

2014

## On constructing a sonic gangbang: system and subversion in Gerald Barry's Chevaux-de-frise

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### Recommended Citation

Mark Fitzgerald, 'On constructing a sonic gangbang: system and subversion in Gerald Barry's Chevaux-de-frise' in *Irish Musical Studies 11: Irish Musical Analysis* ed. Gareth Cox and Julian Horton (Four Courts Press, 2014), 298-314. DOI: 10.21427/DQTZ-KZ47

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## On constructing a sonic gangbang: system and subversion in Gerald Barry's

### *Chevaux-de-frise*

(Chapter for *Irish Musical Studies 11* ed. Julian Horton and Gareth Cox)

In conversation with Kevin Volans in 1984 Gerald Barry declared, 'In a way I find there is so little to say about my music because it is so transparent, and what can you say about something you can see through? This was one of my aims all along.'<sup>1</sup> Commentators seem to have taken Barry at his word, and it is surprising that while Barry's high profile outside Ireland has resulted in prestigious performances and commissions it has yet to generate any significant musicological commentary. Of course Barry's work does present certain problems for the analyst due to its unsystematic nature, and as Ivan Hewett noted:

Barry's pieces are in many ways unknowable; they resist the listener's attempts to 'make sense' of them, and they resist analysis as well. But in another sense they're 'knowable' as few composers are. Each piece by Barry is like a signature in music. It's utterly personal and instantly recognisable.<sup>2</sup>

In this chapter I will outline the background to the composition of one of Barry's key compositions, the orchestral work *Chevaux-de-frise* (1988), before going on to consider elements of Barry's compositional technique as demonstrated in this piece.

#### **Background**

For Barry, the 1980s were dominated by work on his first opera *The Intelligence Park* (1982-88) and, as often happens when composers spend a period of lengthy immersion on one project, this prompted Barry to reassess his approach to technical issues in his work.

He expanded on this theme in interview:

I'm reacting harshly (toward other people's work) because I've reached a certain kind of impasse (or whatever) in my own music [...] In many ways I will level the criticism at my music, that I have at others, that...I am coming to the terrible

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<sup>1</sup> Kevin Volans, *Summer Gardeners: Conversations with Composers, Summer 1984*, (Durban: Newer Music Edition, 1985), 8.

<sup>2</sup> Ivan Hewett, 'Bob's your uncle', *The Musical Times*, April 1995, 201.

conclusion that a lot of my work could be thought of as one-dimensional, in that it tends to take place on one level, and ...I don't know why, but ever since I started writing, I always write in basically the same tempo, and even if it's faster it's the same tempo played faster, if you see what I mean. I've never thought contrapuntally either.

I'm writing this organ piece *Fouetté et Ballon* [...] I tried to get around the whole business of counterpoint and I decided once and for all to write a complex polyphonic texture, even if it killed me. I had this long line written out, in two parts, lasting several minutes, and I simply began at the end and reversed it – I played the retrograde with the original and it happened to work well (with modifications), so you do get all these interlocking, polyphonic textures, but that is purely...artificial, and it's forced. I don't think it sounds forced, but it is. I have no natural...bent towards counterpoint. I just find it difficult not to think in plodding baroque crotchets [...] I feel now for this new direction I want to take, and I don't know what it is, I will need a new technique. I am aching to discover a new and glorious polyphony.<sup>3</sup>

The commission to write a twenty-minute orchestral work for the 1988 BBC Henry Wood Promenade Concerts in London was the first opportunity for Barry to explore these new paths in a large-scale composition.<sup>4</sup>

The work was commissioned by the BBC for the Ulster Orchestra to mark the quatercentenary of the Spanish Armada. Scattered by eight fireships<sup>5</sup> and forced to journey back to Spain around the coast of Scotland and down the west coast of Ireland where it encountered severe weather, twenty-six ships of the Armada foundered in the gales, resulting in the loss at sea of over five thousand men. As part of Barry's pre-compositional work he undertook some research around the topic of the Armada and was struck, not just by the enormous loss of life, but also by the fact that his house on the west coast of Clare overlooked the watery grave of the Armada. Feeling that 'he didn't have it

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<sup>3</sup> Kevin Volans, *Summer Gardeners*, 1, 5 & 8.

<sup>4</sup> Untangling the relation of this interview to the published score of *The Intelligence Park* would be a far more complex task as, while he worked on the acts of the opera in sequence, he also returned at certain points to revise sections of the first act in particular. The first major work to be composed after this interview was a string quartet for the Arditti Quartet entitled *Cork*. Barry was, however, unhappy with the result, withdrawing it after its first performance and, when the piece re-emerged in 1994, only the first 140 bars of the original 420 remained. The rest was replaced with a new second section.

<sup>5</sup> Large ships packed with explosives which were then set alight.

in him to celebrate such an event in music,' he began to move away from the proposed idea of an Armada celebration.<sup>6</sup> An early draft for a programme note declares:

The Spanish Armada and its defeat represent the energy that was such a creative aspect of the renaissance. This piece does not celebrate aggression and destruction but that energy and confidence.<sup>7</sup>

By the time of the premiere he declared that the work was 'a piece of purely abstract music about nothing but itself.'<sup>8</sup> It is clear, however, that submerged beneath the seething surface of the work are images of flames and drowning.

One of the earliest sketches for the work takes two appendices from Niall Fallon's study of the Armada and uses them to generate a chart of pitches.<sup>9</sup> The first part of a table detailing the names of the sunken ships, their captains, tons, guns and men and the place at which they were wrecked is converted by Barry into pitches through a simple process of equating letters and numbers to pitches (A=A, B=B flat, C=B etc.). The relation between such sketches and the final piece is, however, not a simple one to disentangle due to Barry's methodology.<sup>10</sup> Large amounts of pre-compositional material are frequently derived using a variety of mechanical procedures, but only a percentage of this material will then be deemed useable for the piece, as Barry outlined when discussing the composition of *The Bitter Tears of Petra von Kant*:

I may decide purely arbitrarily that I am going to write down twenty A3 pages of sounds, maybe from the first three acts by using some kind of childish system. I might take the first sound from Act I, the second sound from Act II, the third sound from Act III, the fourth sound from Act I, the fifth sound from Act II, the sixth sound from Act III...I'll go back and forth. It's no guarantee of anything—it

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<sup>6</sup> Michael Dervan, 'Music written with lots of sweat,' *Irish Times*, 15 August, 1988.

<sup>7</sup> Trinity College Dublin, MS 10670.

<sup>8</sup> Michael Dervan, 'With lots of sweat'. Reinforcing this is the anachronistic late-seventeenth century term of the title which describes defensive spikes, usually metal used to stop cavalry charges. It is also used to describe difficult passages placed in a text by an author to deter the casual reader.

<sup>9</sup> Niall Fallon, *The Armada in Ireland* (London: Stanford Maritime, 1978), 210–11.

<sup>10</sup> In addition the sketches for *Chevaux-de-frise* are quite fragmentary so items in this sketch could well have undergone many other forms of transformation before use or may have been left unused.

could be complete rubbish. But I do it for twenty pages, like automatic writing. And I never check to see the quality. Because if you check too early and it's rubbish, you get very disheartened and you think, 'I haven't the energy to go on for fifteen more pages. I can't do this.' So I never look, I never check. While listening to the radio, or during breakfast, I do it. And when the twenty pages are full, I then look. And then that's where your whole life comes into play. These arbitrarily-made, found sounds are a springboard for your imagination. And you'd be amazed. And that's the point where you then enter the fray [...] You've got to be able to recognise your sounds.<sup>11</sup>

As the original programme note elegantly states:

Technical games like these are ways in which a composer restricts his choice to a point at which its force is greatly increased, and far from being imprisoned by his self-imposed rules, he can exercise his own perception of beauty by breaking them at moments, as taste prompts.<sup>12</sup>

This note refers to derivations from the Armada ships as a secret language, yet it is one that remains in a sense unheard, or at the very least is not understood; in the aural terrain where music exists, such esoteric references to the past are undetectable.<sup>13</sup> However, the touch of the Elizabethan era does permeate this region through Barry's appropriation of a consort song, *Like as the day* by Patrick Mando.<sup>14</sup> The song, a paean to true friendship and melancholy leave-taking of one who has died, forms the basis of a number of sections of the work after submitting to more of Barry's technical games.

**Example 1.1** Patrick Mando, *Like as the day* (vocal line only)

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<sup>11</sup> Michael Dungan, 'An Interview with Gerald Barry', 27 February 2004, <http://www.cmc.ie/articles/article849.html>.

<sup>12</sup> Adrian Jack, Programme note for premiere of *Chevaux-de-frise*, 15 August 1988.

<sup>13</sup> Barry addresses this issue (and analysis/description of the music) more directly saying that 'It doesn't really tell you anyone anything to say that I used so many pitches here, the music was inverted in a certain way here. That doesn't really tell you anything about how the music was written.' Michael Dervan, 'With lots of sweat'.

<sup>14</sup> It would seem that there is no further information available at present about Patrick Mando who is believed to have lived in the late sixteenth/early seventeenth century.

Like as the day, that bright doth show The dark - ness of  
 the night, is seen So my true friend you soon should  
 know From feign - ing friends that on - ly seem Se - cret and  
 wise, of truth un - stain'd, Con - stant in faith of love un - feign'd,  
 Such one was he, my heart's de - light Now  
 to his soul I bid good - night, now  
 to his soul I bid good night.

While Barry has always insisted that all of music history is essentially his to use as he wishes, at this period he preferred to render the material borrowed unrecognisable.

Explaining his approach Barry stated:

The problem with transforming other people's music is that you only want to take things which are very beautiful, that move you, and then you can only do something which is equally beautiful, otherwise it's a terribly cheap thing to do.<sup>15</sup>

While speaking specifically about *Chevaux-de-frise*, he explained:

It's a very melancholy tune [...] very beautiful. It has that feeling that a lot of Elizabethan songs have that deal with death. It has an extraordinary cool

<sup>15</sup> Adrian Jack, 'Unspeakable practices,' *Music Ireland* 5, July/August 1990, 8.

melancholy. I could not have outdone that. I went to the other extreme, I made it extremely brutal. It is literally smashed, hit on the head with a gigantic sledgehammer. Of course I tried to create a brutality that would have a certain pathos. It's not ugly for the sake of being ugly. It's so ugly that it becomes something else. When I took that tune I made the decision that I could not leave it in the same world it inhabited. I must wrench it into a new world. I mustn't also be disloyal to it. If you borrow material you have a responsibility to the material [...] I would hate if it remained recognisable. I would feel that would be a cop-out, a betrayal of the material.<sup>16</sup>

By uprooting Mando's melody and brutalising it Barry renders it suitable to take part in the climactic section of what Antony Bye described as 'a twenty-minute sonic gangbang, a violent, predominantly *ff* orchestral assault.'<sup>17</sup>

### **Elements of Barry's musical language in *Chevaux-de-frise***

#### **Form and Orchestration**

The basis of all Barry's music is melody. Early works such as '\_\_\_\_\_ ' and Ø (both from 1979) demonstrate a purely monodic scrutinizing of their material while in *The Intelligence Park*, textures vary from instrumental doubling of vocal lines at the unison to four-part textures. *Chevaux-de-frise*, Janus-faced, looks back to the spare writing of the early 1980s but also throws a lance into the early nineties where denser textures were to be created by riotous canonic proliferations of the material. Canon is used at several key points in the work, producing textures of four or more parts, but the aural characteristics of canon are frequently undermined by his pairing of the technique with long passages of rhythmic uniformity. In similar fashion sections of the work which are in two or more parts can seem more like an extension or multiplication of an essentially monodic texture, rather than independent parts, due to the use of exact rhythmic replication across the texture and the shadowing of parts at a fixed interval's distance. The use of clusters in the

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<sup>16</sup> Michael Dervan, 'With lots of sweat.'

<sup>17</sup> Antony Bye, 'Gay days spent in gladness,' *Musical Times* 134, September 1993, 497.

closing section of the work, for example, obliterates any sense of harmony and instead can be interpreted as a realisation of the ‘monody wildly decorated’ that Barry notes as a possible idea for the conclusion of the work in his sketches.<sup>18</sup>

Formally, Barry’s work exists in happy ignorance of the nineteenth century. As Barry puts it:

My music does tend to be constructed in blocks, which are then juggled and you have to find the right order to put them in. In terms of form, it would be pre-classical I suppose. The way I write my music would tend to be more like 16<sup>th</sup>-century keyboard music than like 19<sup>th</sup> or 20<sup>th</sup>-century music.<sup>19</sup>

This method of working is clear from the surviving sketches, as for example where Barry in various notes debates how the piece should begin, at one point considering the possibility of opening with the quiet bassoon passage at bars 182–90, before presumably deciding that this one moment of quiet in the piece would be more effective at a slightly later juncture.<sup>20</sup> And while at one stage Barry considered the possibility of a rondo structure with Mando’s melody acting as a refrain, ultimately the non-developmental (in the German sense) nature of his approach and preference for juxtaposition over transition ensures the evasion of such formal propriety.

Essentially the work can be seen as falling into five main sections each of which can be further subdivided to varying degrees. The opening introductory section from bar 1–190 is framed by use of the same material at the opening and in the closing bassoon section at bar 182. In between fall a section based on a dotted-quaver/semiquaver idea (bars 44–148) and the first appearance of a variant of the Mando theme at 149. The

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<sup>18</sup> Trinity College Dublin, MS 10670.

<sup>19</sup> Barra Ó Séaghdha: ‘Breathing Space,’ *Graph* 6 (August 1998), 14–17.

<sup>20</sup> Trinity College Dublin, MS 10670. This method of working is of course not uncommon and indeed Elgar, with whose Violin Concerto *Chevaux-de-frise* shared the programme at its premiere, is another composer who completed blocks of material before deciding on the ordering of events, though of course with very different structural strategies in mind.



section from bar 191–330 is marked off by its rhythmic uniformity, consisting as it does entirely of quavers. By contrast the following section (bars 331–484) is the most rhythmically variegated section of the entire score. The section from bar 485–731 concerns itself almost entirely with the Mando melody, prefacing it with references back to the opening of the work. The final cluster section (bars 732–60) focuses on a semiquaver/dotted-quaver figure thus acting as a variant rhythmically of bars 44–148 while it derives its pitches from both this passage (bars 44–69) and from the quaver section from bar 301–30.

The formal juxtapositions only partly account for the distinctive grain of this piece. Apart from the use of loud dynamics almost throughout (the nine-bar *mf* bassoon duet being the one major deviation from a prevailing fortissimo), this derives from Barry's idiosyncratic approach to orchestration and voicing.<sup>21</sup> Michael Blake highlights this aspect of *Chevaux-de-frise* noting that it:

has undoubtedly been influenced by his organ playing, functioning rather like the registration of the instrument. This is especially apparent in [...] *Chevaux-de-frise* where the instrumental families and sections are treated rather like organ stops to articulate a frenzied 20-minute movement of great orchestral virtuosity.<sup>22</sup>

The abundant octave doubling and changes of texture to delineate formal sections is indeed reminiscent of organ technique, but Barry also links this approach to his early exposure to Irish traditional music:

[...] a lot of my music is played in unison as well, everyone playing exactly the same thing. A lot of musicians hate that because it's extremely difficult to do. Any problems of intonation are shown up. Céili bands are concerned with nothing but that—playing the notes in this garish rather wonderful way.<sup>23</sup>

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<sup>21</sup> Indeed the lack of 'expressive' dynamic markings throughout the score also seems pre-classical; in general a single indication of *ff* or similar is the only marking for several pages.

<sup>22</sup> Michael Blake, 'Gerald Barry' in Brian Morton & Pamela Collins (eds.) *Contemporary Composers* (Chicago and London, St. James Press 1992), 54.

<sup>23</sup> Barra Ó Séaghdha, 'Breathing Space'.

A typical example of this type of writing can be found at bars 247ff where the two-part writing is distributed across the orchestra as follows:

**Example 1.2** Barry, *Chevaux-de-frise*, reduction of bars 247–54

Flutes, Oboe/Cor Anglais, Violin I

The musical score is presented in two systems. The first system consists of eight staves: Flutes, Oboe/Cor Anglais, Violin I (top staff); Clarinets, Violin II; Trumpet; Trombone and Tuba (middle staff); Bassoons and Cellos; and Piano and Double Bass (bottom staff). The second system consists of four staves: Trombone and Tuba (top staff); Trombone and Tuba (second staff); and two staves for Bassoons and Cellos and Piano and Double Bass. The music is in 6/8 time and features complex rhythmic patterns and dynamic markings.

**Canon and Permutation of Material**

The opening of the work presents a further example of Barry's distinctive orchestration, while also demonstrating some of the devices used for creating larger spans of material in the piece. This section is based on a series of 17 dyads.

**Example 1.3** 17 Dyads used for the opening canons



The texture is increased by use of canon, initially an extra set of dyads, commencing one crotchet after the first, but the constant unvarying crotchets in all parts militate against this being heard clearly as a canon. Once the original seventeen pitches have been heard the upper voices are varied twice through simple permutation with each ‘new’ canon starting at a different point of the original sequence, resulting in new combinations of the pitches. The shift from one canon to the next is, on the one hand, disguised through dovetailing, while on the other, the use of a different collection of instruments highlights the shift. Thus in the first and third canons, the first pair of dyads is doubled on oboe, clarinet, trumpet, horn and piano, while the second (canonic) pair is doubled by the bassoons, trombone, tuba, piano, cellos and double basses. The second canon is then scored for cor anglais, clarinet, horns and piano pitched against bassoons, trombone and bass trombone, piano, cellos and double basses. The permutations of pitch are as follows:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	4 5 6 7 8 9 10 11 12 13 14 15 16 17
- 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14

Permutations continue to be used in the following groups of canons but the texture is altered through the addition of a third canonic pair of dyads (thus giving six voices) at bar 12 and the addition of the remaining instruments of the orchestra to the texture. As before, three permutations are heard before a further set of six voice canons (i.e. three sets of dyads) begin, but whereas at bar 12 the upper pair of voices sets the canons in motion, this time at bar 23 the canons start with the lower pair of voices and work up,

with a series of octave Bs in the first violins masking the entries. Whereas most of the notes in these opening bars can be accounted for by relation to these procedures, there are typically some anomalies, the most striking being the sudden appearance of two semiquavers and a quaver in the cello part (which is the freest line) at bar 14. With the *piu mosso* at bar 33 (signalled by the 5/4 bar), the material begins to fragment, caused by obsessive circling around the latter half of the seventeen-note collection. A further 5/4 bar at bar 43 leads to the juxtaposition of a section contrasting in speed (crotchet = 168), rhythm (utilising a dotted-quaver/semiquaver figuration throughout), orchestration (a reduction from the close of the previous section) and pitch material (a new collection of pitches).

Use of canon occurs at two other points of the work. The first is at bar 100 where the horns, trombones and cellos enter a bar after the flutes, trumpets, glockenspiel, piano and violins with the same melodic idea transposed down a tritone. Complicating the texture however, are a number of other voices entering a crotchet after the first entry with an identical rhythmic profile, but different intervallic content. In the ensuing passage Barry then shifts the position of the entries in relation to the barline, with each iteration resulting in different emphases on the melodic elements and differing harmonic combinations. A further passage of canonic working can be found in the brief *scherzando* from 468–84.

The opening pitch material is used for two of the most notable of the large-scale repetitions of material in the piece, in both cases without any canonic amplification but making considerable use of permutational devices. The first at bar 182 closes the opening part of the work, when the seventeen chords are heard twice on a pair of bassoons,

transposed down a semitone to link the passage to the conclusion of the previous section which ends on a sustained B flat.<sup>24</sup> For the second statement, the material is shifted in its relation to the barline by one crotchet resulting in a change in the natural stresses. The next recurrence of the material at bar 485 is more complex and signals the beginning of the climactic section of the work. In this short section to bar 493 and from 514–27 a series of permutations of the pitches is used, starting with the retrograde form, resulting in the following patterns:

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2	16 14 12 10 8 6 4 2 1 3 5 7 9 11 13 15	17 16 14 12 10 8 6 4 2 1 3 5 7 9 11 13 15
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and at 514:

17 15 13 11 9 7 5 3 1 2 4 6 8 10 12 14 16 (x2)		
17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	17 16 15 14 13 12 11 10 9 8 7 6 5 4 3	16 17 14 15 12 13 10 11 8 9 6 7 4 5 2 3

The cumulative effect of these is the heavy emphasis on the circling around C sharp inherent in the original seventeen chords but with the approach altering each time.

A second form of permutational device can essentially be described as a pairing of rhythmic and pitch ideas of differing lengths, a feature that can be seen clearly in the passage from 423 onwards. Thus from bar 423–426 there are a series of dotted quavers followed by semiquavers, the use of a repeated pair of rhythmic durations resulting in an even numbered pattern. The pitch idea consists of 21 dyads and so when it is played twice in sequence, pitches that were initially allotted to quavers are instead paired with semiquavers and vice versa.<sup>25</sup>

<sup>24</sup> In this way it is curiously reminiscent of the opening section of *The Rite of Spring* where the solo bassoon melody essentially frames the section, the second time occurring transposed down a semitone.

<sup>25</sup> The same process can be observed in the concluding section when the passage from bar 44ff reappears but the rhythmic pattern of dotted-quaver/semiquaver is reversed.

**Example 1.4** Barry, *Chevaux-de-frise*, bars 423–29

The passage from bar 452–67 is a further demonstration of Barry’s use of temporal shifting as a short phrase is repeated six times, the pitches aligning with the rhythms in a slightly different fashion each time.

**Obsessive focus, elaboration and repetition**

The programme note for the work notes that:

In its later stage lines are doubled at fixed intervals, which give the music not so much a particular harmonic colour as a distinctive texture. Yet there is no sense of key, and despite any amount of liberated dissonance, certain notes offer the ear strong points of reference.<sup>26</sup>

It is indeed the case that the extreme dissonance of some sections of the work negates any sense of key but the ‘points of reference’ are often achieved as much through repetition as through any other technique. I have already mentioned the repeated C sharps from the opening material (seven of the seventeen notes in the upper part, two of which are doubled in the lower part), given extra emphasis by the persistent use of neighbouring pitches C natural and D. At some points it is precisely the harmonic colour achieved,

<sup>26</sup> Adrian Jack, ‘Unspeakable Practices’, 8.

either through the doubling of material or freer harmonisations, that helps to demarcate sections of the work or to provide a link between starkly juxtaposed passages. While the emphasis is on the more dissonant intervals of sevenths, seconds and tritones in the outer sections of the work, the middle section is marked off not just by its rhythmic variety but also by its harmonic content. The section from 331–51 contains a wide mixture of intervallic content whereas the passage from 352–373 and its elaborated repeat at 374 focus almost exclusively on fifths and this is taken up again in the passages from 423–29, 441–6 and the scherzando canon at 468.

The replication of the obsessive repetitions found in the rhythmic sphere at several points of the work in the pitch sector can be observed in the section at bar 44–99. Rhythmically it consists almost entirely of a dotted-quaver/semiquaver figuration. The pitch organisation not only carries over the dissonance of the opening with its restriction to sevenths and ninths, but on closer examination it becomes clear that the entire section is constructed using five seventh intervals and their inversion.

**Example 1.5** Intervals used for bars 44–99

The image shows a musical staff in treble clef with a key signature of one sharp (F#). It displays ten dyads (intervals) labeled 1 through 5a. Intervals 1, 2, 3, 4, and 5 are shown as pairs of notes on the same staff. Intervals 1a through 5a are shown as pairs of notes on two staves, representing the inversion of the intervals above. The intervals are: 1 (D4-F#4), 2 (E4-G#4), 3 (F#4-A4), 4 (G#4-B4), 5 (A4-C#5), 1a (F#4-D4), 2a (G#4-E4), 3a (A4-F#4), 4a (B4-G#4), and 5a (C#5-A4).

Apart from its recurrence at the close of the work, the passages from 44–51 and 59–68 reappear in a rhythmically flattened out form (reduced to a stream of quavers) at 247–71, forming the central part of the larger quaver-only section of the work. Omitted in this varied return is a passage at bar 52–8 that contains particularly distinctive repetitions of the dyad marked 1a in Example 1.5.

The approach Barry has to large-scale repetition of material and its elaboration and amplification is most clearly seen in the passage from bar 331–422, which in essence comprises of two related sections of material both of which are repeated. The return of the material from 331–49 at 404 is relatively straightforward, in that, on its first appearance the material is very lightly scored, whereas on the return it is doubled across a wider range of instruments. The middle section (352–73 and 374–403) is slightly more complex as there are additional voices in the repeat while in the second half there is a deliberate transfer upwards in register across all parts, the density and registral shift creating a sectional peak.

### **Brutalisation of Mando**

Barry's use of found material again demonstrates his idiosyncratic combination of the traditionally systematic and the unsystematic. The melody of Mando's song is treated like a long pitch row (with attached rhythms) that can be used in the four basic forms of prime, retrograde, inversion and retrograde inversion. However, whereas the orthodox would construct tables determining the four versions at the same pitch level, Barry uses the simpler expedient of reversing the score to provide him with the starting pitch area of each form of the melody (imagine/turn music example 1.1 upside down).

The material is further subverted through the application of a variety of accidentals to each pitch to deform the melodic lines until Barry has found the contour he is looking for. The first entry of this material, which comes near the close of the opening section, is marked 'brutally' and consists of a truncated form of the altered retrograde



inversion. The remaining phrases are broken up by rests with phrase endings marked by a sforzando chord (E, B and F) giving it a somewhat monumental character.

**Example 1.6** Barry, *Chevaux-de-frise*, bars 149–80

The musical score consists of three systems of two staves each (treble and bass clef). The first system is marked 'Brutally' and 'fff'. It begins with a 5/4 time signature and features a complex rhythmic pattern. A sforzando chord (sfz) is marked at the end of the first system. The second system starts at bar 6 and the third at bar 10. The score is in 5/4 time and features complex rhythmic patterns and dynamic markings.

It is notable that this statement and the following bassoon duet contain the only silences heard in the piece, in contrast to Barry’s earlier work in which silence frequently plays an important role.<sup>27</sup> The next version to appear is a high speed, rhythmically uniform version of the retrograde inversion heard twice starting at bar 494. Once again the material is shifted by one quaver in relation to the barline on its repetition. The inversion, minus its first few notes, follows in similar fashion at bar 532, this entire section acting as a sort of structural upbeat to the large section from 555–731 based entirely on the Mando material.

<sup>27</sup> In reality, each phrase of the first cluster statement of the transformations of the Mando theme at bar 676 is separated by a tutti crotchet rest but due to the density of the sound and the extreme speed (minim=132), these do not ‘sound’ as silences.

Here various versions of the melody are superimposed creating a dense and dissonant texture. The combinations also ensure that where there are rests or long notes in one part there is some rhythmic activity in another.<sup>28</sup> The initial statement in this section gives the deformed prime form to the bassoons, trombones, tuba and double bass. The upper parts (piccolos, oboe, clarinets, glockenspiel, piano and first violins) have the inversion which is doubled at the seventh by the cor anglais, trumpets (with modifications), piano and second violins. The horns and violas play the retrograde inversion.

**Example 1.7** Barry, *Chevaux-de-frise*, bars 545–50

The musical score consists of three systems. The first system is labeled with 'Inversion' above the top staff, 'Retrograde Inversion' above the middle staff, and 'Prime' above the bottom staff. The second system continues the three-staff structure. The third system begins with a measure number '4' above the first staff. The notation includes various note values, rests, and accidentals, illustrating the complex texture described in the text.

This statement is then followed by a series of varied combinations in different registers. The sections at bars 570–95 and 595–621 move to a lower register and combine derivatives of the prime, inversion and retrograde inversion of the theme with the

<sup>28</sup> The one exception is that already mentioned in footnote 27.

addition of the retrograde at bar 595ff. Denser textures are created, not just through the collapse in register, but also through the application of further alterations to the melodic lines, so that for example, whereas oboe, cor anglais, clarinets, bassoon horns, trumpets piano violins and viola are all doubling the inversion at bar 570, there are in fact several ‘versions’ of this material distributed across these parts, with different levels of deformation in each line.

**Example 1.8** Barry, *Chevaux-de-frise*, bars 570–75, variants of the inversion

The image shows a musical score for five staves, likely representing different instruments in an orchestra. The music is written in 3/4 time and consists of five measures. The notation includes various rhythmic values (quarter, eighth, and sixteenth notes), rests, and accidentals (sharps and flats). The score illustrates different variants of a melodic inversion, with some staves showing more complex rhythmic patterns and others showing simpler, more direct versions of the material.

The statements at 622–48 and 648–75 restore the upper register and there is a greater sense of clarity due, not just to the spacing, but also to the straightforward doubling across the upper parts of the orchestra of the retrograde inversion. The cluster version at bar 676 initially only utilises the retrograde and retrograde inversion, but for the second statement at bar 704, the horns and violas add a severely distorted part which could be technically claimed as the prime, its inversion or a combination of both.

**Example 1.9** Barry, *Chevaux-de-frise*, bars 704ff, variant of prime/inversion

The image displays a musical score for four instruments: Horns I & III, Violin II, Horns III & IV, and Violas. The score is written in 3/4 time. The top staff (Horns I & III) is in treble clef and shows a sequence of notes with various accidentals. The second staff (Violin II) is also in treble clef and features a more complex rhythmic pattern with many beamed notes. The third staff (Horns III & IV) is in bass clef and shows a sequence of notes with various accidentals. The bottom staff (Violas) is in bass clef and shows a sequence of notes with various accidentals. The score is a variant of prime/inversion.

**Unsystematic concluding observations**

Barry has frequently commented that he sees differing instrumentations of early works such as *Sur les Pointes* (1981) as each offering an alternative view of the same material, and in a sense this is what happens throughout *Chevaux-de-frise*. Material is heard once and then again, but shifted slightly temporally, rhythmically altered, changed in colour or altered in texture. While Barry may refer to the techniques used as simple or primitive, what is most striking is the highly sophisticated sense of balance and structuring in this piece. For example, it is notable that the highest degree of change of material occurs in the first half of the piece. The first section has several components which on the surface are quite different, and the following quaver section flings a huge amount of pitch material at the listener. After this the blocks of material tend to be larger containing fewer elements. The rapid cutting between the opening dyads and the Mando theme at bar 485 by contrast provides the necessary increase in tension before the climactic section begins.

While Barry eschews transitions in his music, in a sense one can detect in certain passages a covert transitional art as, for example, when the aurally distinctive idea heard in bar 373 is filtered out of the dotted figuration at bar 441 and then becomes the basis of the scherzando section at 452. Another example is the way in which the repeated C sharps and dissonant harmonies at bar 486, followed by the retrograde inversion of the Mando theme, commencing on a C sharp and doubled at the seventh, combine to lead one to the penultimate section of the work. One could also chart out the changing levels of density which occur throughout the work. Earlier climaxes are carefully withdrawn from to ensure a continuous sense of progression and momentum; for example, after the sharp shift upwards in register at bars 374–403 there is not just a drop in register but also a clear return of a previous block of music. The careful terracing of tempi throughout the work also helps to sustain the momentum in a work where more traditional modes of achieving this are absent.

The work demonstrates several traits common in Barry's earlier music such as the relentless exploration of particular intervals and the tendency towards monody. Unusually though, it lacks any significant moment of stillness and in some ways the chamber composition *Bob* from 1989 acts as the shadow-image of *Chevaux-de-frise*. The two works share material including the transformations of Mando's song but *Bob*'s exuberance burns out to a coolly dark close. *Chevaux-de-frise* could be said to contain far less variety of mood even though it is almost double the length of *Bob*, a fact that gives a further indication of how Barry's music was to change in the ensuing years. Subsequent works frequently contain much faster cutting between contrasting sections and it was

only with *The Road* (1997) that Barry began the return to more concentrated focus on smaller quantities of material.

The new polyphony of *Chevaux-de-frise* was to explode in the orgy of canons that encompasses his second opera *The Triumph of Beauty and Deceit* (1991–92) but it is noticeable that the close canons (often at a quaver's distance) favoured in this period tend to utilise intervallic content that avoids the type of dense dissonance preferred in *Chevaux-de-frise*. The exception here is the use of exuberant clusters which have appeared in a range of works throughout Barry's oeuvre including such recent works as 'Home Thoughts' from *Feldman's Sixpenny Editions* (2009). The subversive use of rigid systematic techniques of pitch organisation perhaps reaches its apogee in the high speed 'fake' serial passages in the opening scene of *The Importance of being Earnest* (2009–10). The central section of *Chevaux-de-frise* also provides a springboard into the next phase of Barry's output which tends to encompass a greater rhythmic variety than his work from the 1980s. *Chevaux-de-frise* can therefore be regarded, not just as a highly virtuosic work which can leave the unprepared performer impaled on its glittering spikes, but as a pivotal work in which ideas and techniques that were to preoccupy Barry in the ensuing years appear in embryonic form, while the work also acts in certain ways as a summation of the first phase of Barry's output.