

for arrow 17 would already be lost. The prospect of waiting until after the première to make revisions was not an option. As a conductor, I inserted barlines where possible and numbered the arrows in relation to the beating patterns I prescribed (see Figure 1). These graphics remained for use in subsequent performances. As in other scores which I have discussed, the impracticalities were induced by the ideas which informed the work. It is part of a conductor's task to interpret them with solutions which project the idea successfully. The post-première revisions are then an asset to the performers. My contention is that such changes should never preclude an awareness by the performers of the original score.

One into Three: Context, Method and Motivation in Revising and Reworking *Dance Maze* for Solo Piano

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This article is about my use of revision and reworking to compose a trio of closely related pieces grouped under the collective title *Dance Maze: Variations for Piano, Duos for Trumpet and Piano* and *Solos for Trumpet*.⁹³ Such grouping finds echoes in Pierre Boulez's and Wolfgang Rihm's families of genetically related works, Richard Barrett's work cycles and the interlocking polyworks of Klaus Huber. My approach differs from most of these in harnessing techniques closely associated with another composer – those outlined by Tom Johnson in his book *Self-Similar Melodies*.⁹⁴ *Dance Maze* began life in 1994 as a solo piano piece; it was revised once in 2008 and again in 2017,⁹⁵ by which time the idea of creating a second version by adding a trumpet part had taken hold. The trumpet part was composed using techniques from Johnson's book and was designed to be detachable, thus turning *Duos* into *Solos*. Table 1 summarizes the form of *Duos* (a mobile structure in which the 15 sections may be performed in any order); shows its derivation from *Variations*; and refers the reader to the pages in *Self-Similar Melodies* used to compose the trumpet part. In the rest of this article I position my revisions and reworkings in relation to other composers' practices; I explain in detail some of the changes made to the original piano piece (confining my comments to *Variations* and *Duos*);⁹⁶ and I briefly discuss what drew me to revisit a work from much earlier in my output. My method might be described

⁹³ Recorded on the CD *Dance Maze* (Resonus RES10230, 2018).

⁹⁴ Tom Johnson, *Self-Similar Melodies* (Paris: Éditions 75, 2014). Huber's polyworks borrow from other composers: ... *Plainte* ... , for viola d'amore, is incorporated into the string quintet *Ecce homines*, where it is overlaid with fragments from Mozart's G minor Quintet. 'Klaus Huber: Focus on Mankind', <<https://www.ricordi.com/en-US/News/2014/10/Klaus-Huber-90-Geburtstag.aspx>> (accessed 12 November 2021).

⁹⁵ The *Variations for Piano* subtitle was attached at the time of the 2017 revision.

⁹⁶ *Solos* is simply the trumpet part of *Duos*, but the idea of making it detachable was an important driver behind my decision to use Johnson's processes to compose it; on 27 April 2016 I wrote in my journal that these would 'give the trumpet part its own independent logic ... essential if the piece is going to exist in multiple versions'.

TABLE 1
 SKETCHES, ALTERATIONS AND PROCESSES IN
DANCE MAZE: DUOS AND VARIATIONS

<i>Dance Maze: Duos sketch and date</i>	<i>Location in Dance Maze: Variations, alterations made in Dance Maze: Duos piano part</i>	<i>Trumpet/piano relation</i>	<i>Process from Johnson, Self-Similar Melodies</i>
<i>Counting on Two Levels</i> (8 August 2016)	bars 1–36, RH omitted	aligned	'Counting Several Things at Once', 34–5
<i>Base Six Counting</i> (10 August 2016)	bars 169–200, RH octave higher, LH doubling three octaves lower	aligned	'Counting in Other Bases', 39–50
<i>Sandwiching Automaton 1</i> (11 August 2016)	bars 91–146, selective omission of bass notes, chords and portions of theme from bar 42	aligned	'Transforming Sandwiches', 118–19
<i>Self-Replicating Melody at 3:1</i> (31 July 2017)	bars 240–72	aligned	'Self-Replicating Melodies', 240–1
<i>Base Two Counting</i> (6 August 2017)	bars 65–90	enclosed (trumpet encloses piano)	'Counting in Other Bases', 45–6
<i>17-Note Weaving Pattern</i> (15 August 2017)	bars 37–64, each phrase separated by trumpet solo	interlocked (alternating piano–trumpet)	'Mapping Weaving Patterns', 216–17
<i>Infinite Automaton</i> (17 August 2017)	bars 147–68	non-aligned (trumpet begins and ends first)	'Transforming by Infinite Automaton', 109
<i>Dragon Curve no. 9</i> (24 August 2017)	bars 201–31, phrases separated by crotchet or quaver rests	non-aligned (piano begins and ends first)	'Transforming Dragons', 89–90
<i>Cube Melodies</i> (27 August 2017)	bars 412–37	aligned	'Mapping Geometric Patterns', 203–5
<i>Sandwiching Automaton 2</i> (14 September 2017)	bars 304–18	non-aligned (trumpet begins first)	'Transforming Sandwiches', 122–3
<i>Accumulative Counting 1–12</i> (5 October 2017)	bars 319–34, each phrase separated by trumpet solo	interlocked (alternating piano–trumpet)	'Counting 123', 18–19
<i>Self-Replicating Melody at 5:1</i> (8 October 2017)	bars 335–64, wide-ranging omissions allow only one new chord per phrase	aligned	'Self-Replicating Melodies', 237–8
<i>The Towers of Brahma</i> (26 October 2017)	bars 365–411, RH omitted, from bar 388 RH chords revoiced in both hands and LH triplets omitted	enclosed (piano encloses trumpet)	'Mapping the Towers of Brahma', 177–8
<i>Single-Voice Weaving Canon</i> (29 October 2017)	bars 232–9	non-aligned (trumpet ends last)	'Mapping Weaving Patterns', 214
<i>Another Infinite Automaton</i> (5 November 2017)	bars 273–303	aligned	'Transforming by Infinite Automaton', 107

as automusicological: it has involved detailed study of the sketches for *Duos* alongside reference to written and recorded reflection from the period of its composition.⁹⁷

The procedures I have employed to fashion *Variations* and *Duos* encompass what the Boulez scholar Joseph Salem describes as ‘basic revisions’ and ‘obvious siblings’.⁹⁸ The former preserve the original title and make relatively small-scale changes resulting in an updated version; the latter modify the title (Boulez’s *Anthèmes*, for example, became *Anthèmes 2*), make significant changes (in Boulez’s case, various types of expansion) and usually leave the earlier version intact rather than replacing it.⁹⁹ The way in which *Duos* audibly incorporates *Variations* is also a form of self-borrowing. Leta Miller uses this term in relation to Lou Harrison’s practice of plundering his catalogue for reusable material and associates it with the eclecticism that was so much a part of the composer’s style. I prefer to describe my self-borrowing as reworking because, despite drawing on another composer’s music, *Duos* is stylistically more uniform than the former term might imply.¹⁰⁰

I will now provide some examples to explain how my processes of revision and reworking were carried out. [Examples 1–3](#) show three versions of the same passage from *Dance Maze*. The revisions in [Example 2](#) concern idiom; the performer is now given time to leap between the chords and the octave unison figuration. [Example 3](#) shows a change of character, with a reduction in dynamic to *pianissimo* and much more separation between the chords (now *laissez vibrer*) and the figuration. This second revision, halting the forward momentum of the passage by separating out its constituent figures, hints at the deep-seated aesthetic changes manifested in *Duos* via the reworkings in [Table 1](#).

I will focus on two reworkings to highlight the contrasting ways in which they utilize Tom Johnson’s processes – contrast marked by the degree to which the result of each process is interfered with. *Infinite Automaton* is based on the transformation $n \rightarrow n, n + 1, n + 1$,¹⁰¹ the first level of which is seen in bar 2 of [Example 4](#). Johnson modifies the transformation in two ways: subsequent transformations are applied only to newly added notes, and new notes are twice the duration of old ones. *Infinite Automaton* borrows Johnson’s process intact, differing from his example only in the whole-tone mapping and extension to the sixth level of the transformation.¹⁰² *Dragon Curve no. 9*, on the other hand, reveals considerable intervention in the outcome of its generative process. This process is a version of John Heighway’s paper-folding fractal¹⁰³ – his study of what occurs when a piece of paper is folded rightwards again and again – in which Johnson converts the left and right turns (revealed when the folds are opened to 90 degrees) into a sequence of ones and zeros. Plotted as ascending and descending scale steps, a series of phrases are produced that, starting from the same note, alternately rise or fall in

⁹⁷ Recordings were made via the Com-Note composer’s notebook app, available from Google Play.

⁹⁸ Joseph R. Salem, ‘Boulez Revised: Compositional Process as Aesthetic Critique in the Composer’s Formative Works’ (Ph.D. dissertation, University of Yale, 2014), i.

⁹⁹ Salem points out that in Boulez’s work earlier versions are often marginalized in performance. This is very much not the case with *Variations* and *Duos*; the coexistence of these viable versions is key to the aesthetic critique discussed below.

¹⁰⁰ Eclecticism was not an aim in reworking *Variations*; in a Com-Note narrative from 12 August 2016, I mention that ‘not sounding like Tom Johnson’ has proved easier than envisaged. But, as this had to be balanced against the need to ‘try and remain true to the logic of these self-similar melodies’ (12 August 2016), there are moments in *Duos* that approach Johnson’s style.

¹⁰¹ Johnson, *Self-Similar Melodies*, 109.

¹⁰² The choice of mapping is arbitrary, but follows Johnson’s procedure of translating numbers, for example the 1233233 of bar 3, into scale steps.

¹⁰³ Johnson, *Self-Similar Melodies*, 83.

Example 1 Tom Armstrong, *Dance Maze*, 1994 version, bars 31–8.

31

34

37

Sost. Ped.

(Sost. Ped.)

Sost. Ped.

a sequence of trills.¹⁰⁴ Example 5 (from *Duos*) shows that the melodic curve of Johnson's melody is drastically altered: rather than radiating upwards and downwards from the same pitch, the descending phrases are transposed two octaves higher, creating jagged breaks in the line that disrupt the melody's smooth unwinding. Rhythmically, the regular crotchets of Johnson's example are interrupted by pairs of quavers that mark the change to a new two-note group. The piano part is treated differently in each of these passages: *Infinite Automaton* maintains it intact from *Variations* – the level of autonomy between the instruments here creates a state of near indifference; in *Dragon Curve no. 9* the piano is assimilated to the trumpet's material and the continuous pulses of *Variations* (see Example 6) are disturbed by aperiodic rests.

The main technique used to rework *Variations* to create *Duos* is overpainting, a procedure found frequently in Rihm's music, particularly his *fleuve*, *Formen* and *Seraphim* collections.¹⁰⁵

¹⁰⁴ *Ibid.*, 90.

¹⁰⁵ Alastair Williams, *Music in Germany since 1968* (Cambridge: Cambridge University Press, 2013).

Example 2 Tom Armstrong, *Dance Maze*, 2008 version, bars 65–73.

As in Rihm, the overpainted material sometimes alters or degrades the base layer as was observed in *Dragon Curve no. 9*. But in contrast to Rihm, the new material is derived explicitly from the work of another composer – Johnson; *Self-Similar Melodies* is, after all, a kind of composition ‘manual’ that provides generous links to the author’s own music for the reader to follow up.¹⁰⁶ As in visual art practice, overpainting changes the form of the target work. In *Dragon Curve no. 9* the non-aligned trumpet part (see Table 1) extends beyond the conclusion of the piano’s music, dissipating the tension that has accrued rather than, as in *Variations*, harnessing it to propel the music into the next section. Here, on a larger scale, is the same attenuation of momentum observed in the revisions of *Variations* (Examples 1–3); such a lessening of forward drive in *Duos* represents a significant shift in aesthetic values between the two works that points to my reasons for undertaking such a reworking.

¹⁰⁶ There is often a very close correspondence between the processes exemplified in the book and Johnson’s own music, characterized as it is by the explicit presentation of mathematical phenomena often in an unadorned, monophonic style – see *Rational Melodies* (1982), for example.

Example 3 Tom Armstrong, *Dance Maze: Variations for Piano*, 2017, bars 65–79.

The musical score for Example 3 consists of three systems of piano parts, each with a treble and bass clef staff. The first system (bars 65-68) begins with a *pp* dynamic. It features a complex rhythmic pattern with triplets and octuplets. The second system (bars 69-72) continues with similar rhythmic complexity, including sextuplets and octuplets. The third system (bars 73-76) also features complex rhythmic patterns with sextuplets and octuplets. The score includes various articulation marks such as slurs, accents, and breath marks.

Example 4 Tom Armstrong, *Infinite Automaton*, bars 1–6, from *Dance Maze: Duos for Trumpet and Piano*.

The musical score for Example 4 shows the first six bars of a piece. It is in 2/4 time with a tempo marking of quarter note = c.84. The score includes a *f* dynamic marking. The first staff is for the trumpet, and the second staff is for the piano. The music features complex rhythmic patterns with slurs and accents.

Example 5 Tom Armstrong, *Dragon Curve no. 9*, bars 15–32, from *Dance Maze: Duos for Trumpet and Piano*.

The musical score is presented in three systems, each with a trumpet part and a piano accompaniment.

- System 1 (Bars 15-18):**
 - Trumpet:** Bar 15 starts with a piano (*p*) triplet of eighth notes. Bar 16 has a mezzo-forte (*mf*) quarter note with an accent (>) and a slur. Bar 17 has a piano (*p*) triplet of eighth notes with an accent (>).
 - Piano:** The right hand plays a triplet of eighth notes in the treble clef, and the left hand plays a triplet of eighth notes in the bass clef. Dynamics alternate between *p* and *mf*.
- System 2 (Bars 19-22):**
 - Trumpet:** Bar 19 has a mezzo-forte (*mf*) quarter note with an accent (>). Bar 20 has a mezzo-forte (*mf*) quarter note with an accent (>). Bar 21 has a mezzo-forte (*mf*) quarter note with an accent (>). Bar 22 has a mezzo-forte (*mf*) quarter note with an accent (>).
 - Piano:** Continues with the triplet accompaniment. Dynamics include *p*, *mf*, and *p*.
- System 3 (Bars 23-26):**
 - Trumpet:** Bar 23 has a mezzo-forte (*mf*) quarter note with an accent (>). Bar 24 has a piano (*p*) quarter note with an accent (>). Bar 25 has a mezzo-forte (*mf*) quarter note with an accent (>). Bar 26 has a mezzo-forte (*mf*) quarter note with an accent (>).
 - Piano:** Continues with the triplet accompaniment. Dynamics include *mf*, *p*, and *mf*.

Example 5 (cont.)

27

31

cresc. poco a poco

mf p mf p mf p

3 3 3 3 3 3 3 3

My decision to rework *Dance Maze* was driven by my own critical response to the 1994 and 2008 versions. The revision discussed earlier (Example 3) was a ‘reaction against the rather “bashy” nature of the original, even in the [2008] revised version’,¹⁰⁷ while the later over-painting of trumpet material would ‘override the formal divisions in the piano part’ and address the ‘short breather problem I’ve noticed in a few of my pieces’.¹⁰⁸ It is common for composers’ revisions to be prompted in these ways, but such critiques can move beyond matters of style and technique to embrace deeper aesthetic changes. Miller shows how Harrison’s ‘compulsive retrospection’¹⁰⁹ reached back beyond his 1947 nervous breakdown and the re-evaluation of his compositional language this occasioned; for example, the *Largo ostinato* (1937) was reworked as a movement of the Third Symphony (1982) with the upper parts changed significantly to reflect Harrison’s study of the Chinese cheng in the 1960s. Salem’s study of

¹⁰⁷ Armstrong, journal entry (21 February 2016).

¹⁰⁸ Armstrong, journal entry.

¹⁰⁹ Leta Miller, ‘Lou Harrison and the Aesthetics of Revision, Alteration, and Self-Borrowing’, *Twentieth-Century Music*, 2 (2005), 79–107 (p. 80).

Example 6 Tom Armstrong, *Dance Maze: Variations for Piano*, bars 215–31.

215 *p* *mf* *p* *mf*

217 *p* *mf* *sim.*

220

223

226

229 *p* *f*

Boulez's long decade (1948–62) is predicated on the mismatch between the composer's aesthetics (as revealed in his early writings) and the music of formative works of the period, notably *Le marteau sans maître*, *Structures 2* and *Pli selon pli*.¹¹⁰ Boulez's later writings, such as *Boulez on Music Today*, fail in Salem's view to catch up with and adequately explain the aesthetic changes in his mature music. These changes involve a move away from an organicist aesthetics of growth towards one of proliferation involving 'self borrowing, transcription and "open" compositional structures'.¹¹¹ As Salem shows, Boulez's works may be open in a variety of ways: revised over many years; sprouting from a single kernel of material; or possessing formal mobility. In my own *Duos* it is mobile form that is the vehicle for aesthetic critique; the fixed, regulated¹¹² form of *Variations* is 'exploded' into 15 discreet sections (see again Table 1) that can be played in any sequence¹¹³ – my reworking rearticulates an ordered whole as a disordered collection.

Duos critiques not only the integrity of a particular work, but also (through its openness) the concept of the musical work itself. Luciano Berio viewed the open work as a path to 'recovering an ephemeral, lucid, and transitory dimension of human experience [...] and educating us instead to think of the work as an agglomeration of events without any prearranged centre'¹¹⁴ between which connections are local and not determined by formal *a priori* elements. A similar (that is, less singular) idea of the work is advanced by Roger Parker in his discussion of Donizetti's sketches for 'Al suo piè cader vogl'io' from *Adelia*, in which the existence of different drafts (each perfectly viable) reminds us not to confine composer intention only to the production of authentic and final versions.¹¹⁵ Parker further suggests, citing the interpretative interventions of the soprano on the *Adelia* recording,¹¹⁶ that we should attend to the way a musical work changes over time and the way we ourselves change with it: 'Perhaps we will ask new questions, find new meanings in objects we had once thought too familiar to excite us further.'¹¹⁷ This leads back to revision – to revisit a piece from years past, as was the case with *Variations*, is to revisit a version of yourself and, in the process, to realize not only how you have changed, but how subjectivity is contingent and constructed. Perhaps, more prosaically, it is also to realize that a piece of music can always go another way.

¹¹⁰ Salem, 'Boulez Revised'.

¹¹¹ *Ibid.*, 2.

¹¹² Each section of *Variations* is linked to its neighbours by metric modulations.

¹¹³ This is the reason for the different alignments of trumpet and piano shown in Table 1 – to avoid creating a series of 'chunks' in which the instruments always begin and end together.

¹¹⁴ Luciano Berio, *Remembering the Future* (Cambridge, MA: Harvard University Press, 2006), 97–8.

¹¹⁵ Roger Parker, *Remaking the Song: Operatic Visions and Revisions from Handel to Berio* (Berkeley and Los Angeles, CA: University of California Press, 2006).

¹¹⁶ Mariella Devia transposes some declamatory passages in the opera an octave higher to avoid the lower part of her range.

¹¹⁷ Parker, *Remaking the Song*, 21.