

Formulae and Spectra The Quiet Pioneering of Jonathan Harvey, 1967-73

by Paul Griffiths

As is well known, Hugo Vernier, in his poetry collection *Le Voyage d'hiver* (1864), anticipated celebrated works by Stéphane Mallarmé, Arthur Rimbaud, Paul Verlaine, and many more.¹ Readers may therefore need to be assured that, in making similar claims for Jonathan Harvey, this essay is dealing with a composer who had a real existence.

Happily, the Jonathan Harvey Collection held by the Paul Sacher Stiftung contains abundant evidence of that existence, including, besides scores and sketches, a hardback notebook (henceforth HN) the composer seems to have kept by him throughout his adult life, in order to catalogue his works, at one end of the book, and, at the other, inverted, to jot down notes on his reading and creative ideas. Dates appear infrequently among those notes, though of course the succession is some indication of chronology. We can thus be sure it was before July 5, 1967, that Harvey proposed venturing into a domain that would be of lasting importance to him, that of electronic music. This first potential step involved the foundation instrument of Stockhausen's *Momente* – one of two Stockhausen works he had witnessed at Darmstadt the previous summer in the films by Luc Ferrari, the other being *Mikrophonie I*. His project now was his *Cantata II*, and the note in question asks “Electronic organ?”

The answer was to be in the negative, but the impression left by those Stockhausen experiences remained, as revealed in the note of the later date just mentioned, which has to be quoted in full:

5.7.67 Noh Play setting. “Ghost” Play. Instruments: Piano (with contact mike?) (two players?) Electronic organ, percussion with contact mike & Anna Maria's xylophone! [presumably a toy instrument belonging to Harvey's three-year-old daughter], glass plate with contact mike controlled by director. Transistor radio for climaxes. Superimposition of layers. Chorus, often provide mere noise. Style: modern dress? Most complex sounds for supernatural. Bird noises etc. from glass plate. Extremes of Love & Death [this phrase added in pencil to the ink note].²

1 See Georges Perec, *Le Voyage d'hiver* (Paris: Seuil, 1993).

2 Jonathan Harvey, notebook “Thoughts,” p. [62] (Jonathan Harvey Collection, PSS).

Not only do we have the electronic organ again but also the “microphony” of *Mikrophonie I* and even – what had not yet been added to the instrumentarium of Stockhausen’s performing group but soon would be – a radio receiver. By no means for the last time, Harvey independently imagines an innovation that another composer, similarly independently, is also imagining, or soon will imagine.

Notes in HN refer to other projects of 1967-68 involving electronic equipment (contact microphones, gramophone, tape-delay system), of which the only one to reach completion was *Cantata III* for soprano and mixed sextet, designed for the Pierrot Players, the group recently founded by Peter Maxwell Davies and Harrison Birtwistle. Not only does the pianist double on electronic organ (though Harvey asks for a RIHA “or similar,” rather than the Hammond of *Momente*), there is also a connection with *Mikrophonie I* in the use of a contact microphone on a cymbal and later tam tam, with a volume control and cowbell band-pass filter.

Recorded in HN as having been completed in July 1968, Harvey’s *Cantata III* appears to be the first score by a British composer to require live electronic manipulation of sound, predating Roger Smalley’s *Transformation* for piano and electronic modulation (August 1968 - March 1969³). (The ensemble Gentle Fire,⁴ founded the same year, also used live electronics, but not scores.) If Harvey’s historical pre-eminence in this regard has not been recognized, that may be because the work’s first performance took place in Southampton, where he was a university lecturer, not in London. Also, the work seems not to have been performed since, nor is there a sale edition of the score.

Just over a year later, in the autumn of 1969, Harvey went to Princeton for a year under a Harkness Fellowship, perhaps deliberately following the examples of Davies and Birtwistle. As much as Darmstadt in 1966, Princeton in 1969-70 had a crucial effect on his music. Strongly impressed by Milton Babbitt, he also aligned himself with a lively group of composers using the computer sound-synthesis technology developed by Max Mathews at Bell Telephone Laboratories, Murray Hill, NJ, sixty kilometers away. He must have spent a fair amount of his time in the United States on his orchestral piece *Benedictus*, for performance at the Bristol Proms in May 1970; other than that, his main creative preoccupation seems to have been his first composition on tape.

Material for this at the Paul Sacher Stiftung includes two twelve-staff exercise books whose covers Harvey inscribed in pencil “Computer Study” and “Computer Study (2),” appending to the latter the title “Time Points.”

3 See www.rogersmalley.com/programnotes.htm#notetransformation (accessed March 27, 2018).

4 See Hugh Davies, “Gentle Fire: An Early Approach to Live Electronic Music,” *Leonardo Music Journal*, 11 (2001), pp. 53-60.

$\downarrow = 90$
 $\uparrow = 360$

INITIAL STATEMENT START FINAL STATEMENT A10

Musical score with ten staves. Annotations include "Echo", "New Line", and "New Line". Measure numbers are written above the staves. The page is numbered "61" at the bottom right, with "A17=10" written below it.

Plate: Jonathan Harvey, *Time Points* for tape (1969-70), sketches in sketchbook "Computer Study," p. [7] (Jonathan Harvey Collection, PSS).

The cover of the first also carries a date, "1969-70," in dark blue felt-tip pen, and since HN records that Harvey finished the piece in June 1970, this indicates he spent over five months, at least, on the seven-minute composition.

As its title suggests, *Time Points* was an immediate response to Babbitt. Most of the piece is made up of twelve segments of twelve-part counterpoint where each line is based on a twelve-note row laid out to instance also a set of twelve time points (Babbitt's term for the position of an attack within the measure). The two exercise books include tables of rows, form schemes, and other annotations, as well as a full score of the entire piece.

For all its Babbittian abstraction and fascination, however, *Time Points* evinces a connection, still, with Stockhausen, though no longer as echo. The twelve-part structure, where textures are varied by different proportions of legato and staccato lines, is prefaced by a two-part segment in which the basic set is presented in the legato manner with its inversion staccato, both in a middle register (*Plate*). If this melody appears somewhat familiar in character, there would be a reason. The registral conformity, the repetitions of intervals, the use of all twelve notes, the residues of tonality (with triads of C# minor and F major outlined in the legato Line), and the characterization of notes and intervals (for example, B \sharp always has the length of a dotted eighth-note and follows a longer note) all coincide with the principles of "formula composition," which Stockhausen was not to introduce until the first performance of his *Mantra*⁵ on October 18, 1970, four months after Harvey had finished work on *Time Points*. (Stockhausen's *Formel* of 1951, in many ways an anticipation of formula composition, remained unpublished and unheard until 1971.) This is not to suggest that Stockhausen could have taken note of the Harvey piece, or even been aware of the composer at all, for his path to *Mantra* was laid down by its formula, which he had notated on February 26, 1969,⁶ months before Harvey traveled to Princeton. What is clear is that Harvey's arrival at a similar style was independent, and that his later development of that style came as the pursuit of a personal discovery, not as the fellow-traveling of a Stockhausen epigone. Never, however, did he do anything to assert his equal rights here.

Back in Britain, Harvey found opportunities to continue working with recorded and synthesized sound at University College, Cardiff, where the professor of physics, Charles Taylor, had set up an electronic music studio, the first in a British university, in 1970.⁷ There Harvey worked on his large-

5 This is the last work Harvey mentions in his monograph *The Music of Stockhausen: An Introduction* (London: Faber and Faber, 1975), in an appendix dated 1972, pp. 126-31.

Perhaps it is significant that he devotes immediate attention to the ring modulation applied to the piano sound and comes only later to the formula, the mantra.

6 See Hermann Conen, *Formel-Komposition: Zu Karlheinz Stockhausens Musik der siebziger Jahre* (Mainz etc.: Schott, 1991), pp. 59-60.

7 See www.cardiff.ac.uk/physics-astronomy/about-us/our-history (accessed March 27, 2018).

scale *Cantata VII: On Vision* (1971-72), followed by *Inner Light (I)* for six instrumentalists and tape (1973), the latter commissioned by the Radcliffe Trust and opening a trilogy of works with tape. In the published score of *Inner Light (I)* Harvey acknowledges not only the Cardiff studio but also that of "Swedish Radio," undoubtedly referring to the Elektronmusikstudion in Stockholm, which was at this time the only electronic music studio in Europe possessing a computer,⁸ a facility he needed in order to analyze and synthesize sounds so that he could effect the transitions he had in mind, between instrumental sound and electronic. The tape this time was to be used not so much to introduce alien sounds, as in *On Vision*, into which it conveys a speaking voice and synthesized material, but rather in immediate connection with the instruments.

A script Harvey wrote for the first broadcast of the work,⁹ on April 23, 1974, offers details he did not include in his program note,¹⁰ especially with regard to the functioning of the synthesized sound. Remembering Stockhausen's *Kontakte*, the piece begins with a tam tam initiating low electronic sound that moves towards the first instrumental entry, that of the cello, Harvey's own instrument, on its lowest note. Before the cello comes in, the script goes on, this note "is simulated on the tape by a fundamental with seventeen partials. Then, with the help of computer control, the partials are moved and loudened until they become an eighteen-part chord expressing the harmonic structure of the section. Thus 'cello-ness' is integrated into the structure of the piece. It is not a case of the cello *playing* the music, as in tradition, but its acoustic nature *is* the music."

Once again, Harvey was dealing with concepts he shared with a leading contemporary (though neither could have known of the other's work at the time): in this case Gérard Grisey. Two years after *Inner Light (I)*, which HN informs us he wrote on Menorca between April and September of 1973, Harvey was in Paris for the Semaine Internationale de Musique Contemporaine, at which he heard the first performance of Grisey's *Vagues, Chemins, Le Souffle*. His response was strongly positive ("one of the most exciting new pieces of the festival" he changed to "the most exciting new piece" in a notebook¹¹ he kept), to what may have been the first Grisey work he had heard ("One can feel reasonably sure that Grisey is going to be exciting to watch"). Nowhere in these notes, however, does he relate Grisey's music to his own, and when he came to write about spectralism he positioned himself as a latecomer. Again, modesty prevailed. "This type of vertical sound-sculpture," he recalled, referring to the electronic creation and trans-

8 See Knut Wiggen, "The Electronic Music Studio at Stockholm, its Development and Construction," *Interface*, 1 (1972), no. 2, pp. 127-65.

9 BBC WAC, file R132/75/1.

10 For this see www.musicsalesclassical.com/composer/work/7644 (accessed March 27, 2018).

11 Collection of Rosaleen Harvey.

formation of spectra, “had its personal origins in *Mortuos Plango, Vivos Voco* for 4-track tape (IRCAM 1980),”¹² as if he had not already discovered the essential spectralist premise that “harmony is timbre; timbre is harmony,”¹³ to quote from the same essay, seven years before.

Undoubtedly the notion of a workable equivalence between timbre and harmony had for Harvey – as no doubt for Grisey – a source in Stockhausen. Culminating in an orchestral work based on a twelve-note row that is the retrograde of that of *Kontakte*, the *Inner Light* trilogy seems to have been prompted partly by a wish for a closer electronic-instrumental integration than Stockhausen had sought or been able to achieve in *Kontakte*, lacking digital means. Like Harvey, Grisey set out from a computer studio more than a decade after *Kontakte*, and indeed, the chronology of spectralism suggests the whole development was encouraged by the spread of computers in the early 1970s. Within that chronology, a work in which “partials are moved and loudened until they become an eighteen-part chord” can claim as firm a place as anything Grisey or Tristan Murail had created by then, a year before the most widely celebrated totem ancestor of spectralism, Grisey’s *Périodes*.

Though Julian Anderson mentions *Inner Light (1)* in his classic essay on spectralist origins,¹⁴ its precedence is unstressed and has remained largely unobserved. Yet it is clear Harvey already had in mind the central tenet of spectral music at a time when the work was still only a project. The Radcliffe piece was to be, he noted in HN, for “4tet [presumably string quartet] + voice,” this entry coming well before the next dated one, of April 1973, the month work on *Inner Light (1)* properly began, in which he proposed an opera with mechanical characters and taped voices. And the note for the “Radcliffe 4tet” goes on, setting out in a few words a full spectralist agenda: “Timbre (cello C string ff) into harmony & vice versa.”

Within a period of under six years, then, between July 1967 and (at the latest) April 1973, Harvey was not only introducing live electronic music to Britain but also, on an international plane, independently anticipating or paralleling two highly significant innovations of the time: “formula composition” à la Stockhausen and spectral music. If his position in these spheres has not been recognized, that is partly because the works in question have remained underexposed. There is no commercial recording of either *Time Points* or *Inner Light (1)*, and the latter has not been performed in more than a decade. There is also the question of Harvey’s lack of ego. The very quality that made him so receptive to ideas just over the horizon would then have restrained him from taking ownership of them.

12 Jonathan Harvey, “Spectralism,” *Contemporary Music Review*, 19 (2000), part 3: *Spectral Music: Aesthetics and Music*, pp. 11-14, esp. p. 13.

13 *Ibid.*, p. 12.

14 Julian Anderson, “A Provisional History of Spectral Music,” *Contemporary Music Review*, 19 (2000), part 2, pp. 7-22.