. Reighley "Vocoder Questions," http://www.wendycarlos.com/vocoders.html.
[ix] Dirks.
[x] *Sonic Seasonings* set the stage for New Age music, a form that generally picks up on the most superficial aspects of Carlos' work.
[xi] Online, Wendy Carlos, "Sonic Seasonings and the Land of the Midnight Sun," http://www.wendycarlos.com/+sslms.html.
[xii] A few years later, Brian Eno began working in a similar vein with his "Music for Airports."
[xiii] Henri Lefebvre, "Plan of the Present Work," trans. Donald Nicholson Smith, *The Production of Space* (London: Blackwell Publishing, 1991), p. 38.