

# The manic mechanic

DAVID BRUCE revisits the square-wheeled music of Conlon Nancarrow, short, sharp and still shocking

THE MUSIC of Conlon Nancarrow poses, in the best spirit of American experimental music, a whole host of unanswered questions. Not the least of these, of course, is how and why a composer could accept the extraordinary restriction of writing for the same mechanised instrument – the player piano – for the majority of his working life. But there are also other questions, such as the actual shape of his compositional career – the player piano studies (over fifty to date) are infuriatingly numbered with chronological order as only a secondary consideration. The positions of some were moved, to charade as ‘new works’ so as to fulfil commissions; others seem, by their sudden technical advances to be obviously, perhaps even deliberately misplaced. Nancarrow does not mind – ‘it’s not important’ is apparently his usual riposte and despite the best efforts of Kyle Gann, in his recent analytical study of the composer’s entire oeuvre, this seems a problem which is likely to remain intractable, short of some kind of forensic wizardry on the original rolls. There is also the question of what purpose Nancarrow saw for his works, as he sat in his studio, almost totally isolated for over thirty years, meticulously punching thousands and thousands of holes in bits of paper; as well as the question of what, now that these works are more widely known and appreciated (thanks mainly to the Wergo recordings and the Mikhashoff arrangements), will become of them – will we have to accept the recordings and arrangements, or will some brave entrepreneur lug a player piano around and pray people will want to come and hear it ‘perform’? It is indeed the performability of these works, or lack of it, which is their central conundrum.

Before attempting to impose value judgements on the studies it is first important to consider their true nature. It is obvious that they sit very uncomfortably in the imposing splendour of the great hall of Western Tradition – due in part, no doubt, to their degree of indebtedness to the vernacular (although Ives’s equally vernacular-indebted piano pieces immediately reveal their composer’s western sensibility – however twisted). For me, both their instrumentation and the way Nancarrow treats it means that the studies probably sit most at ease in a small, but strangely fascinating room, in other quarters of the ‘house of music’. This is a room into which no one can resist having a little peek – wherein reside musical-mechanical devices of the fairground or the street-corner, the hurdy-gurdy or the organ-grinder. Most

of the studies share with such machines (though often multiplied in intensity a thousandfold) what can usefully be summed up as ‘the manic and the mechanic’ – on the one hand an irrepressible, over the top, *joie de vivre*, which few could fail to find exhilarating (though few would want to hear for more than a couple of minutes); and on the other, an awareness of their very mechanicity, most obviously in the use of superhuman speeds; but also in the use of a limited range of repertoire consisting of pulse-determined rhythms, symmetrical forms – most things, in fact, which oppose the romantic and very human idea of ‘free expression’. Nancarrow’s music for player piano is, I believe, at its most successful when it accepts these genre restrictions. Conversely, when it takes a reflective stance, or attempts in some way to involve itself with western classical concepts of development and form, the very instrumentation somehow obstructs our acceptance of the music. It seems, rather unsatisfactorily, to have its feet in two opposing and contradictory camps.

THIS SAID, Nancarrow’s influence over mainstream classical composers in recent years has been enormous. Elliott Carter was an early exponent, generously discussing Nancarrow in his 1955 article ‘The rhythmic basis of American music’.<sup>1</sup> More recently and crucial in many ways to the wider dissemination of Nancarrow’s ideas has been the backing of György Ligeti, who in 1981 famously described Nancarrow’s music as ‘the best of any composer living today’ and then went on to write pieces clearly indebted to him in terms both of technique and expression (although the two have shared such similar interests all their lives).

Ligeti’s involvement has helped some of the basic tenets of Nancarrow’s art to become well-known in current compositional circles. The main such, and one which still pervades Nancarrow’s music to this day, is the use of an extremely fast underlying pulse as a means of creating precisely controlled rhythmic complexities. For example, by combining the fast pulse with some kind of repeating cycle of rhythmic intervals (e.g. 3+3+2+2+3+2) one can create a clearly audible but extremely irregular sounding rhythm.<sup>2</sup> It results in a bumpy, hiccoughing, cart-with-square-wheels sort of texture which is highly characteristic of Nancarrow and has gone on to become a common late-20th-century sound, from John Adams to Birtwistle. A similar technique is to simultaneously divide the fast pulse into, say, 5, 6 and 7. This particu-

1. Elliott Carter: ‘The rhythmic basis of American music’, in *The Score and IMA Magazine*, 12 (June 1955), pp.27–32; reprinted in Else Stone and Kurt Stone, ed.: *The writings of Elliott Carter* (Bloomington & London, 1977), pp.160–66, and in Jonathan Bernard, ed.: *Elliott Carter: collected essays and lectures, 1937–1995* (Rochester, NY & Woodbridge, 1997), pp.57–62.

2. See Richard Steinitz’s article in *MT*, May 1996 for a fuller explanation of this technique in Ligeti’s music.

(bar 1  $x = \text{[musical notation]}$ )

1

(bar 14)

2

(bar 17)

3

(bar 19)

4 etc.

(bar 20)

5 etc.

(bar 33)

6

(bar 36)

7 etc.

larly appealed to Ligeti as a means of creating highly complex but accurately performable cross-rhythms, which, notated any other way, could only be approximated.

Nancarrow, of course, made use of these techniques twenty or thirty years before Ligeti or indeed anyone else. His earliest works were in a sort of heightened blues idiom – the rhythmic complexities and foibles of that style being pushed way beyond the means of any human player. In study no.3e, for example, the tempo is a staggering semibreve = 108. Traditional blues harmony reigns; and even when the complexity builds, parts in the main change in sync with the boogie-woogie bass line. These works also extend other traditional blues techniques. For instance the use in blues playing of triplet ‘stabs’ against the basic pulse is expanded to include the use of groups of seven semiquavers and so forth.

No.3b demonstrates very clearly how Nancarrow achieved a marvellous sense of build up in many of these early works in the very simplest of ways. Ex.1 shows how the rhythmic complexity is gradually increased throughout the piece, until finally the very bar-line itself is broken. Nancarrow made the de-

lightful discovery that to accurately capture the natural feeling of ‘swing’ a blues player has, it was best to use the ratio 5:3. Setting this up as the principal background rhythm (line 1), he first places simple crotchet and quaver patterns against it in the upper parts (lines 2–3). These then become sub-divided into groups of three (lines 3–6). Finally groups of three semiquavers form a 12/16 bar which then continues in opposition to the main 4/2 (line 7). In other pieces, a similar build-up is achieved by simply adding more and more layers until we end up unable to distinguish them (e.g. nos.5 and 7), ending in a glorious wash of sound. This is a favourite conclusion for Nancarrow and one which encourages the reading of the piece as a ‘machine gone wrong’ (Ligeti again). It is one of his most successful techniques.

One further technique to mention briefly from these early works is the use in study no.6 of a bar which is simultaneously divided into 3/8, 4/8, and 5/8. This is a forerunner of the use of simultaneously different tempos which would become almost a *modus operandi* for Nancarrow in the years to come. Here its use is simple, but astonishing in its perc-

Ex.2

The image shows two systems of musical notation for piano. The first system, labeled 'cycle 1', consists of two staves. The top staff is in 4/8 time and the bottom staff is in 5/8 time. The music features a complex rhythmic pattern with various note values and rests. The second system, labeled 'cycle 2' and 'cycle 3', also consists of two staves. The top staff is in 4/8 time and the bottom staff is in 5/8 time. The music continues the complex rhythmic pattern. The notation includes various note values, rests, and dynamic markings.

liarity and originality. Ex.2 shows how the ostinato-like bass-line is constructed out of the 4/8 and 5/8 time signatures, shifting between the two every four notes. As the cycle of pitches is 15 notes in length, the pattern is constantly shifting, but by keeping the *approximate* distance between notes in each successive pattern the same, Nancarrow creates a marvellous aural illusion. The ear thinks there is a pattern there but cannot quite pinpoint what it is. It is also, of course another variety of our friend, the square-wheeled cart.

Study no.6 makes use of one of Nancarrow's favourite scales – the melodic minor, specifically that part of it which is different in the ascent from the descent. This is arguably the first Spanish influence which became more dearly manifested in the marvellous Study no.12. The Spanish and the jazz/blues influences are very important to the success of the early works, defining their style and contributing to the feeling of player-piano as popular fairground instrument. From early in the 1950s, however (the numbering obscures exactly when), Nancarrow began to move on from these popular idioms and styles he had made his own. Their influence would creep in and out of his compositions henceforth – for example, in the use of rhythms which alternate crotchet and quaver in a jazzy way. He began instead to develop a more abstract style, particularly in terms of harmony. The evidence suggests that the harmonic changes occurred as Nancarrow took his first steps into the experimental worlds of multi-simultaneous tempos, as well as of accelerandos and ritardandos. Study no.8, a piece which is surely later than its numbering suggests, is the first piece to explore the latter technique. It ingeniously uses a slid-

ing scale of rhythmic intervals which zig-zag up and down to delightful effect. Gann has painstakingly worked out the mechanisms Nancarrow used to achieve this<sup>3</sup> and I need not repeat them here. The important fact of this new rhythmic technique is that, of necessity, harmonic considerations become more approximate. The rhythmic game of faster-slower is the principal goal, planned in advance. The actual notes used are therefore subject to less than full control, in terms of their specific placement.

One technique Nancarrow began to use to control the notes (again I am indebted to Gann) was to make notes in the same vicinity, but in different parts, conform to a common, usually triadic-based chord. Curiously, this effect, clear enough on paper, often does not come through at all on the dry staccato notes of the player piano that Nancarrow so favours. No.11, for example (otherwise, I think, one of a handful of real masterpieces in Nancarrow's output), contains a moment when a series of irregularly spaced chords are underpinned by a regularly spaced bass line (ex.3). Each bass note derives from one or other of the adjacent chords. The aural effect is conversely that of two entirely separate voices.

Such problems of control dominate many of the works with numbers in the teens and early twenties, as Nancarrow plunges headlong into the world of multiple tempos. Most of these works are canonic, with one part moving in relation to another at, say, the interval of a third and at a tempo relationship of, say, 12:15 (meaning in this case that if one is written at minim = 138, the other would be minim = 172.5). Again, Nancarrow would design a rhythmic scheme and then fill it out, creating similar problems of harmonic control to those found when dealing with

3. Kyle Gann: *The music of Conlon Nancarrow* (Cambridge, 1995), p.148.

varying tempos. In particular, many of these teen works suffer mainly from a lack of differentiation, such that even a minute-long piece like no.19 becomes somewhat tedious. Almost palpable in these works is a bold sense of experimentation, as Nancarrow explores musically virgin territory. The bravery, however, does not immediately yield the most impressive of musical rewards.

**I**N VARIOUS studies, Nancarrow also further explored techniques of *accelerando* and *ritardando* first seen in no.8. A new system for punching the rolls for the player piano he obtained sometime in the 1950s allowed him to punch a hole absolutely anywhere – the old system had always had a minimum distance between one hole and the next. This opened the path to experimentation with such exotic devices as logarithmic acceleration. Study no.21 was the first such piece. In it, Nancarrow takes the incredibly simple premise of using two voices, one which starts fast and decelerates, the other which starts slow and accelerates. The result is something as far from the western classical music tradition as can be imagined. It is a pure aural game – but this is its success. Pieces like no.27, which attempt to develop the use of *accelerando* and *ritardando* into a more traditional concept of ‘a piece of music’ fail precisely because of that attempt. Kept short, sharp, machine-like and utterly demented, pieces like no.21 contain the elemental simplicity of genius.

Gradually, Nancarrow’s canonic technique mutates into what Gann usefully calls the ‘sound-mass canons’. These are canons which are not necessarily meant to be heard as such. The canon, or canons, is now used to build up dense nets of sound. Finally, after what must have been years of experimentation and difficulty, Nancarrow reasserts control. This may sound paradoxical when one hears the exuberant wildness of many of the late studies, especially a work like no.48 whose first two movements, already dense and busy enough in themselves are played *simultaneously* to produce the third. One would imagine the result to be pure chaos. In fact, listening to no.48c (the third, doubled-up movement), it is diffi-

cult to ignore the impression of a composer who knows exactly what he is doing. Crystal clear textures emerge and re-submerge and the sense of a grand build-up is enthralling.

The grand finale of chaotic, manic sound likens no.48 and several other of the late studies to Nancarrow’s early works. But there is also something very new about these pieces. Mere funfair fodder they are not. They are rather philosophical tracts, making comments on the very nature of music and our perception of it, rather in the manner of many works by Nancarrow’s great American contemporary, Elliott Carter. Of all Nancarrow’s fifty-plus studies, these are indeed the closest to that Great Hall of Westernism. Somewhere along the way, Nancarrow had clearly involved himself with current compositional thought. Pieces like no.20, with its clustering chromatic ticks *à la* Ligeti (yes, pre-dating Ligeti, no doubt, but clearly involved in the same tradition as him); or no.33 with its use of register as a means of dramatic surprise and its returning, motivic chord progressions: all these pieces display a new source of influence on the middle-aged Nancarrow. Whilst many of these more ‘traditional’ pieces are extremely fine (no.33, with its intelligent, witty form and its sense of contrast and balance is particularly brilliant) one cannot quite accept them for what they want to be – ‘normal’ pieces – and this is due entirely to the instrumentation. Perhaps these pieces above all others would benefit from an intelligent orchestration. Studies like no.48, however, as well as no.25 (one of only two to use the sustaining pedal), no.36, no.40 and several others are Nancarrow’s late(-ish) masterpieces. In these works, the general density of the ‘sound-mass’ is high throughout, rising to a fever-pitch climax. As such, they somehow manage to recapture the feeling of mechanicity. It is the impossible, other-worldliness of the sound on which we once again focus our attention, instead of spuriously attempting to incorporate what we hear into a traditional classical framework. These pieces regain our essential two ‘M’s – the manic and mechanic – which make the best of this strange man’s music such a joy to experience.