

BEEPING AND BUZZING BUT NOT BREAKING GROUND:  
HOW THE FIRST USE OF SYNTHESIZERS BY PAUL BLEY, SUN RA, AND HERBIE  
HANCOCK SERVED THEIR PREEXISTING AESTHETIC GOALS

The release of the first commercially available synthesizers in the late 1960s and early 1970s ushered in new possibilities for jazz musicians. Here was an instrument whose primary characteristic was its ability to manipulate timbre. At the time of its release, its musical potential must have seemed endless. But although the synthesizer was novel in many respects, it did not immediately provoke a paradigm shift in jazz. Instead, musicians found ways to use synthesizers to extend and enhance what they had already been doing. In this essay, I explore how three jazz musicians used synthesizers to further the avant-garde aesthetic goals they had established during the previous decade. I discuss how the music of Paul Bley, Sun Ra, and Herbie Hancock was not dramatically changed by their use of the synthesizer. Rather their early synthesizer music is best understood as an extension of their previous efforts to explore new sonic territory.

For jazz musicians, the synthesizer could not have come at a better time. During the 1960s, many jazz musicians were striving to push the envelope, playing avant-garde music that was as much intended to explore new possibilities as it was to entertain. Ornette Coleman played jazz with no clear meter or harmonic progression, as in his aptly titled album *Free Jazz*.<sup>1</sup> Eric Dolphy played atonal solos whose musical interest was as driven by notes and rhythms as by honking, squeaking, and other extended techniques.<sup>2</sup> John Coltrane recorded *Ascension*,<sup>3</sup> forty minutes of impassioned, atonal playing. Cecil Taylor performed concerts of wild,

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<sup>1</sup> Ornette Coleman, *Free Jazz: A Collective Improvisation*, Atlantic Records 1364, 1970; recorded December 21, 1960.

<sup>2</sup> For example, Eric Dolphy, *Out to Lunch!*, Blue Note Records 4163, 1964; recorded February 25, 1964.

<sup>3</sup> John Coltrane, *Ascension*, Impulse! A-95, 1967; recorded June 28, 1965.

dissonant, and entirely improvised pieces on solo piano.<sup>4</sup> Miles Davis's 1960s quintet became known for its feats of harmonic and rhythmic abstraction, and he abandoned traditional form and harmony completely in his early fusion explorations *In a Silent Way*<sup>5</sup> and *Bitches Brew*.<sup>6</sup>

*Bitches Brew*, released in 1970, presaged many of the trends that would come to dominate jazz in the ensuing decade. In addition to having amorphous harmonies and no clear form, the album was pieced together by splicing several sections of magnetic tape (an early electronic music technique pioneered by academic western art musicians like Karlheinz Stockhausen<sup>7</sup>). Lawrence Wayte, in his dissertation *Bitches Brood*, notes that the tape splicing serves to disguise traditional elements of jazz form. He writes, "What stands out about the edit points. . . is just how arbitrary and random they are, reflecting the sketch-based, improvisational nature of the music itself. However, this arbitrariness of the edits serves to highlight one of primary sonic features of the recording: There are few moments of structural clarity in any of the songs on *Bitches Brew*."<sup>8</sup>

This abandonment of traditional form was, Wayte suggests, "a theme running through the art worlds of the 1960s. The late 1960s marked the culmination of a period of artistic questioning and experimentation with improvised and aleatoric processes that began in earnest in the 1950s and gathered steam during the 1960s." By the time *Bitches Brew* was released,

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<sup>4</sup> His first such recording was recorded July 1, 1967 and titled "Carmen with Rings." It is available only as a bootleg recording.

<sup>5</sup> Miles Davis, *In a Silent Way*, Columbia Records CK 40580; recorded February 18, 1969.

<sup>6</sup> Miles Davis, *Bitches Brew*, Columbia Records GP26; recorded August 19-21, 1969.

<sup>7</sup> Miles Davis was directly influenced by Stockhausen, which he discusses in his autobiography: Miles Davis and Quincy Troupe, *Miles: The Autobiography* (New York: Simon and Schuster Paperbacks, 2005), first published in 1989 by Simon and Schuster, 329. For additional insight into that cross-pollination, see Barry Bergstein, "Miles Davis and Karlheinz Stockhausen: A Reciprocal Relationship," *The Musical Quarterly* 76, no. 4 (Winter 1992): 502-525.

<sup>8</sup> Lawrence A. Wayte, *Bitches Brood: The Progeny of Miles Davis's Bitches Brew and the Sound of Jazz-Rock*, (Ph.D. diss., University of California Los Angeles, 2007): 73.

audiences had had two decades to acclimate to and grow an appetite for exploratory, disjunct music.

*Bitches Brew* was also noteworthy for its use of electronic instruments and effects. The three keyboardists on the recording—Joe Zawinul, Chick Corea, and Larry Young—played Rhodes electric pianos. John McLaughlin played electric guitar. Dave Holland and Harvey Brooks played electric basses. The sound of Miles Davis’s trumpet was routed through a tape delay effect. And the final taped tracks themselves were subjected to effects like echo, reverb, and slap delay.<sup>9</sup>

Many factors influenced Davis’s choice to use electronics, including his desire to cash in on the popularity of rock and roll.<sup>10</sup> But the novel sounds of electronic instruments—together with the free improvisation, amorphous form, and arbitrary tape edits—may have also contributed to what Wayte calls the “aesthetic sublime.” Citing Immanuel Kant, Wayte describes the experience of the aesthetic sublime as “different from the pleasure of beauty,”<sup>11</sup> defying “explanation or rational interpretation,”<sup>12</sup> and inspiring “such emotions as awe, confusion, dread, agitation, and an uncomfortable sense of the unexpected.”<sup>13</sup> In 1970, electronic sounds in jazz were unexpected, and the futuristic atmosphere they contributed to *Bitches Brew* helped evoke in its listeners a sense of the aesthetic sublime.

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<sup>9</sup> Paul Tingen, “Miles Davis and the Making of *Bitches Brew*: Sorcerer’s Brew,” *JazzTimes*, originally published July 10, 2017, updated March 30, 2020, [jazztimes.com/features/profiles/miles-davis-and-the-making-of-bitches-brew-sorcerers-brew/3](https://www.jazztimes.com/features/profiles/miles-davis-and-the-making-of-bitches-brew-sorcerers-brew/3).

<sup>10</sup> Davis, 297 & 302.

<sup>11</sup> Wayte, 48.

<sup>12</sup> Wayte, 61.

<sup>13</sup> Wayte, 65.

*Bitches Brew* was enormously popular. It sold over a million copies—more than any other record of Davis’s at the time.<sup>14</sup> Given its avant-garde sensibilities, this is perhaps surprising, but it serves as an important indicator of the tastes of many jazz audiences and musicians of the time. They were receptive to the kind of forward-thinking exploration that novel electronic timbres helped provide, and it was into this landscape that the synthesizer—an instrument especially capable of producing such timbres—first emerged. It is not surprising then that many of the first jazz musicians to experiment with this new instrument were, in the years prior to its release, playing avant-garde jazz. Early synthesizer enthusiasts like Paul Bley, Sun Ra, and Herbie Hancock had each been making music that challenged listener expectations and pushed the envelope within jazz. Their early use of synthesizers was in service of these same goals.

#### Paul Bley

Since the late 1950s, Paul Bley had been striving to escape the harmonic and melodic boundaries of his bebop roots. As early as 1955, Bley was seeking to break precedent. He remarked in a *Down Beat* interview that year, “I’d like to work with superimposed harmonies and try to write music without a chordal center.”<sup>15</sup> In the ensuing decade, he played music that at times was, as he put it, “completely free, without tempo, without harmony, without written composition.”<sup>16</sup> In 1958 and 1962, he performed with Ornette Coleman’s groundbreaking free

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<sup>14</sup> Andrew Read, “Miles Davis ‘Bitches Brew’—A Brief Look at the Albums Impact,” *Jazz in Europe*, January 9, 2018, [jazzineurope.mfmmedia.nl/2018/01/miles-davis-bitches-brew-a-brief-look-at-the-albums-impact](http://jazzineurope.mfmmedia.nl/2018/01/miles-davis-bitches-brew-a-brief-look-at-the-albums-impact). That sales record was eventually overtaken Davis’s by 1959 *Kind of Blue*.

<sup>15</sup> Bob Fulford, “Paul Bley: Jazz is Just About Ready for Another Revolution, Says Canada’s Young Pianist,” *Down Beat* 22, no. 14 (July 13, 1955): 13. Accessed via *Jazz Periodicals*, [jazz.ripmfulltext.org/RIPMJAZZ/Permalinks/1428065](http://jazz.ripmfulltext.org/RIPMJAZZ/Permalinks/1428065).

<sup>16</sup> David Lee, *Stopping Time: Paul Bley and the Transformation of Jazz* (Véhicule Press, 1999): 58, quoted in Bob Gluck, “Paul Bley and Live Synthesizer Performance,” *Jazz Perspectives* 7, no. 3 (2013): 304, [doi.org/10.1080/17494060.2014.912257](https://doi.org/10.1080/17494060.2014.912257).

jazz group. In 1964, he released *Barrage*, which is described by an AllMusic review as a “free jazz classic,”<sup>17</sup> and for the next few years Bley continued this thread with albums like *Closer*<sup>18</sup> and *Mr. Joy*.<sup>19</sup>

Broadly, Bley’s template for free jazz in the 1960s followed that of Ornette Coleman. Many of the pieces in his repertory—the bulk of which were composed by Carla Bley and Annette Peacock, both of whom had been married to Paul Bley at different times—retained some traditional elements of jazz and abandoned others. On 1965’s *Closer*, a representative example, each composition employs some kind of “head” or melody that is played to begin and end the piece. Between statements of the head, Bley and his bandmates take solos (improvise melodies), which are occasionally quite melodious. But every track (except “Ida Lupino”) has no clear key center, pulse, meter, harmonic progression, nor form during solos. To emancipate jazz from previously ubiquitous qualities, Bley and his bands (and those of other free jazz pioneers) attempted to collectively improvise outside the confines of more traditional jazz devices.

One day in 1969, Bley solicited Bob Moog for a Moog Modular, which in 1964 became the first widely commercially available synthesizer.<sup>20</sup> The production model Bley acquired that day inspired a new chapter of his musical experimentation. Between 1969 and 1971, Bley performed regularly with the Moog (and later an Arp 2600) and recorded several albums,

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<sup>17</sup> Al Campbell, review of *Barrage*, [www.allmusic.com/album/barrage-mw0000083783](http://www.allmusic.com/album/barrage-mw0000083783)

<sup>18</sup> Paul Bley Trio, *Closer*, ESP 1021, 2008, recorded December 12, 1965.

<sup>19</sup> Paul Bley, *Mr. Joy*, Limelight LS 86060, recorded May 10-12, 1986.

<sup>20</sup> The Moog Modular was not the first ever voltage-controlled synthesizer. That title belongs to Hugh Le Caine’s invention of 1945. Thom Holmes, *Electronic and Experimental Music: Technology, Music, and Culture*, 5th ed (New York: Routledge, 2016): 256.

including *The Paul Bley Synthesizer Show*,<sup>21</sup> *Improvisie*,<sup>22</sup> and *Paul Bley & Scorpio*.<sup>23</sup> Bley did not know at first how to make the instrument work, and there were few examples at the time for him to learn from. As Michael Cuscuna wrote in the liner notes to *The Paul Bley Synthesizer Show*, “As far as I can determine, this is the first album of any sort to use the synthesizer as a truly musical improvising instrument.”<sup>24</sup> Especially groundbreaking was Bley’s use of the synthesizer in a live setting, since its cumbersome size and the significant effort it took to design a sound prevented most musicians from using it outside of a studio. The tracks on *The Paul Bley Synthesizer Show*, although recorded in a studio, potentially capture this live sound, since “the entire album was done in three three-hour sessions, and is heard as played, with no overdubbing.”<sup>25</sup>

Bley’s 1969-71 synthesizer recordings are in many ways like his acoustic recordings from years prior. On *The Paul Bley Synthesizer Show*, five of the seven tracks follow the free jazz template he had practiced through the 1960s. While they employ a head form (melody, solos, melody), they exhibit no consistent pulse or meter and are tonally ambiguous or atonal.<sup>26</sup> In fact, four of the tracks are compositions Bley had first recorded 1966-67. For example, Bley had previously recorded Annette Peacock’s “Nothing Ever Was Anyway” on four separate occasions, including in May 1968 for the album *Mr. Joy*. That version and the one that appears on *The Paul Bley Synthesizer Show* are, except for the presence of the synthesizer, more similar than

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<sup>21</sup> Paul Bley, *The Paul Bley Synthesizer Show*, Milestone Records MSP 9033, 1971, recorded December 9, 1970, January 21 & March 9, 1971.

<sup>22</sup> Paul Bley, *Improvisie*, America Records AM6121, 1971, recorded March 26, 1971.

<sup>23</sup> Paul Bley, *Paul Bley & Scorpio*, Milestone Records, MSP 9046, 1973, recorded November 24, 1972.

<sup>24</sup> Michael Cuscuna, liner notes for *The Paul Bley Synthesizer Show*.

<sup>25</sup> Ibid

<sup>26</sup> The other two tracks, “Mr. Joy” and “Parks,” seem out-of-place by comparison. Each features a repetitive, two-chord vamp and a straight-forward rock-inspired groove over which Bley improvises melodies on his synthesizer.

different. Each features Bley in a trio, accompanied by acoustic bass and drums. Bley plays the opening melody and his subsequent solo with a flexible and unmetred time feel. He avoids the kind of chordal left-hand accompaniment that is typical among jazz pianists, instead playing mostly sparse, unaccompanied right-hand melodies. The band shifts between degrees of intensity as they improvise collectively, but they favor a languid, contemplative feel with the drummer playing textural accompaniment on the cymbals and the bassist alternating between long pizzicato notes and more active, albeit still unmetred, phrases.

Bley himself noted the congruence between his synthesizer music and his earlier acoustic music, writing in his autobiography, “There was no difference between the electric music and any of the free jazz we played acoustically. We didn’t bother using the instrument to change the music; we were just hoping to be able to do some things that you couldn’t do on acoustic instruments.”<sup>27</sup> Indeed, where differences do exist, they are best understood as consequences of the differing instrumentation. Bley mostly plays melodic lines on his synthesizer not unlike those he might play on the piano, but he also occasionally creates the kind of beeping and buzzing that only the synthesizer can provide.

Bob Gluck discusses several ways that Bley took advantage of the synthesizer’s unique abilities in his article “Paul Bley and Live Synthesizer Performance.” He writes, “the features of greatest interest to Paul Bley include the synthesizer’s ability to select and subtly alter timbres, shape articulations, such as attack and note-bend, hold long sustain, and craft variable

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<sup>27</sup> Paul Bley and David Lee, *Stopping Time: Paul Bley and the Transformation of Jazz* (Montreal: Véhicule Press, 1999), from an excerpt available on the publisher’s website, [vehiculepress.com/montreal/paulbley.html](http://vehiculepress.com/montreal/paulbley.html).

portamento gestures, sometimes combined with leaps between registers.”<sup>28</sup> For example, at 4:28 in “Nothing Ever Was Anyway” from *The Paul Bley Synthesizer Show*, Bley generates a rapidly-modulating series of high-pitched tones, likely the result of a sample-and-hold LFO modifying the pitch of the main oscillator. And at 2:30 in “The Archangel,” Bley begins adjusting the portamento on his instrument and playing with pitch bend; his improvised melody slides smoothly between pitches, at times settling on frequencies between the notes of an equal-tempered piano. His accompaniment of the bass solo at 03:40 begins with nothing but detuned, high pitched squeaking and wailing.

While these experiments with the novel capabilities of the synthesizer are interesting, and are in retrospect historically significant, to my ears they did not change the essential quality of Bley’s music. Despite his interest in producing novel sounds with synthesizers, the music he produced with them frequently explored the same aesthetic territory as his earlier work. His avant-garde and, at times, non-metric and atonal improvisations evoked feelings of the aesthetic sublime, and the futuristic electronic timbres of the synthesizer served to heighten that experience.

#### Sun Ra

Avant-garde jazz pianist and prolific composer Sun Ra also made several synthesizer recordings during this period. In New York in 1969, he recorded with a quintet on a Moog Modular system. He was invited later that year to test a prototype Minimoog at the Moog

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<sup>28</sup> Bob Gluck, “Paul Bley and Live Synthesizer Performance,” *Jazz Perspectives* 7, no. 3 (2013): 317, doi.org/10.1080/17494060.2014.912257.

factory in Trumansburg, and these test sessions were recorded.<sup>29</sup> At least one more synthesizer recording (“Space Probe”) was made later that year in Philadelphia.<sup>30</sup> These recordings are currently available on the expanded releases of *My Brother the Wind*, volumes one and two.<sup>31</sup>

Many of Sun Ra’s synthesizer recordings include no accompaniment, consisting of only solo Moog. These recordings are bizarre avant-garde soundscapes that abut the threshold between music and noise. Far from carefully constructed compositions, they seem to document Sun Ra’s unselfconscious improvised explorations of a new instrument. As Irwin Chusid describes in the online liner notes to *My Brother the Wind Vol. 2*, “Because of the ad hoc nature of the session, the Moog works, though titled, sound improvised, as Sunny tests the keyboard action, seeks chromatic capabilities, and adjusts tones and timbres. . . . With the Moog, Sun Ra. . . was exploring the unknown, tapping into the future, levitating thru the cosmic flux, as the titles indicate.”<sup>32</sup> The sounds on these recordings feature the unmistakable and then-novel timbres of the synthesizer; however, their overall aesthetic character bears striking similarity to Sun Ra’s earlier work.

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<sup>29</sup> Detailed discographical information is available on the Bandcamp pages for Sun Ra’s albums, which also allow unrestricted streaming of all contents. For example, *My Brother The Wind Vol 1* ([sunramusic.bandcamp.com/album/my-brother-the-wind-vol-1-cd-lp-digital](https://sunramusic.bandcamp.com/album/my-brother-the-wind-vol-1-cd-lp-digital)) and *Volume 2* ([sunramusic.bandcamp.com/album/my-brother-the-wind-vol-2](https://sunramusic.bandcamp.com/album/my-brother-the-wind-vol-2)).

<sup>30</sup> Thom Holmes, “Sun Ra & the Minimoog,” Moog Foundation website, November 6, 2013, [moogfoundation.org/sun-ra-the-minimoog-by-historian-thom-holmes/](https://moogfoundation.org/sun-ra-the-minimoog-by-historian-thom-holmes/).

<sup>31</sup> Sun Ra & His Arkestra, *My Brother The Wind Vol. 1—Expanded Edition*, Spotify, 2016, likely recorded 1969-1974; Sun Ra, *My Brother The Wind Vol. 2*, Spotify, 1971, likely recorded 1969-1970.

<sup>32</sup> Irwin Chusid, online liner notes for *My Brother the Wind, Vol. 2*, Bandcamp, [sunramusic.bandcamp.com/album/my-brother-the-wind-vol-2](https://sunramusic.bandcamp.com/album/my-brother-the-wind-vol-2). These notes are only signed “I.C.,” but the sole name with those initials in the credits that follow the notes is Irwin Chusid, who is credited for digital restoration. Chusid’s website describes him as a “music historian” and “landmark preservationist,” so I think it is a safe guess that he wrote these (and several other) liner notes on Sun Ra’s extensive Bandcamp page.

Sun Ra had been recording otherworldly sonic landscapes without a synthesizer for much of the prior decade. Several examples can be found on the album *Continuation, Vol. 1*,<sup>33</sup> recorded sometime in the years immediately preceding Sun Ra's first Minimoog recordings. "Intergalactic Research" from this album consists of eight minutes of unmeasured, non-tonal, formless sounds. Sun Ra (and possibly additional unlisted personnel) records the sound of low- and high-pitched drums, cluster chords in the highest registers of an electric organ (perhaps Sun Ra playing with his fist), frantic and imprecise-sounding notes from a Hohner Clavinet, and other percussive sounds that are hard to identify. The next two tracks on the album, "Earth Primitive Earth" and "New Planet" follow a similar vein, with the latter also conspicuously employing a tape reverb effect. This reverb effect was likely the work of drummer Tommy Hunter, who, as Irwin Chusid reports in the online liner notes to *Art Forms of Dimensions of Tomorrow*, "ran a cable from the output back through the input, creating a mind-bending feedback loop that could be shaped by adjusting the volume of the playback knob." Providing testimony to Sun Ra's love of new and electronically-manipulated timbres, Chusid continues, "Tommy was initially apprehensive that Sun Ra might be furious at the cacophony, but when he heard it, the bandleader was delighted."<sup>34</sup>

Electronic music scholar Thom Holmes identifies the 1961 recording "Cluster of Galaxies"<sup>35</sup> as an even earlier example of Sun Ra's soundscapes. As Holmes describes it, the recording "forgoes traditional jazz form and became Sun Ra's version of *musique concrète*, a

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<sup>33</sup> Sun Ra & His Arkestra, *Continuation Vol. 1*, Bandcamp, dated 1968-69 but possibly recorded a couple years earlier, [sunramusic.bandcamp.com/album/continuation-vol-1](https://sunramusic.bandcamp.com/album/continuation-vol-1).

<sup>34</sup> Irwin Chusid, online liner notes for *Art Forms of Dimensions Tomorrow*, Bandcamp, <https://sunramusic.bandcamp.com/album/art-forms-of-dimensions-tomorrow>.

<sup>35</sup> Track 1 of Sun Ra, *Art Forms of Dimensions Tomorrow*, 1965, recorded 1961, accessed via Bandcamp <https://sunramusic.bandcamp.com/album/art-forms-of-dimensions-tomorrow>.

soundscape of suspended sounds, tinkling piano strings, and the sonorous drone of an amplified gong or cymbal. This was. . . clearly an imitation of tape music that Sun Ra had heard coming from any number of institutional electronic music studios.”<sup>36</sup> This track, like Sun Ra’s other soundscapes, does bear some resemblance to *musique concrète* in that the features of interest are not conventionally musical: they lack meter, form, harmony, and melody, and they are much more likely to evoke a feeling of the aesthetic sublime than to make a listener want to dance. However, it is unclear to me whether Sun Ra was attempting to imitate *musique concrète* or simply pursuing his own tastes, *sui generis*.

Sun Ra was likely drawn to the synthesizer at least in part because of its novelty. Playing new instruments was a major part of his practice; he recorded with dozens of them. The Tom Lord Jazz Discography credits him with playing nearly 70 instruments, at least 20 of which include keyboards.<sup>37</sup> Indeed, only two years prior to recording with a synthesizer, Sun Ra recorded with the Hohner Clavinet.<sup>38</sup> This instrument had only been commercially available for about a year before he adopted it, and his 1967 album *Atlantis*<sup>39</sup> may be the first jazz album to have featured it.<sup>40</sup> On other recordings from the time period, including “Intergalactic Research,” he plays a Gibson Kalamazoo K-101 electric combo organ. Sun Ra must have felt that both the clavinet and the K-101 formed a special enough part of his repertory that he gave them both

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<sup>36</sup> Holmes, *Electronic and Experimental Music*, 422.

<sup>37</sup> The Jazz Discography Online, lordisco.com. The numbers here are imprecise because the discography includes entries that are difficult to identify, like “space instr.,” and “thrash harp.”

<sup>38</sup> He called it a “Solar Sound Instrument.”

<sup>39</sup> Sun Ra & His Astro Infinity Arkestra, *Atlantis*, Bandcamp, recorded 1967-68.

<sup>40</sup> Trevor MacLaren, “Sun Ra: Atlantis,” *All About Jazz*, October 5, 2003, [allaboutjazz.com/sun-ra-atlantis-sun-ra-by-trevor-maclaren.php](http://allaboutjazz.com/sun-ra-atlantis-sun-ra-by-trevor-maclaren.php).

characteristically futurist names: the “solar sound instrument” and the “space organ,” respectively.

Sun Ra’s recordings of futuristic soundscapes, his eager adoption of tape reverb, and his use of novel electronic instruments all suggest that Sun Ra was eager to explore new timbral territory before ever having access to a synthesizer. Considering this, Sun Ra’s early Minimoog explorations can be seen not as a dramatic shift in his aesthetic, but as a natural outgrowth of his established search for new timbres.

### Herbie Hancock

Beginning in the late 1960s, celebrated jazz pianist Herbie Hancock performed and recorded with a new group that was officially named the Herbie Hancock Sextet, but is most commonly referred to today as the Mwandishi band (a reference to Hancock’s adopted Swahili name). In 1972, Hancock’s producer encouraged him to learn about synthesizers.<sup>41</sup> An engineering major in college and a lifelong technology enthusiast, Hancock expressed interest. He was introduced to Dr. Patrick Gleeson, a former English professor at San Francisco State University who operated a recording studio containing a Moog modular system. The Sextet had already recorded several tracks for an upcoming album, and Hancock asked Gleeson to overdub synthesizer parts atop them. Gleeson remembers the experience:

So Herbie comes down to the studio with the material they’d already recorded. I’d just bought a 16 track, and it had a loop function. So he tells me to set everything up and he puts on “Quasar.” So we’re listening and he says, “Can we hear that again?” We loop it. He says, “I’m thinking of something we can add here.” So I start patching the Moog 3, and I’m just rushing like crazy because I think I have no time to get this shit together. And then he says, “Okay, did you record that?” And I tell him no because I was setting up the synthesizer for him to play. And Herbie being Herbie, he liked what I was doing and says, “Well,

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<sup>41</sup> Herbie Hancock and Lisa Dickey, *Possibilities* (New York: Penguin Group, 2014), 143.

why don't you just keep playing, I'll be back later, just keep going." And by the time he'd come back the next day I'd overdubbed an entire side of the album.<sup>42</sup>

This collaboration led to the album *Crossings*,<sup>43</sup> and Gleeson began performing live with the Sextet (using an ARP 2600 instead of the bulkier Moog). Their music in many ways followed the tradition of early fusion groups in the model of *Bitches Brew*, blending rock and funk grooves with avant-garde sensibilities and harmonic adventurousness. In his seminal book about the Mwandishi band *You'll Know When You Get There*, Bob Gluck connects the sound of this group with the free jazz movement that had blossomed in the decade prior. He writes that although "in its 1969 incarnation, the Herbie Hancock Sextet was at first an idiomatic jazz band. . . . [whose] music was organized by conventions of the 'head' followed by solos, which were tied to the chord changes,"<sup>44</sup> the band increasingly explored the territory of free, unstructured improvisation. Gluck writes, "In fall 1970, the music of the Mwandishi band became increasingly organic, spontaneous, and ever evolving. As the lifeblood of the band increasingly became collective improvisation, the results, being of the moment, could be striking in their innovation and unpredictability."<sup>45</sup>

As a dedicated synthesist in the group, Gleeson's parts were almost entirely textural: beeping, squeaking, buzzing, and echoing in support of the acoustic and electroacoustic instruments played by the rest of the band. Without a precedent to follow, it was a difficult—and incredibly creative—project. As Gluck describes:

In 1972, there was no existing paradigm for Gleeson to follow in performing electronic instruments live with a jazz ensemble. He was not playing melodic

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<sup>42</sup> Derek Opperman, "Wearing a Really Different Fur," *Red Bull Music Academy Daily* (May 27, 2015), [daily.redbullmusicacademy.com/2015/05/patrick-gleeson-feature](http://daily.redbullmusicacademy.com/2015/05/patrick-gleeson-feature).

<sup>43</sup> Herbie Hancock, *Crossings*, Warner Bros. Records, 1972, recorded February 15-17, 1972.

<sup>44</sup> Gluck, *You'll Know When You Get There*, 144.

<sup>45</sup> *Ibid*, 147.

lines that drew on historical acoustic instruments, as in Wendy Carlos's *Switched on Bach* (1968). His aesthetic was equally different from jazz pianist Paul Bley's "Synthesizer Show," and progressive rock musician Keith Emerson. . . . Nor was he playing exclusively abstract electroacoustic music, like John Eaton's works on Paul Ketoff's *Synket*. What Gleeson was attempting to do was create real time sound design on an orchestral scale, often using noise elements, and doing so within an improvisatory jazz context.<sup>46</sup>

And yet Gleeson's synthesizer textures, although original and creative, did not represent a paradigm shift for Hancock's band. Hancock was already using electronically manipulated timbres as a core feature of the group. He rarely played an acoustic piano. Instead, his primary instrument was the electro-acoustic Fender Rhodes, which he routed through effects boxes like the Echoplex and a fuzz-wah pedal. "I was always hooking up various gadgets to the electric piano, sometimes right before a show," Hancock relates in his autobiography. "Once, when we were in Boston, I got together with a couple of engineers from MIT, who told me, 'Just hook up this box to your piano—it will change the shape of the sound wave!' I loved exploring new sounds."<sup>47</sup>

For Hancock and other keyboard players of this period, the Rhodes functioned as much like a piano as a sound design instrument. Timbral manipulation was, by 1970, a mainstay in psychedelic rock, exemplified by the distorted electric guitar of Jimi Hendrix and the studio effects used by The Beatles. Electro-acoustic keyboards allowed pianists to get in on the action. As Gluck reports, Hancock "quickly cultivated an appreciation for the sonic potential of the Rhodes for multiple reasons. Certainly he was constitutionally an aficionado of electronics and

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<sup>46</sup> Ibid, 128.

<sup>47</sup> Hancock, 143.

devices. . . . But on a deeper level, he was fascinated by sound.”<sup>48</sup> Gluck offers a telling quote by

Hancock:

I thought of Synthesizers as instrument makers. You program a certain way and you get a sound. You can't do that with an acoustic piano. An acoustic piano basically has one sound and that's it. Whereas these other instruments, because you can tweak them in different ways and make other sounds out of them, they were like sound design devices. The Rhodes was a preview of that in a way.<sup>49</sup>

Other instruments Hancock used with the Mwandishi band were the Mellotron and Hohner D-6 Clavinet,<sup>50</sup> each of which offered additional timbral possibilities. In this context, the addition of a synthesizer to the arsenal of sound design instruments at the band's disposal was hardly a game changer.

In fact, despite Gleeson's part being overdubbed, his synthesized textures blend nearly seamlessly with the band's previously recorded material. He created non-pitched, ambient, sci-fi-like effects using AM and FM synthesis, sample-and-hold circuits, and filtered noise.

“Gleeson's work is so deeply embedded within the texture and flow of the music that one seems to emerge from the other,” Gluck writes. And as Gleeson himself later observed, “[In live performances] you can't really tell [whether a particular sound is me or one of the horn players]. And everybody sounds like a synthesizer.”<sup>51</sup>

On the band's final album, *Sextant*,<sup>52</sup> Gleeson's synthesizer even seems to support a non-musical aesthetic of the Mwandishi group: the intersection of African and African-American culture and identity with technological innovation, retrospectively referred to as Afrofuturism.

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<sup>48</sup> Gluck, *You'll Know When You Get There*, 73.

<sup>49</sup> *Ibid*, 71.

<sup>50</sup> *Ibid*, 133.

<sup>51</sup> *Ibid*, 113.

<sup>52</sup> Herbie Hancock, *Sextant*, Columbia Records, 1973, recorded 1972.

Around the time of the formation of the band, Hancock and his bandmates had each adopted a Swahili nickname (Hancock's was Mwandishi) and "started embracing other visible symbols of the black diaspora." As Hancock remembers it, "We started wearing dashikis and African talismans, and I began to feel more connected than ever to the civil rights movement and to our shared, collective past as black musicians. This was a powerful transformation, and of course it affected our music."<sup>53</sup> This combination of African cultural symbols with electronic timbres created a distinctly Afrofuturist aesthetic for the band. This aesthetic—shared by Sun Ra—is evoked by Robert Springett's artwork for *Sextant*, which depicts two dark-skinned men dressed in colorful tribal attire dancing in an austere, science fiction landscape under an enlarged crescent moon.<sup>54</sup> The opening track, "Rain Dance" begins with a repeating synthesizer pattern generated by a device called a Random Resonator, which Gleeson described in 2014 as a "clever realization of a sample and hold circuit."<sup>55</sup> This pattern, in the context of the group's broader aesthetic, strikes me as notably Afrofuturist. Its synthesized timbre evokes a sense of science fiction futurism, and the repeating rhythm is reminiscent of the driving groove of some forms of African drumming. Again, the synthesizer here seems to serve aesthetic goals already present in the music rather than abruptly and profoundly changing it.

### Conclusion

Not all the jazz musicians who were early adopters of the synthesizer used it to create avant-garde music; indeed, not all jazz musicians were creating avant-garde music when the

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<sup>53</sup> Hancock, 120.

<sup>54</sup> Marshall Bowden, "The Afrofuturism of Robert Springett and Herbie Hancock," *New Directions in Music* (blog), March 28, 2019, [newdirectionsinmusic.com/afrofuturism-robert-springett-and-herbie-hancock](http://newdirectionsinmusic.com/afrofuturism-robert-springett-and-herbie-hancock).

<sup>55</sup> Patrick Gleeson, Can We Talk About Herbie Hancock's *Sextant* Album for a Second? [Online forum comment #29], October 2, 2014, message posted to [www.gearslut.com/board/10451580-post29.html](http://www.gearslut.com/board/10451580-post29.html).

synthesizer became available. Jan Hammer of the Mahavishnu Orchestra used synthesizers to emulate electric guitars, often strapping the instrument to his shoulders and standing as a guitarist would. And Dick Hyman's two 1969 Moog albums<sup>56</sup> are groovy, tonal affairs that share more in common with pop music of the time than with jazz. Perhaps this is not surprising. After all, the synthesizer is but an instrument, and by design it is incredibly versatile. Musicians choose what to do with their instruments, not the other way around. And though the synthesizer may have had special appeal to musicians seeking to add an element of futurism and timbral novelty to their music, the instrument was by no means restricted to that role.

In any case, despite the synthesizer's novelty, it did not profoundly alter the music jazz musicians were creating—at least not during the first few years of its availability. The musicians who adopted it were largely those who had already been experimenting with novel textures and, in many cases, electronic timbres. Although the synthesizer no doubt affected and influenced jazz musicians, its initial uses are best understood not as entirely groundbreaking but rather as a natural outgrowth of the musicians' previously established aesthetic goals.

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<sup>56</sup> Dick Hyman, *Moog: The Electric Eclectics of Dick Hyman*, Command Records, 1969; Dick Hyman, *The Age of Electronicus*, Command Records, 1969.

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