

Thinking Irrational

Thomas Adès and New Rhythms



Huw Belling

2010

Critical Project Submitted by **Huw Belling** in partial fulfilment of the requirements of the Master of Music degree in **Advanced Composition**, Royal College of Music, Summer 2010.

Supervisor, Dr Jean-Philippe Calvin MM, DMA

Table of Contents

| | |
|--|----|
| Table of Figures | 3 |
| I. Introduction..... | 4 |
| II. Precedents and antecedents..... | 5 |
| III. The 'Pleasures of Allusion' | 7 |
| IV. Finding voice and drama | 17 |
| V. A new complexity | 24 |
| VI. In several ways | 38 |
| VII. Conclusion..... | 47 |
| Select Bibliography..... | 49 |

Table of Figures

| | |
|---|----|
| Figure 1, Example 10 Cowell, <i>New Musical Resources</i> , 59..... | 6 |
| Figure 2, Example 9 Cowell, <i>New Musical Resources</i> , 59..... | 6 |
| Figure 3, Example 7 Cowell, <i>New Musical Resources</i> , 61..... | 7 |
| Figure 4, Thomas Adès, <i>Chamber Symphony</i> (Oxford: Faber, 2001), 1. (bb.1-5) | 8 |
| Figure 5, Relative durations of drum 'articulation isorhythms' in <i>Chamber Symphony</i> (bb. 1-12) | 9 |
| Figure 6, Thomas Adès, <i>Living Toys</i> , Movement Titles | 10 |
| Figure 7, Thomas Adès, <i>Living Toys</i> , 22-34, (bb. 135-50)..... | 11 |
| Figure 8, Thomas Adès. <i>Arcadiana: Study Score</i> . (Oxford: Faber, 2001), 7..... | 14 |
| Figure 9, Thomas Adès. <i>Arcadiana: Study Score</i> . (Oxford: Faber, 2001), 10, (bb. 43-47) | 15 |
| Figure 10, Thomas Adès. <i>Arcadiana: Study Score</i> . (Oxford: Faber, 2001), 10, (bb. 48-49) | 16 |
| Figure 11, Thomas Adès. <i>Powder Her Face: (Vocal Score)</i> , (Oxford: Faber, 2005), 1-14..... | 18 |
| Figure 12, Thomas Adès. <i>Powder Her Face</i> (b.19)..... | 18 |
| Figure 13, Thomas Adès. <i>Powder Her Face</i> , Annotated reduction of bars 27-32 | 19 |
| Figure 14, Igor Stravinsky, "Danse Sacrale" in <i>Sacre Printemps</i> (1913), annotated reduction of opening 5 bars | 20 |
| Figure 15, Thomas Adès. <i>Powder Her Face</i> , Reduction of bars 118-19..... | 21 |
| Figure 16, Thomas Adès. <i>Traced Overhead (Score)</i> , (Oxford: Faber, 1997), III Chori, 21. | 22 |
| Figure 17, Thomas Adès. <i>Traced Overhead</i> , III Chori, 16. | 23 |
| Figure 18, Thomas Adès. <i>Traced Overhead</i> , II Aetheria, 4. | 24 |
| Figure 19, Thomas Adès, <i>Piano Quintet</i> , 1. (bb. 1-12) | 25 |
| Figure 20, Thomas Adès, <i>Piano Quintet</i> , 3..... | 26 |
| Figure 21, Reduction of Rehearsal Mark 4, Adès, <i>Piano Quintet</i> , 5-7 | 27 |
| Figure 22, Time-space representation of rehearsal mark 4 of Thomas Adès, <i>Piano Quintet</i> , 5-7. | 29 |
| Figure 23, Thomas Adès, <i>Piano Quintet</i> , 7. | 30 |
| Figure 24, Alternative time-space representation of rehearsal mark 4 of Thomas Adès, <i>Piano Quintet</i> , 5-7. | 32 |
| Figure 25, Thomas Adès, <i>Piano Quintet</i> , 13..... | 33 |
| Figure 26, Thomas Adès, <i>Piano Quintet</i> , 4..... | 35 |
| Figure 27, Piano part, 5 after [3] In Thomas Adès, <i>Piano Quintet</i> , 4..... | 36 |
| Figure 28, Proposed Ossia, Piano part, 5 after [3] In Thomas Adès, <i>Piano Quintet</i> , 4. | 37 |
| Figure 29, Re-notation of violin solo rhythm at rehearsal mark 14 of Thomas Adès, <i>Violin Concerto</i> | 40 |
| Figure 30, Violin solo at rehearsal mark 14 of Thomas Adès, <i>Violin Concerto</i> , 27 | 40 |
| Figure 31, Representation of Interval classes in Violin solo. [14] of Thomas Adès, <i>Violin Concerto</i> , 27. | 41 |
| Figure 32, Violin solo at [14] of Thomas Adès, <i>Violin Concerto</i> , 27. Including Adès' own alternative notation..... | 41 |
| Figure 33, Violin solo at [14] of Thomas Adès, <i>Violin Concerto</i> , 27. Alternative notation II. | 42 |
| Figure 34, Violin solo at [14] of Thomas Adès, <i>Violin Concerto</i> , 27. Alternative notation III. | 43 |
| Figure 35, Thomas Adès, <i>Tevot: (Score)</i> , (Oxford: Faber, 2008), 12. (2 after rehearsal mark F) | 44 |
| Figure 36, Alternative notation based on Thomas Adès, <i>Tevot</i> , 12. Flute bar (Cf. Figure 35, 3 rd bar) | 45 |
| Figure 37, Piano part and alternative from Thomas Adès. <i>In Seven Days</i> , 32..... | 46 |

I. Introduction

By the very act of writing music, composers interact, however accidentally, with history. The exchange between the individual and tradition can be about redefining the boundaries manifest in notation; performance practice; or the habits of genre. The twentieth century saw composers drift from functional harmony and harmonic rhythm in favour of other processes, leading to development in rhythmic vocabulary. Some inventions were of course a rediscovery of latent technique, whilst other methods found apparently novel expressions.¹ Composers of so called 'new complexity' have rendered rhythms at the limit of human capability and perception or, as with electronic music, beyond it.² Contemporary shifts in practice presented fresh problems and it is edifying to observe the manner in which they are confronted by composers, especially composers in their nascence, for it is this confrontation which can provoke a talent to innovation.

This critical project focuses on the development of rhythm in the music of the British composer Thomas Adès (b.1971).³ Adès's music has come to challenge some of the limitations of established notational convention, and by extension rhythmic practice. This project traces methods employed by Adès to overcome these limitations, as practically as he could envisage, all while developing a personal style. Adès's earlier rhythmic engagement with extra-textual references to other music and literature, would later inform his mature rhythmic practice in 'absolute' composition.

¹ There is a body of scholarship which identifies unique rhythmic practices in the twentieth century. See, for example, Bernard, John, 'The Evolution of Elliott Carter's Rhythmic Practice', *PNM*, xxvi/2 (1988), 164–203.

² See Toop, Boros & Brian Ferneyhough. *Collected Writings (Contemporary Music Studies)*, (New York: Routledge, 1995). & Karlheinz Stockhausen, 'Four Criteria of Electronic Music' In *Stockhausen on Music* (London: Marion Boyers, 1989), 88-111.

³ Arnold Whithall 'Thomas Adès' *Grove Music Online* (Accessed 28 October 2009).

II. Precedents and antecedents

Though a reticent and sardonic public figure, Adès has on occasion obliquely revealed his interest in certain other composers.⁴ In one such anecdote, reported in a 1998 *New Yorker* article, Adès cites as ‘great’ American artists, ‘an insurance millionaire and a man who lived in a garage in Mexico’⁵ referring to Charles Ives and Conlon Nancarrow. Nancarrow, whose furiously polymetric piano roll pieces Adès now performs, reveals in an equally rare interview, the influence of Henry Cowell’s rhythmic ideas in his book *New Musical Recourses* first published 1930.⁶ The book is remarkable for its (unknowing) anticipation of Adès’s eventual notational requirements. It is possible, if not likely, that Adès shares a love with Nancarrow of the same treatise.

The first known reference to the so-called ‘irrational bar’⁷ is in Cowell’s treatise.⁸ Where the bottom number in every time signature is the division of the semibreve (whole note), an irrational bar is when that number is not base two. Thus a 4/6 bar would consist of four ‘triplet’ crotchets, facilitating an essentially bar-length metric modulation. Across the twentieth century examples emerged in works (now canonical) of the use of these kinds of bars.⁹ Cowell also proposed a system of dividing tuplets such that a triplet could be distributed throughout a bar.

⁴ Alex Ross, “Roll Over, Beethoven,” *New Yorker*, October 26, 1998, 111.

⁵ *Ibid.*, 116.

⁶ See for example, Adès, Thomas. *Thomas Adès: Piano* Alexey Vladimirovich Stanchinsky (Composer), Conlon Nancarrow (Composer), Edvard Grieg (Composer), Ferruccio Busoni (Composer), György Kurtág (Composer), et al. [CD recording] EMI, London: 2000.

William Duckworth, *Talking Music: Conversations With John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers* (New York: Schirmer Books, 1995), 38.

Henry Cowell, *New Musical Resources* (New York: Cambridge University Press, 1996), First Published 1930.

⁷ Cowell, *New Musical Resources*, 85-89.

⁸ Most notation compendiums find no use of irrational bars earlier than 1930, see for example Gardner Read, *Modern Rhythmic Notation* (London: Gollancz, 1980), 96-99.

⁹ Read, *Modern Rhythmic Notation*, 97.

Figure 1, Example 10 Cowell, *New Musical Resources*, 59.

He envisaged different types of note-heads for each non base-two divisions of the whole-note (triplets, quintuplets, etc.).

Figure 2, Example 9 Cowell, *New Musical Resources*, 59.

Whole Note Series.
Oval-shaped notes
Whole note: ○ half note: ◐ quarter note: ◑ 8th note: ◒ 16th note: ◓ 32nd note: ◔

Third Note Series.
Triangular-shaped notes
2-3rds note: ◕ 3rd note: ◖ 6th note: ◗ 12th note: ◘ 24th note: ◙ 48th note: ◚

Fifth Note Series.
Square notes
4-5ths note: ◑ 2-5ths note: ◒ 5th note: ◓ 10th note: ◔ 20th note: ◕ 40th note: ◖

Seventh Note Series.
Diamond-shaped notes
4-7ths note: ◑ 2-7ths note: ◒ 7th note: ◓ 14th note: ◔ 28th note: ◕ 56th note: ◖

Ninth Note Series.
Oblong notes
8-9ths note: ◑ 4-9ths note: ◒ 2-9ths note: ◓ 9th note: ◔ 18th note: ◕ 36th note: ◖

Eleventh Note Series.
Oval notes with stroke
8-11ths note: ◑ 4-11ths note: ◒ 2-11ths note: ◓ 11th note: ◔ 22nd note: ◕ 44th note: ◖

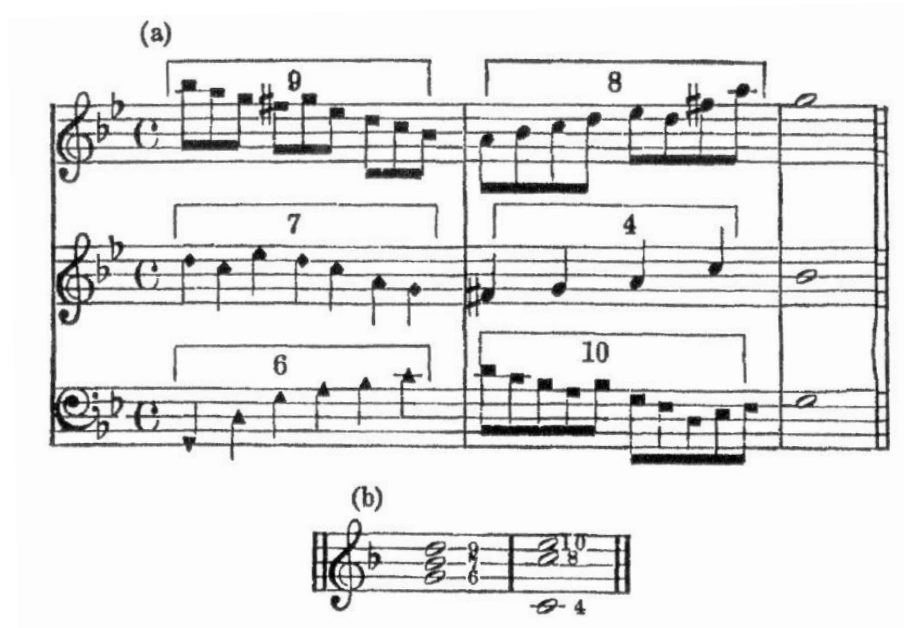
Thirteenth Note Series.
Triangular notes with stroke
8-13ths note: ◑ 4-13ths note: ◒ 2-13ths note: ◓ 13th note: ◔ 26th note: ◕ 52nd note: ◖

Fifteenth Note Series.
Square notes with stroke
8-15ths note: ◑ 4-15ths note: ◒ 2-15ths note: ◓ 15th note: ◔ 30th note: ◕ 60th note: ◖

This way, Cowell argued, a new kind of rhythmic polyphony could be explored.¹⁰ For Cowell, the ‘vibration ratios’ of rhythmic relationships were in a way analogous to the frequency relationships in pitch.¹¹

¹⁰ Cowell, *New Musical Resources*, 61.

¹¹ *Ibid.*, 46.

Figure 3, Example 7 Cowell, *New Musical Resources*, 61.

Despite, or perhaps because how comprehensive Cowell's ideas were, many found little traction for most of the twentieth century. Although Adès did not adopt 'rhythmic noteheads', some of Cowell's notational concepts eventually found traction in Adès's music such as irrational time signatures beginning with his earliest output, and divided or 'broken' tuplets much later on. How did Adès's rhythmic interests come to require and make use of these kinds of notation?

III. The 'Pleasures of Allusion'

Adès's *Chamber Symphony*, written in 1990, when Adès was nineteen, is catalogued by Faber Music as his Opus 2.¹² As one of his earliest published works, it is also one of the few not to incorporate irrational bars. Nevertheless, even without that notational monogram, the seeds of a rhythmic style are there from the beginning. Adès's proclivity for allusion has been noted elsewhere, and the fact of

¹² Faber Music. *List of works by Thomas Adès* <http://www.fabermusic.co.uk/resources/pdfs/240-worklist.pdf> (Accessed 04 April, 2010).

several early piece titles shows reference was an important element of composition from the outset.¹³

In the case of *Chamber Symphony*, instrumentation and gesture frequently connotes a variety of unlikely musical styles. However, these allusions are often veiled by Adès's own rhythmic mechanisms. The piece notably opens with percussion solo whose articulation on the Cymbal is reminiscent of the square ostinati usually rendered by the ever-ubiquitous drum-kit.

Figure 4, Thomas Adès, *Chamber Symphony* (Oxford: Faber, 2001), 1. (bb.1-5)

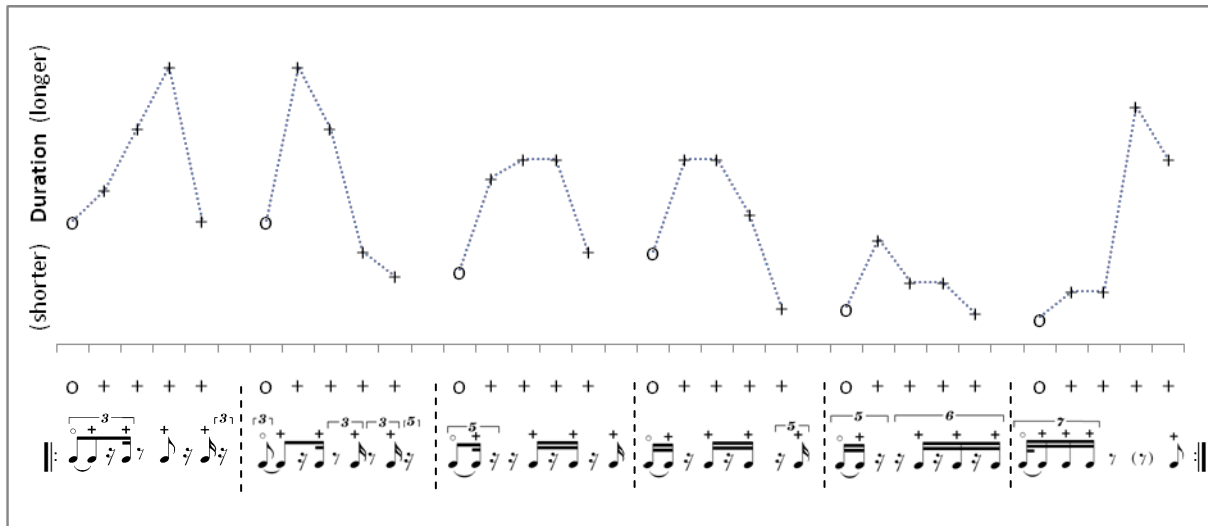


This reference is in fact entirely reliant on choice of instrument and articulation as the rhythm is so distorted. *Rhythm itself* is the subject. The content is its superimposition on what is ordinarily a strict metric ostinato. In *Chamber Symphony* the opening rhythm is so varied as to tell us almost nothing about meter. One might loosely call the opening ostinato an 'articulation isorhythm,' cognate to an isorhythm in the sense of being the superimposition of two patterns: articulation and rhythm (as opposed to pitch and rhythm).¹⁴

¹³ See Arnold Whittall, "James Dillon, Thomas Adès, and the Pleasures of Allusion." In *Aspects of British Music of the 1990s*, 3-28. 1st ed. (Hampshire, England: Ashgate Publishing, 2003).

See, for example, the movements of Adès' *Living Toys*, or *Arcadiana* discussed later in this project.

¹⁴ Such as outlined by Olivier Messiaen, *Technique de mon langage Musicale* (Paris: Editions Musicales, 1975).

Figure 5, Relative durations of drum 'articulation isorhythms' in *Chamber Symphony* (bb. 1-12)

This figure is an analogous graphical representation of rhythmic durations in the opening drum solo of *Chamber Symphony*. In this figure the rhythm is divided into cells of five articulations (denoted by o and +). The y axis represents relative durations, while the x axis is linearity. The dimensional (and mensural) representation of rhythm allows an instant appraisal of durational development.¹⁵ In each cell there is an observable convex trend of acceleration and deceleration, likewise across the cells there is also a general acceleration. However there is no discernable process relating one 'rhythmic cell' to another. Indeed for only twenty-five attacks there are eighteen distinct rhythmic values. Adès's opening rhythm has a certain logic; a directional impetus, applied connotatively to a drumming cliché; however there is little evidence of systemic determinism. Adès's gives only a second repetition of the articulation isorhythm before instituting yet more rhythmic variations of the pattern (presumably as part of a dialogue with the rest of the ensemble).¹⁶ This mechanism of

¹⁵ As the attacks are the main concern, the rests are counted as part of the duration. Bar lines were ignored in the presentation of each articulation 'cell', instead the dotted lines represent only divisions of those cells.

¹⁶ Subsequent iterations of the solo pattern form accompaniment for instrumental entries.

rhythmic variation is apparently more intuition than system. The aural result is jittery; and more convoluted than actual iso-rhythm and in that sense is a departure from the certainty of more systematic “iso-rhythmic” processes.¹⁷

Later in *Living Toys* (Op. 9 1993) Adès uses similar techniques in the distortion of material which is perhaps more historically loaded. It takes its impetus from a text simply attributed as coming from the Spanish:

When they asked him what he wanted to be, the boy did not name any of the men’s occupations, as they had all hoped he would, but replied: ‘I am going to be a hero, and dance with angels and bulls, and fight with bulls and soldiers, and die a hero in a distant place, and be buried a hero.’ Hearing this child’s words, the men felt small, understanding that they were not heroes, and that their lives were less substantial than the dreams which surrounded him like toys.
- from the Spanish¹⁸

The movements of *Living toys* are playfully referential, with a loose thematic relation to the poetry.

Figure 6, Thomas Adès, *Living Toys*, Movement Titles

| |
|--------------------|
| I Angels |
| II Aurochs |
| BALETT |
| III Militiamen |
| IV H.A.L.’s Death |
| BATTLE |
| V Playing Funerals |

¹⁷ See for example Messiaen’s use of grand scale iso-rhythmic processes in his *Chronochromie* (1959-60), these processes are outline in Messiaen’s own analysis: *Chronochromie* in Olivier Messiaen, *Traité de rythme, de couleur et d’ornithologie: Tome 3* (Paris: Alphonse Leduc, 1996).

¹⁸ Thomas Adès, *Living Toys* (Oxford: Faber, 1993), Score note.

Figure 7, Thomas Adès, *Living Toys*, 22-34, (bb. 135-50)

Brutale, con eleganza **P** ♩. = 67

135

Piccolo Trumpet in B \flat

Castanets

p \leq *f* *p* \leq *f* *f* brillante *mf* *p* *mf* *p*

141

f *p* brillante *f* *p* *mf* *p*

Q

146

ff *brillante* *mf* *f* \leq *ff* \leq *fff*

¹⁹ Adès, *Living Toys*, 31.

a contrasting quintuplet meter. Adès seems to avoid directly using a normal castanet pattern, preferring instead to granulate and diffuse it. In this respect, Adès's rhythmic processes here miniaturise and jumble their source material.

Much of the limited amount of published scholarship on Adès centres on his earlier music, which is unsurprising given its relatively recent emergence. Many of Adès's early works make overt or veiled allusions to other music or art forms, in title and/or content, leading to speculation about the nature of his aesthetic and his philosophical subscriptions. How can, or should, he be categorised? In his article *A Surrealist Composer Comes to the Rescue of Modernism*²⁰, first published 1999, Richard Taruskin casts Adès in the mould of the 'rescuing' composer:

...for all his spectacular eclecticism, don't call Mr. Adès a postmodernist just yet. For one thing his spoiled-brat behaviour, so much commented on in the press, shows that he is still playing the part our culture has written for the modernist artist. But more positively, as long as there are strong controlling hands like his at the stylistic mixing board, there be enough life left in modernism, taking that word now to mean the late-romantic projection of a strong creative personality, to last well into the coming century.²¹

This defence of Adès's modernist credentials may be in view of his 'omnivorous range of reference—fifteenth-century England to seventeenth-century France to contemporary Hungary; gamelans and ouds; Billie Holiday, Astor Piazzolla, the Chemical Brothers'.²² The aesthetic fear here is presumably of a composer who either; adopts a consumerist 'pick and use' attitude to cultural production (what Theodor Adorno might call reproduction to the point of destroying meaning)²³. Arnold Whittall cites Taruskin accusing Richard Strauss, warning us of composers who adopt an:

²⁰ Richard Taruskin, "A Surrealist Composer Comes to the Rescue of Modernism." In *The Danger of Music and Other Anti-Utopian Essays* (ed. Berkeley: University of California Press, 2008), 144-52.

²¹ Ibid., 145.

²² Ibid.

²³ Theodor W. Adorno (Adorno 2002). "On the Social Situation of Music", 391-436. In *Essays on Music*, Edited by Richard Leppert (Los Angeles, : University of California Press, Ltd., 2002), 391-92.

Essentially decorous model [of influence] centering not on uncontrollable belligerent contest, but on voluntary benign submission, described by T.S. Eliot as the poet's "surrender of himself...to something which is more valuable."²⁴

Taruskin, in his unconnected didactic on Adès clears him of 'putting everything in quotes'²⁵, just as Whittall clears him of 'doing an Eliot' in his article *James Dillon, Thomas Adès, and the Pleasures of Allusion*.²⁶ Both Whittall and Taruskin give evidence as to what substance in Adès's music exonerates him of petty quotation. Taruskin, particularly, notes the

striking...quality of Mr. Adès's rhythm...fast ostinatos, often of a tricky, ear-beguiling complexity, co-exist at varying speeds in contrasting colors and registers, evoking not linear distance but gyres and vortexes: sound in motion but not going anywhere.²⁷

Similarly Whittall writing of the movement *O Albion* in Adès's explicitly referential²⁸ string quartet *Arcadiana* (1994, Op. 12) observes the movement's 'unstable diatonicism which consistently blocks the possibility of 'structural' or 'musicological' hearing, according to the precepts of functional harmony, however vivid its evocation of the 'sweetness of tonality'.²⁹ Adès's method of 'allusion', therefore 'shadows' its sources from "a distance at which the musical identity of those sources may not longer be clear, and their generic associations may be *questioned rather than confirmed*."³⁰

For Whittall ambiguity or even ambivalence, it would seem, is a principal weapon in the arsenal of a referencing composer. Although he is cautious enough to purport that 'the allusions [listeners]

²⁴ Whittall, "James Dillon, Thomas Adès, and the Pleasures of Allusion." 5. Cf. Richard Taruskin, "Revising Revision." In *The Danger of Music and Other Anti-Utopian Essays* (ed. Berkeley: University of California Press, 2008), 356.

²⁵ Taruskin, "A Surrealist Composer," 145.

²⁶ Whittall, "James Dillon, Thomas Adès," 5.

²⁷ Taruskin, "A Surrealist Composer," 147.

²⁸ Thomas Adès. *Arcadiana: Study Score*. (Oxford: Faber, 2001). See quartets own program note.

²⁹ Whittall, "James Dillon, Thomas Adès," 20-21.

³⁰ *Ibid.*, 21-22. (My italics)

uncover are as much to do with their own predispositions as with those of the composer'.³¹ Insofar as it is possible to attribute intent to a device, obfuscation in this case, the method in *O Albion*, Whittall observes, is one of harmonic emasculation: a stripping of function. He convincingly identifies the offending manipulations of pitch in *O Albion* (or is the intent tributary?), but does not specifically address rhythm per se. We have seen in *Chamber Symphony* and *Living Toys* a distortion of rhythm, where the *dissociation* is possible because of prior *association* – similar, if more elusive 'in jokes' abound in *Arcadiana*.

In the entirety of Schubert's *Auf dem Wasser zu singen* D774³² the semiquaver movement stops only twice, once in the eighth bar, anticipating the singer's entry, and then only again in the final bar fermata. It hardly requires a leap of imagination to suppose that these flowing semi-quavers are somehow *Auf dem Wasser* and the text refers to 'der Freude sanftschimmernden Wellen' (the joy of shimmering waves). Adès's movement of the same title instantly posits a troubled opposition to the sentiment and fluidic ease of its Schubertian namesake.

Figure 8, Thomas Adès. *Arcadiana: Study Score*. (Oxford: Faber, 2001), 7.

III. Auf dem Wasser zu singen
 ♩ = 44 (♩ = 132) Dolce muovendo

Just as a popular drumming pattern normally associated with bleak ostinato was distorted by apparently intuitive processes in *Chamber Symphony*, here Adès upends a host of much subtler

³¹ Ibid., 25.

³² Franz Schubert. *Auf dem Wasser zu singen*, D.774, Op.72

associations in the Schubert. The rippling semiquavers have become blurred and stuttering pizzicato 'sobs' marked *singhiozzando* (sobbing). The neatly reducible language of Schubert's harmonic progressions are replaced by a broken and perceptually meter-less heterophony.

The sated languor and parabolic phrases in the voice have become the strings' sinuous and meandering arborescences: alternately floated above, and pitilessly submerged in the sobbing mire. Across the movement Adès appears to have the music attempt rhythmic continuity, only to frustrate it with an oppressive consistency.

Figure 9, Thomas Adès. *Arcadiana: Study Score*. (Oxford: Faber, 2001), 10, (bb. 43-47)

The musical score for Thomas Adès' *Arcadiana: Study Score*, measures 43-47, is presented in four staves. The notation is complex, featuring various rhythmic patterns, dynamics, and articulations. The time signature changes from 5:4 to 7:4 in measure 46. The score includes markings such as *fff*, *mp*, *p*, *f*, *mf*, *ppp*, *pizz.*, *arco*, *singhiozzando*, and *sim.*. The measures are numbered 43, 45, and 47.

The sextuplets which break out of the texture in the upper strings in the 6th last bar descend to a bitter *fff* halt after only a bar (Figure 9, Thomas Adès. *Arcadiana: Study Score*. (Oxford: Faber, 2001), 10, (bb. 43-47)). Likewise in the final two bars (Figure 10) the movement is interrupted broken by the tiniest of demi-semi-quaver rests, their smallness suggesting the pallid decay of a complete object rather than annex of its healthy part.

Figure 10, Thomas Adès. *Arcadiana: Study Score*. (Oxford: Faber, 2001), 10, (bb. 48-49)

The musical score for Figure 10 shows four staves (Violin I, Violin II, Viola, and Cello/Double Bass) with complex rhythmic patterns, including sextuplets and triplets. Dynamics range from *p* (piano) to *fff* (fortississimo). Performance instructions include *arco*, *pizz.* (pizzicato), *molto*, *poco a poco cresc.*, and *attacca*.

What of the broader intent in *Arcadiana*? Is it to subvert the source material? Adès's score note begins 'Each the seven titles which comprise *Arcadiana* evokes an image associated with the ideas of the idyll, vanishing, vanished or imaginary.'³³ In the *Auf dem* movement, the frisson comes from the opposition of *singhiozzando* content against the text of Schubert. Fundamentally Adès's rhythmic processes are distorting *existing* material. The 'joke' or textual function of the movement (and others in *Arcadiana*) is alienating to the uninitiated in the sense of relying on extra-textual familiarity. Yet, Adès's himself notes that the 'odd-numbered movements are all aquatic, and would be continuous if played consecutively'.³⁴

Adès has re-formed and refashioned any second-hand material into a meta-structure, mooting the problematic post-modern dichotomy of extra-textual reliance versus extra-textual rejection. Perhaps

³³ Adès. *Arcadiana: Study Score*, 1.

³⁴ Ibid.

this is why Taruskin says he is a ‘surrealist’.³⁵ Adès’s relationship to his referenced texts is a bonus dimension to a *musical* product answerable to only itself. Because the process of creating allusion requires the *preservation* of character in some form or another (rhythm, pitch, register, etc.), Adès’s penchant for reference in his earlier works led him to develop rhythmic processes which can be superimposed on material whilst preserving its shadow: like an image preserved in a shattered mirror. The referential rhythmic processes already examined in *Chamber Symphony*, *Living Toys* and *Arcadiana*, facilitate the cohabitation of fracture and reference. As this project will later explore, these process; the ‘gyres and vortexes’; are assimilated into Adès’s later absolute music. It a music wherein precepts being ‘shattered’ come only from *within*, and where rhythmic complexity serves purpose other than mere distortion. In this ‘integrated’ Adès, the craft of reference becomes a language reborn, able to stand from material at a distance of its own choosing. Through *Powder her Face* and *Traced overhead* Adès moves from characterful echoes and fractures, to a more personal statement.

IV. Finding voice and drama

Unfettered by the demands of supporting voice, the Overture and opening bars of the first scene of *Powder Her Face* (the most ambitious work he had yet written) is a kind of synthesis of manners. The content of the overture anticipates the highly wrought laughter of the maid in the opening scene and places it over a tango-like bass. Composed laughter has precedent in opera, and the effect of imposing rhythmic certainty can be sinister, such as Benjamin Britten’s in *Death in Venice* (1973) wherein the crowd laughs with staccato quavers.³⁶ Their lack of spontaneity is menacing.

Adès’s approach is paradoxically both more prescriptive, and less, in that this ‘laughter’ has modulating rhythm: it is more composed, yet more fluid. Phenomenologically, the Maid’s eventual entry may retroactively impose a human point of reference on the gestures of the overture: the

³⁵ Taruskin, “A Surrealist Composer Comes to the Rescue of Modernism.”

³⁶ Benjamin Britten. *Death in Venice: Full Score* (Oxford: Faber, 1998), 135.

rhythms apparently have a human basis in laughter. Whatever psychological meaning is derived from the artifice, the techniques involved in combining these ‘laughing’ gestures with the overture’s allusions to tango, exemplify an emerging rhythmic language with a precedent in modernist complexity³⁷ serving an arguably different aesthetic.³⁸

Any number of its characteristics, including instrumentation which calls for an accordion could be said to refer to tango in the overture. The tango cliché

Figure 11, Thomas Adès. *Powder Her Face: (Vocal Score)*, (Oxford: Faber, 2005), 1-14.³⁹



or part of it; repeated, though not strictly; provides a rhythmic layer which has a largely unchanging⁴⁰ quaver base value (i.e. is not subject to metric modulation) above which more complex rhythmic processes occur. This so called tango layer is sometimes disrupted for short periods, by distension of the material it accompanies⁴¹ and is hence *subject* to the demands Adès’s other original rhythms. Here parody *serves* the opera: parody has dramatic purpose beyond its own sake.

The ‘laughing’ gestures which occur amidst the melody over the tango bass line have a cadential impact perhaps best described as interjection. They oppose other slower scalar descents with an insistent, clipped rhythm, first occurring as

Figure 12, Thomas Adès. *Powder Her Face* (b.19)



³⁷ For examples of other schools of composition making use of irrational bars see: Read, *Modern Rhythmic Notation*, 96-99.

³⁸ See Taruskin, “A Surrealist Composer”.

³⁹ Adès’s use of articulation varies with each iteration of the figure. (Articulation here is mine).

⁴⁰ There are minor exceptions in bars 47, 72-3, & 76.

⁴¹ See bars 12-13, 40, 67, 69, & 96-100.

In keeping its distinct character, to begin with this gesture maintains a fundamental base value and consistent articulation. Its falling staccato quavers recur several times.⁴²

The other melodic material is comparatively languorous; a lazy, even 'dirty' texture; blurred heterophonically through Adès's use of varied rhythmic trajectories with downward pitch bending. With the aid of irrational time signatures, Adès has at his disposal more than one fundamental division of pulse for the creation of additive cells.

Figure 13, Thomas Adès. *Powder Her Face*, Annotated reduction of bars 27-32

In the reduction above two meters are in play, with the free mixing of both base (normal) and triplet fundamental rhythmic units in the creation of additive bars. In the 'tango' accompaniment⁴³ the triplet crotchet in bar 28 is staccato and most likely perceived in the meter implied by the preceding bar (its own meter), even though the tango rhythm is itself subject to a 2/6 irrational bar (28), a bar whose meter is derived from the preceding *melodic* material. Bars 27-29 provide for additive

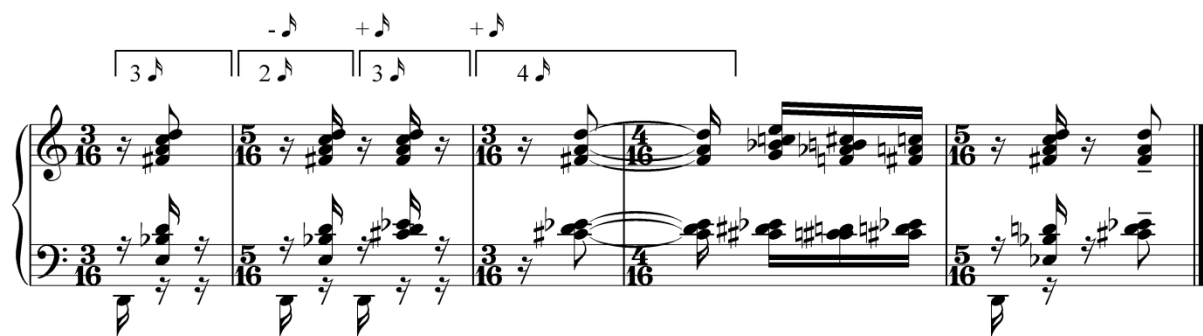
⁴² (Albeit without the semi-quaver double attack) at bars 25, 41, 53, and 58, and again as in 19 with new articulation at 65.

⁴³ In this reduction (Figure 13, Thomas Adès. *Powder Her Face*, Annotated reduction of bars 27-32) only the rhythm of the accompaniment is presented.

processes in *both* meters (triplet and base)⁴⁴ with alignment of the tango accompaniment composed *around* metric modulations in the melody. Furthermore, the melody contains a virtual third ‘base’ meter displaced by a triplet crotchet. The tied notes in the lower melodic voice (which total dotted-triplet-minims) are of course displaced *minims* in the base meter. The majority of the overture is constructed using poly-metric additive processes like these, and in nearly every instance later iterations are more distended.

This multilayered approach to additive rhythmic variation facilitated by the use of irrational bars builds on the kinds of additive processes employed by the likes of Messiaen, or Stravinsky such as in *Danse Sacrale* of *Le sacre du printemps*:

Figure 14, Igor Stravinsky, “Danse Sacrale” in *Sacre Printemps* (1913), annotated reduction of opening 5 bars⁴⁵



These processes use only base-two divisions of the breve (crotchet, quaver, semi-quaver etc) as opposed to the additional divisions afforded by the use of ‘irrational’ bars in *Powder Her face*.

By bar 67 of the opera’s overture, the distension of material generated by additive processes finally ‘infects’ the material of the laughter, and its base unit of a quaver becomes subject to distortion⁴⁶, such that the distinction between the ‘languorous’ and the ‘laughter’ gestures is blurred.⁴⁷ Adès’s curt cells have been destabilised, perhaps in a rhythmic decay that is a metaphor for ‘moral decay’ as

⁴⁴ Additive values are outlined in the figure above bars 31 & 32.

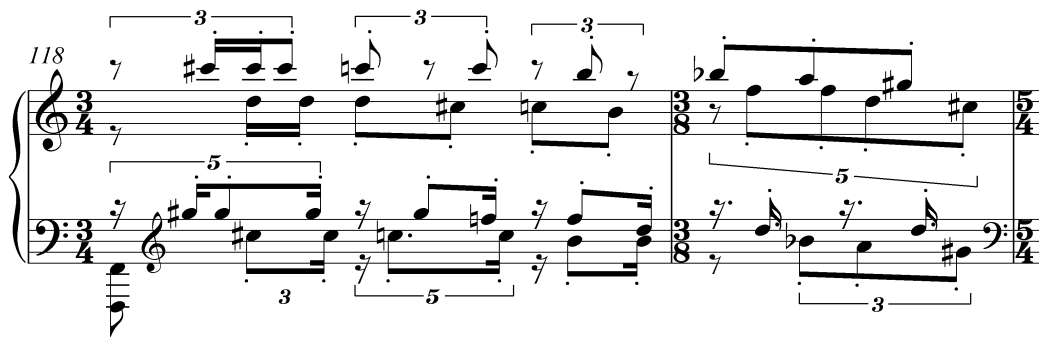
⁴⁵ Stravinsky - *The Rite of Spring: Le Sacre du Printemps* The Masterworks Library (Boosey & Hawkes Masterworks Library). New ed. (New York: Boosey and Hawkes, 2004).

⁴⁶ Adès. *Powder Her Face*, Bars 67, 72, 77-9, 84-7, & 96-8.

⁴⁷ My terminology.

traced by the opera's narrative.⁴⁸ Even though the 'laughter' figure re-occurs in its articulated form, it becomes completely fractured:

Figure 15, Thomas Adès. *Powder Her Face*, Reduction of bars 118-19



One imagines this is heard by the ear *as* a 'fracture' precisely because of the plainness of the original statement. In this Adès differs from many other complexitists⁴⁹ by virtue of the process of finally arriving at this degree of heterophony from a daringly simple vertical gesture in the base meter.⁵⁰ Conversely in these later bars, there is so much misalignment, the meter is virtually unperceived. Adès even exchanges the quaver pulse between the top two voices as if to ensure obfuscation. In *Powder Her Face* meter is overtly manipulated or carefully smothered as required by the music and, more broadly, the drama.

Powder her Face was immediately followed by the solo piano work *Traced overhead* in which the rhythmic techniques employed so far for dramatic effect, or as distortions, become serious devices in of themselves. *Traced overhead* is remarkable for its multiplicity of concurrent trajectories of

⁴⁸ Though only a reckless exegesis; one ignorant of hermeneutical subjectivity; would posit that the opera is capable of internally passing a moral judgement on its *femme fatale*. Since the opera concerns a society scandal, 'moral decay' in this instance is of course culturally relative and musically subjective. (See also footnote⁸⁴).

⁴⁹ See Brian Ferneyhough "Responses to a questionnaire on 'complexity' (1990)" In Toop, Boros & Brian Ferneyhough. *Collected Writings (Contemporary Music Studies)*, (New York: Routledge, 1995), 66-72.

⁵⁰ See Figure 12.

descent and ascent, which are of such distinctive character, as expressed by unique register, rate of change, pitch content, dynamics etc., as to lead Adès to frequently notate the material across many staves.

Figure 16, Thomas Adès. *Traced Overhead (Score)*, (Oxford: Faber, 1997), III Chori, 21.

The musical score for Thomas Adès' *Traced Overhead (Score)*, III Chori, 21, is a complex piece for piano. It features multiple staves with various musical notations. The top staff is marked *mf sonorissimo* and *cantab. la melodia*. The middle staves are marked *f cantab. poss. da molto lontano* and *pp (p) affondato, quasi eco*. The bottom staff is marked *PPP* and *l.v.*. The score includes various musical notations such as triplets, slurs, and dynamic markings. A pedal instruction *Ped. sempre →* is at the bottom left.

Whereas in *Powder her face* complexity is used to effect moments of rhythmic ‘fracture’ such as in Figure 15 where the tango theme is disintegrated, in *Traced Overhead* that same complexity and rhythmic polyphony behaves as a kind of gentle ornamentation.

Figure 17, Thomas Adès. *Traced Overhead*, III Chori, 16.

The musical score for Thomas Adès' *Traced Overhead*, III Chori, 16, is a complex piece of music. It features multiple staves with intricate melodic lines. The score includes various dynamics such as *p*, *pp*, *ppp*, and *pppp*, and tempo markings like *quasi calmandosi*, *[adagio . . .]*, *poch. cantab.*, *logatiss.*, *molto espr.*, and *tempo*. The score also includes a pedal point marked *Ped. →* and a half-note rest at the bottom.

Character here is not a matador, or an obscenely laughing hotel maid, but rather it is of several interweaving melodic lines. By thinking in such broad vertices, made all the more clear by his multi-stave notation, Adès's creates an intricate, almost orchestral-sized world in perhaps the beginning of his musically absolute expression of rhythmic complexity. Many of the rhythms here are as detailed and oblique as in previous works, but here they have an introspective subtlety. Note the overall profligacy of quiet dynamics: rhythms often come across as nearly ornamental. Dramatic punctuations, such as the *secco* chords in the right hand, beginning the second movement, form large scale polyrhythm in of themselves.

Figure 18, Thomas Adès. *Traced Overhead*, II Aetheria, 4.

The musical score is presented in two systems. The first system consists of two staves. The upper staff begins with a treble clef, a key signature of one sharp (F#), and a time signature of 2/4. It contains several measures with complex rhythmic figures, including eighth and sixteenth notes, and rests. Dynamic markings include (mf), ppp, f, and mf. Performance instructions such as 'loco', 'pp cantabile', and 'ppp come sopra' are present. The lower staff begins with a bass clef and a time signature of 2/4. It contains several measures with complex rhythmic figures, including eighth and sixteenth notes, and rests. Dynamic markings include (pp) and pp come sopra. The second system also consists of two staves. The upper staff begins with a treble clef, a key signature of one sharp (F#), and a time signature of 3/8. It contains several measures with complex rhythmic figures, including eighth and sixteenth notes, and rests. Dynamic markings include p, pp, and f. Performance instructions such as 'loco', 'pp cantabile', and 'ppp come sopra' are present. The lower staff begins with a bass clef and a time signature of 3/8. It contains several measures with complex rhythmic figures, including eighth and sixteenth notes, and rests. Dynamic markings include p, pp, and mp. Performance instructions such as 'p poco cantabile', 'pp sempre', and 'mp' are present. The score concludes with a 'Ped.' marking and a '1/2' marking.

It is a watershed moment in expression. In *Traced overhead*, rhythmic complexity forms character from the outset, rather than parodying an archetype or extra-textual idea, as was the case in *Chamber Symphony*, *Living Toys*, and for dramatic effect, in *Powder her face*. Adès's newly integrated rhythmic expression is born and is to be consolidated in his later output.

V. A new complexity

Piano Quintet, commissioned by the Melbourne International Festival of the Arts for the Arditti Quartet, was first performed in 2001 with Adès at the piano.⁵¹ For reasons we will explore, this is Adès's most rhythmically complex work, complexity dared perhaps by the new-music performance credentials of Arditti quartet.⁵² This rhythm here could end up as the apotheosis of Adès's exploration of irrational bars, subtle inflections of tempi, and concurrent metric trajectories. However, Adès's complex rhythmic processes are not fetishised. They work in concert with a simple musical material to form a somehow natural aural result. How is this achieved?

⁵¹ Thomas Adès. *Piano Quintet: (Score)*, (Oxford: Faber, 2007), 1.

⁵² 'The world's pre-eminent contemporary music quartet' Andrew Clements. "Arditti Quartet, Wigmore Hall." The Guardian Online. <http://www.guardian.co.uk/music/2005/apr/12/classicalmusicandopera1> (accessed May 1, 2010).

Adès uses a Violin I solo in the exposition, where there are effectively two tempos opposing two lots of pitch trajectory.

Figure 19, Thomas Adès, *Piano Quintet*, 1. (bb. 1-12)



Figure 19 presents the opening twelve bars of the Violin I solo. A scalic motif basically in ascent occurs in the 'base' tempo of $\text{♩} = \text{c.}88$, and a scalic motif in descent, occurs as triplets, or 2/6 bars at the effective speed of $\text{♩} = \text{c.}132$ (these motifs marked in Figure 19 with brackets). As within earlier works, the notational facility of irrational time signatures enables simple additive processes in relationships beyond the binary divisions of standard notation. The premise of this very bare solo opening, with its simple scalic pitch, is apparently the superimposition of temporal units unexpected by notational convention. The argument is heard because of its simple presentation. In this exposition Adès prepares the listener for an onslaught of a far more complex rhythmic dialogue.

As the violin I climbs into a series of rotationally ascending (standard) semi-quavers the piano enters with another temporal ambit employing various fifthtuplet derived bars (effectively $\text{♩} = \text{c.}110$), as well as standard semi-quavers (misaligned with the violin's by the odd lengths of irrational bars). Subsequently the entry of the remaining strings re-articulates the triplet tempo, and development in the score leading to rehearsal mark 3 consists of the contraction of note lengths corresponding to all three of the introduced meters, creating an effective acceleration.

Figure 20, Thomas Adès, *Piano Quintet*, 3.

The musical score for Figure 20 is a page from Thomas Adès's *Piano Quintet*, movement 3. It consists of five staves: Violin I, Violin II, Viola, Cello, and Double Bass. The music is in 2/4 time and features complex rhythmic patterns, including triplets and quintuplets. Dynamics range from *pp* (pianissimo) to *f* (forte). The score includes markings for *arco* (bowed) and *pizz.* (pizzicato) for the violin. The bottom of the score has a section labeled *(Ped.)* and *(thin out)* with a 7-measure rest.

Nearly the entirety of that next section is then a static ostinato of complex rhythms. It is as if Adès's careering entries of multiple ambits have arrived at a frozen destination; broken, like a record. The listener can tarry a moment (at mark 3)⁵³ and discover the interactions of the polyrhythmic ostinati before being again plunged into development of the scalic pitch genus.

It is next, at rehearsal mark 4⁵⁴ (reduced here in Figure 21), that Adès begins fearlessly splicing together very fast and subtle changes in tempi, by his use of irrational bars.

⁵³ Adès, *Piano Quintet*, 4.

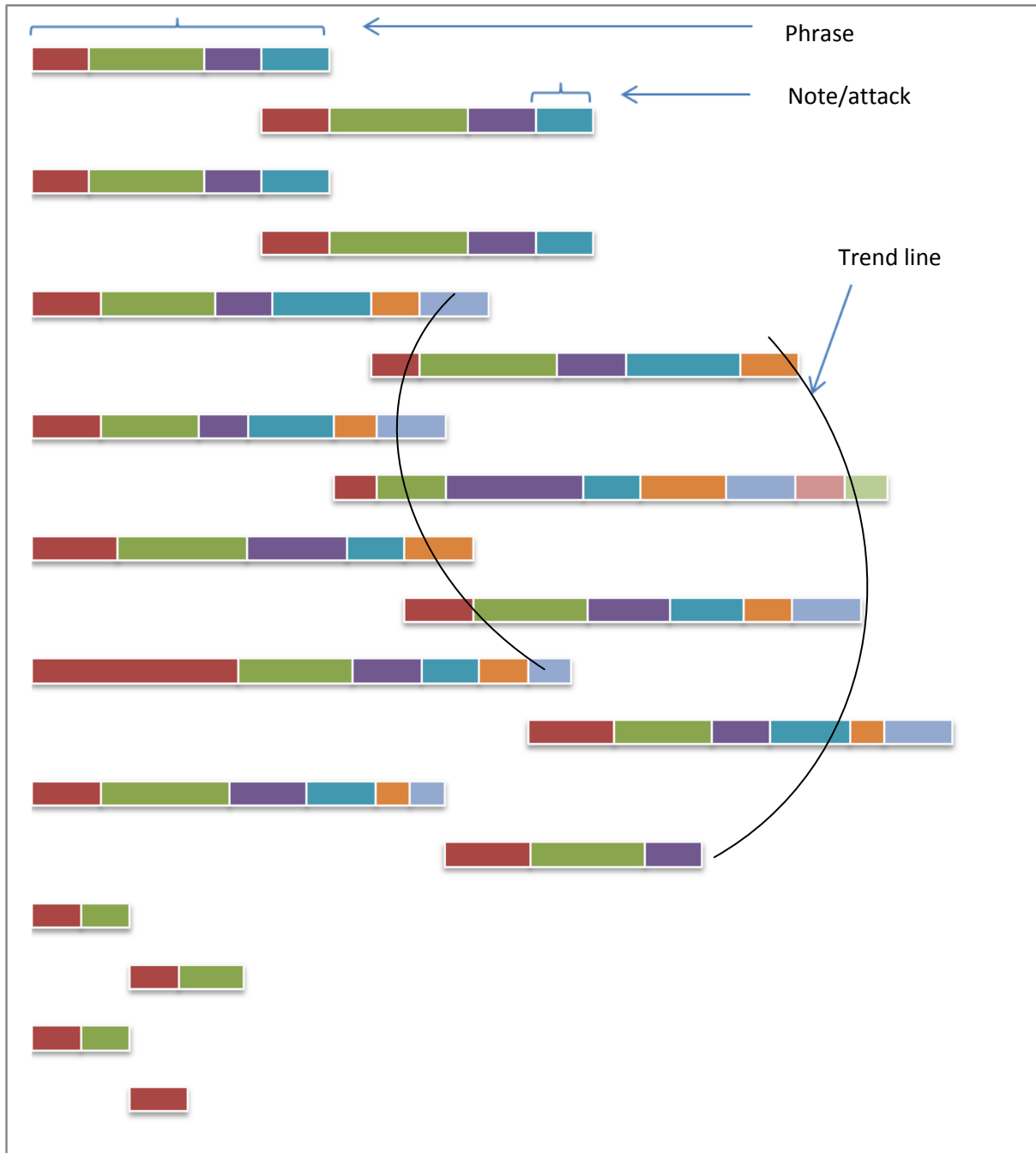
⁵⁴ *Ibid.*, 5.

Musical score for "The Firebird" by Igor Stravinsky, featuring Strings and Piano. The score is divided into three systems. The first system shows the initial chords in 4/4 and 5/4 time, with dynamics *p*, *pp*, and *ppp*. The second system shows the development of the chords in 3/4, 2/4, and 3/4 time, with dynamics *mf*, *rf*, and *f*. The third system shows the final chords in 2/4, 3/4, and 2/4 time, with dynamics *ff*, *mf*, and *f*. The score includes various musical notations such as triplets, slurs, and dynamic markings.

⁵⁵ Metronome marks in this figure were added and do not appear in the score.

lens of metric change. Furthermore Adès places this exchange between only two opposing voices, and then with only dovetailed entries, presumably to better expose the highly wrought rhythmic dialogue. A cursory glance at the phrase lengths in Figure 21 reveals a journey towards; and away from; longer gestures. However here, more than perhaps in any other notation, it is difficult to get a sense of temporal relativity from the score. Indeed since no one has adopted Cowell's rhythmic noteheads⁵⁶, and irrational bars are not presently mainstream, we may turn to a mensural (time-space) representation of the rhythm in this figure in order to better understand its directional impetus.

⁵⁶ See Figure 2.

Figure 22, Time-space representation of rehearsal mark 4 of Thomas Adès, *Piano Quintet*, 5-7.⁵⁷

In the figure above, each set of coloured ‘blocks’ represents, in order, one of the phrases presented in the previous reduction. Each of the blocks in the set represents one ‘note’ (‘attack’, or ‘rhythmic

⁵⁷ Each set of coloured blocks is a contained phrase, each colour an attack. Black trend-lines indicate the continuous development in phrase-length variation.

unit'). As a means of presenting the dialogue, and at least some of the dovetailing of phrases, the piano phrases are those sets which are translated right. In this relative time-space representation, the subtlety of rhythmic variation effected by the relationships between irrational bars is more apparent. More interesting still is the relationship of phrase lengths in the dialogue between the strings and piano. Although proper observation of a general trend in phrase length is precluded by the translated piano phrases, it is nonetheless possible to see trends in the phrase lengths of each of the two separate voices. A fascinating counterpoint of phrase lengths, though by no means strict, is an observable trend denoted by the black arcs. Perhaps this rhythmic 'voice exchange' of sorts contributes to a sense of function in the passage. Likewise the disintegration of the dovetailing of phrases at the end of the passage becomes more aggressive in the next instance (rehearsal figure 5) with a minor third and block chord opposing each other repetitively.

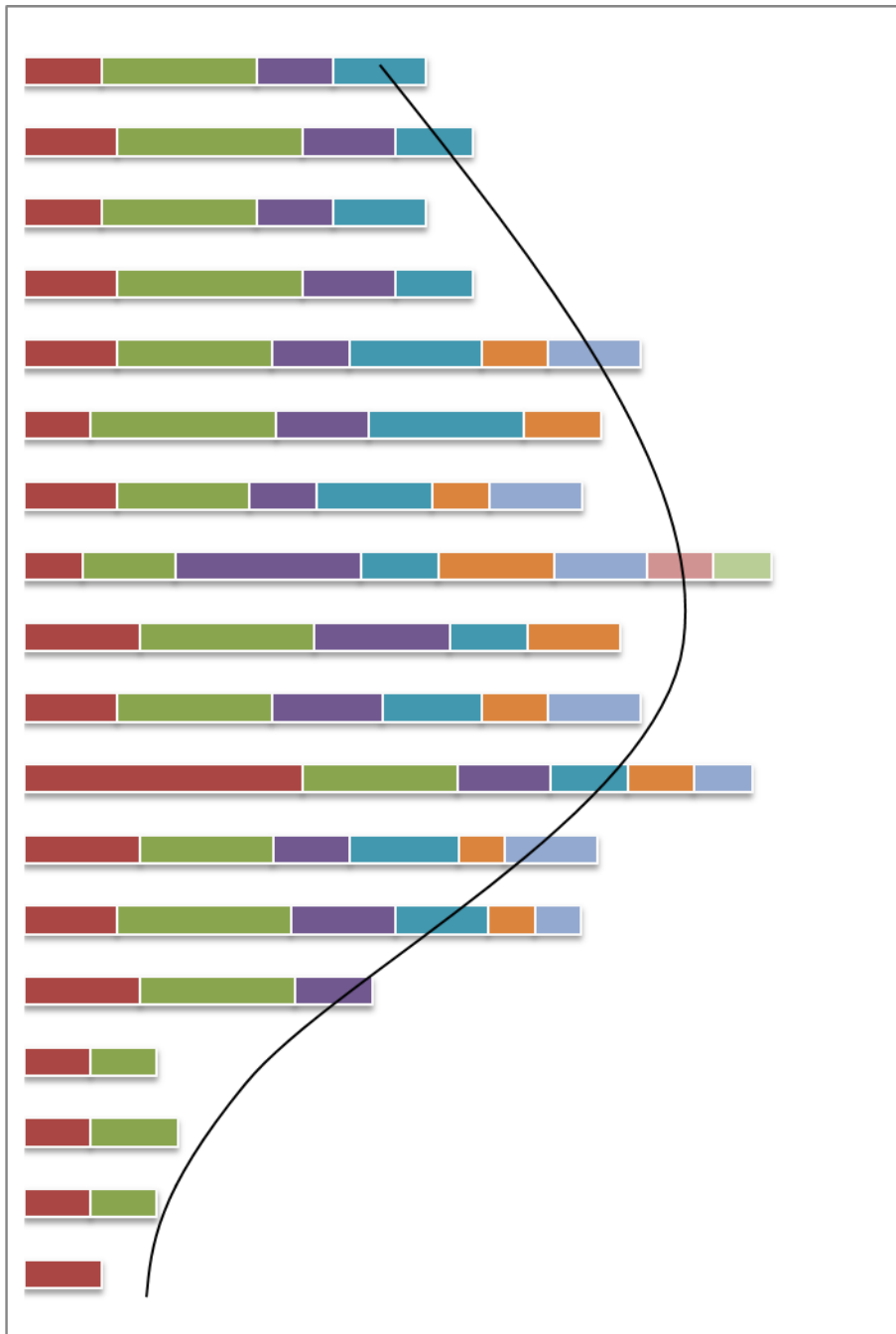
Figure 23, Thomas Adès, *Piano Quintet*, 7.

The image shows a musical score for a piano quintet. The top system contains four staves for string instruments (Violin I, Violin II, Viola, and Cello/Double Bass) and one staff for the piano. The bottom system contains two staves for the piano. A rehearsal mark '5' is placed above the first measure of the string section and above the first measure of the piano section. The string parts begin with a pizzicato (pizz.) and fortissimo (fff) dynamic, followed by an arco section. The piano part in the second system features a block chord and a minor third interval.

Could the arrival at this motif be the Schenkerian equivalent of reduction to the fundamental⁵⁸; in this case the fundamental binary temporal argument as heard in the exposition?

In the event that the phrases given by strings and piano are heard as one arc, it is also useful to present our mensural representation without the translation of the piano phrases to the right. That way, in the next figure, we can better observe the minutiae of rhythmic variation dictated by the irrational bars, as well as the changes in phrase lengths across the material in question:

⁵⁸ For the kind of Analysis pioneered by Heinrich Schenker, See, for example, Heinrich Schenker. *Fünf Urlinie-Tafeln*. 2 ed. (New York: Dover Publications, 1969).

Figure 24, Alternative time-space representation of rehearsal mark 4 of Thomas Adès, *Piano Quintet*, 5-7.⁵⁹

As with the analysis of *Chamber Symphony's* opening bars (only Opus 2, written entirely ten years prior), these phrases not only follow a similar arc of acceleration. Yet even with an observable trend, they too defy systematic explanation in a way that the iso-rhythms in, say, Messiaen's *Chronochromie* (1959-60) would not. Nevertheless, the subtle temporal variations here clearly have

⁵⁹ Cf. Figure 22.

an internal logic: a directional arc; and a rhythmic counterpoint; both probably intuitive, and both *musically* plausible in their leading otherwise non-functional material inexorably forward, and in this case, downward.

Indeed the themes of ascent and descent, notable in all of Adès, and notable in the exposition of this *Quintet*, form a kind of tapestry which can be torn from the wall, shredded, and reconstituted in a multitude of different abstractions. In contrast with the later polyphonic rhythmic trajectories, the rhythmic entropy so far observed seems quite basic.

Figure 25, Thomas Adès, *Piano Quintet*, 13.

Figure 25 represents perhaps the furthest from measured notation that so far exists in Adès's oeuvre. Whereas note values of even his most irrational of bars always align meticulously, the return of the descending argument here must, structurally speaking, be more extreme than all the previous iterations. Here Adès cries havoc and lets slip each part to play a series of independent accelerations, with the delightful caveat '[line ending not necessarily coordinated]'. There is a nearly ironic Apollonian and Dionysian dichotomy at play between the extraordinary detail of the score,

and its requirement of temporal independence. Is this aesthetic the apotheosis of prescription, or a step in the opposite direction? The sheer detail of instruction; from the $\frac{1}{2}$ sostenuto pedal markings in the piano, to the dotted parts-alignment vertices; suggests the former. There is at least the acknowledgement that the live-changing tempi (*molto accel*) in all parts creates a metronomic independence which obviates any need for irrational bars. Nonetheless, there is rhythmic chaos, and it is controlled. By controlling the chaos, Adès takes *responsibility* for an event which is as designed as any other in the piece. Here, once again, rhythmic and registral development replaces the harmonic far-point in any formal definition of excursion. Certainly Adès's extraordinary exact repetition⁶⁰ of the opening 16 pages implies he is thinking in some kind of traditional paradigm, most likely sonata form.⁶¹ All that is required to support this interpretation of form is an alternative focus on what aspects of the material are effecting functionality.

The extremities, even excesses, of Adès's rhythm in *Piano Quintet* raise a further issue which must be addressed. It is the question of performability, the same issue which arises in the performance of so called 'new complexity', such as the in music of Brian Ferneyhough, who in many ways championed the use of irrational time signatures.⁶² In his essay 'Responses to a questionnaire on complexity' Ferneyhough remarks:

...There is no difference here between Xenakis and Haydn. The criteria for aesthetically adequate performances lie in the extent to which the performer is technically and spiritually able to recognize and embody the demands of fidelity (NOT 'exactitude'!) [Sic]. It is a not a question of 20% or 99% 'of the notes'...The fake issue of 'unperformability' is really a red herring...Where literally impossible (or at least: unlikely) actions are called for, I specify this in context, so that the relevant indication forms part of the actual score...the performer has to remain relatively conscious of the need to be always re-evaluating visual, contextual and sonic correlates.⁶³

⁶⁰ Complete with repeat mark, but excepting some pedal indications and an adjusted violin entry, at rehearsal mark 1.

⁶¹ 'The piece is cast in relatively strict sonata form' Service, Tom. "Piano Quintet, Thomas Adès." Ircam - Brahms - Base de documentation sur la musique contemporaine. <http://brahms.ircam.fr/works/work/21724/> (accessed May 9, 2010).

⁶² See Brian Ferneyhough "Duration and Rhythm as Compositional Resources (1989)" In Toop, Boros & Brian Ferneyhough. *Collected Writings (Contemporary Music Studies)*, (New York: Routledge, 1995), 51-65.

⁶³ Ferneyhough, "Responses to a questionnaire on complexity," 71.

Implicit in Ferneyhough's argument is that the distance between score and rendition, like the distance between the truth of Jean-Paul Sartre and his reflection in the mirror⁶⁴, applies to all music, not merely to complexity. That is what gives us the concept of interpretation. Nevertheless, there can be instances where complexity leads to ambiguity of intent. In a passage of too many notes, which ones should be played?

For example, at rehearsal mark three, in Adès's piano quintet the piano has, underneath four bars of 4/4 in the strings, five bars of 3/5. Furthermore, *within* those 3/5 bars the piano has septuplets, and *within* those septuplets a series of acciaccatura as well as, in one case, another 'nested' ratio of 5:6 in the septuplet.

Figure 26, Thomas Adès, *Piano Quintet*, 4.

The image shows a musical score for Thomas Adès's Piano Quintet, rehearsal mark 3. The score is written for a piano quintet, with staves for strings and piano. The top system shows a 4/4 time signature for the strings and a 3/5 time signature for the piano. The piano part includes septuplets and acciaccatura. The bottom system shows a 5:6 ratio nested within the septuplet. The score is marked with 'con slancio, poco in rilievo' and 'non legato ma non troppo senza Ped.'

It is in these instances where Adès's music most resembles the new complexity of some of his fellow countrymen. Without resorting to larger divisions which obliterate the sense of ostinati, Adès's is perhaps the most efficient means of dividing the total of 35 attacks (36 in fact with the 5:6 ratio, excluding acciaccatura). However the act of achieving a correct and even tempo which relates to the strings, as instructed by the vertices of alignment, is at best very difficult. The performer must

⁶⁴ Jean-Paul Sartre. *Critique of Dialectical Reason: (2)*. 2nd ed. (New York: Verso, 2009), 344.

therefore re-evaluate ‘visual, contextual and sonic correlates’.⁶⁵ Should he or she attempt to render all the pitches, should he or she subtly vary tempo to catch up or fall behind in pursuit of fidelity? Finally, does the effect warrant the expense (that is, the effort in rehearsal and performance) of the complexity? In addressing this last question, it is worth closely and critically examining the bar in the piano which immediately follows the system in question.

Figure 27, Piano part, 5 after [3] In Thomas Adès, *Piano Quintet*, 4.



Whilst it is in 4/4 (as opposed to an irrational meter to begin with), it nevertheless contains no fewer than *three* levels of nested ratios. Notably, the 5:4 ratio effects the same temporality as the previous bars, and the 5:6 has precedent in the first 3/5 bar in the previous system, nonetheless the ossia designed for this project, shown in the figure below achieves a *very* close simulacrum of the aural effect requiring only one level of subdivision (none if the bar were made compound). The temporal closeness is evident when they are spaced relatively as below.

⁶⁵ Ferneyhough, “Responses to a questionnaire on complexity,” 71. Cf. Footnote ⁶³.

Figure 28, Proposed Ossia, Piano part, 5 after [3] In Thomas Adès, *Piano Quintet*, 4.

The image shows a musical score for a proposed ossia (alternative version) of the piano part, specifically measure 5. The score is written for two staves: the upper staff is labeled 'Ossia' and the lower staff is labeled 'Piano'. Both staves are in 4/4 time. The key signature has one sharp (F#). The Ossia staff contains a triplet of eighth notes followed by a quarter note, and another triplet of eighth notes followed by a quarter note. The Piano staff contains a triplet of eighth notes followed by a quarter note, and another triplet of eighth notes followed by a quarter note. Various time signatures are indicated by brackets and numbers: 5:4, 5:6, and 7:6. The score is written in a standard musical notation style with a treble clef and a key signature of one sharp.

What, then, is the essential difference between this compromise and Adès's original bar? Most obviously is Adès's use of tuplet to continue a previous meter - but could a similar compromise also be applied to the previous system? On the basis of our experiment, almost certainly, however Adès has determined, in this instance, that its difficulty does not supersede the value of the rhythm he has specifically conceived. This could be related to the fact that he played that very part *himself* at the premiere, and therefore had already internalised the rhythms. Though a composer who has revived the practice of using opus numbers, and who is published through a major house, is surely aware of the control relinquished when a score is released. Here is a composer who is meticulous with rhythm, and in a piece of rhythmic extremes, the detail, he says, is worth it. The question is: How does this rhythmic practice then translate to large scale works for much bigger ensembles?

VI. In several ways

The violinist Anthony Marwood wrote to Adès to ask for a concerto when he was ‘Blown away’ by *Powder Her Face* in 1995.⁶⁶ Adès agreed in principle and ten years later the BBC Proms agreed to take it. Speaking in May 2006 to *The Independent* Marwood recalls an exchange with the composer about what was

...physically possible. It went from the highest point, way off the fingerboard at the top, cascading down in broken ninths to the bottom, then up again, then down again, and so on, very fast, with the journey being slightly shortened each time, till it finally broke up. I couldn't believe my eyes. I decided not to answer the question of whether it was possible - I just decided it would be, somehow. I was determined not to be the man who is laughed at by posterity, like someone saying the Brahms concerto was too hard.⁶⁷

Even if Adès's music ‘shows few signs of direct contact with the rigours of twentieth century constructivism’⁶⁸, accounts like these carry the implication the Adès continued to push the boundaries of idiom. How else would he fashion a concerto which Marwood, at least, is convinced ‘will stay in the repertoire for ever’?⁶⁹ Even prior to the Violin Concerto Richard Taruskin's article on Adès's music (first published 1999) observed ‘the counterpoint of extreme registers’ with a ‘vast expanse’ in between⁷⁰. Certainly in Adès's registral extremes one can find Arnold Whittall's link to Janáček⁷¹, a composer on whom Adès's has published scholarship.⁷² Indeed, Pierre Boulez has commented on Janáček's monophonic, or at least, monothematic textures and his use of metric

⁶⁶ Michael Church. "Anthony Marwood: The magic violinist." *The Independent*. <http://www.independent.co.uk/arts-entertainment/music/features/anthony-marwood-the-magic-violinist-476753.html> (accessed January 9, 2010).

⁶⁷ Church, "Anthony Marwood."

⁶⁸ Whittall, "Adès, Thomas."

⁶⁹ Church, "Anthony Marwood."

⁷⁰ Taruskin, "A Surrealist Composer," 147.

⁷¹ Whittall, "Adès, Thomas."

⁷² Thomas Adès. "'Nothing but pranks and puns': Janáček's solo piano music" in *Janáček Studies (Cambridge Composer Studies)*, ed. Paul Wingfield (New York: Cambridge University Press, 2006), 18-35.

modulations to sustain singular material.⁷³ Taruskin, perhaps condescendingly, speculates that the origins of Adès's interest in 'mensuration canons' at extremes of register derives from 'music history' lessons⁷⁴, but these techniques were thriving in post-romantic Czechoslovakia. A consensus is growing, with some basis in Adès's own declamations⁷⁵ that he strongly identifies with composition that derives its music from rhythmic processes. This does not, however, prevent him from creating tonally complex music.

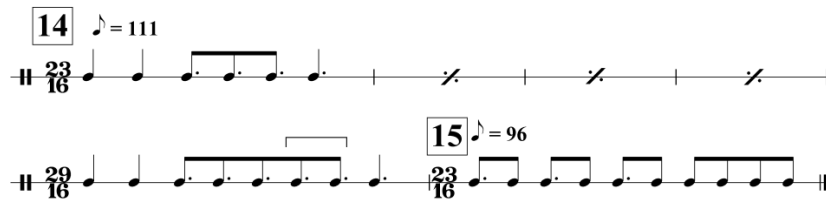
We have observed in Adès's *Piano Quintet* the extreme dissociation of trajectories achievable with a small ensemble known for their performance of complex music.⁷⁶ Leaving aside for a moment the *Quintet's* references to traditional form, and instead observing its micro-structural ambits of ostinati; of patterned trajectories and their polymetric orbits; the *Quintet* might equally be worthy of the title *Concentric Paths*. However, whilst a piano quintet is perhaps a ballet of five equals, a concerto is a dialogue, at times an argument between soloist and orchestra, and virtuosity, where prescribed, is subject to the pragmatic considerations of large ensemble. In romanticism, a convention of *molto rubato* passages and sometimes indulgent cadenzas elevates the soloist. In *Concentric Paths* there are moments when Adès uses highly wrought rhythmic process to create a very subtle dissociation of the metric orbit of soloist and orchestra. The subtlety of these techniques creates some notational conundrums which Adès acknowledges by the provision, in parts the score, of alternative notation for the soloist. The visual inelegance of the alternative notation seems to favour his original conceit. It is a conceit which uses, for the first, the notated *division* of triplets within a conventional bar (as opposed to using irrational bars to achieve fractions of ratio rhythms). This strange uneven meter, however, follows a pattern, which if extricated from the ensemble and assigned a fundamental unit, can presented very simply:

⁷³ Pierre Boulez interview in "feature documentary." *Leos Janacek - From the House of the Dead*. DVD. Directed by Patrice Chéreau. Berlin: Deutsche Grammophon, 2008.

⁷⁴ Taruskin, "A Surrealist Composer," 147-48.

⁷⁵ Ross, "Roll Over, Beethoven," 111.

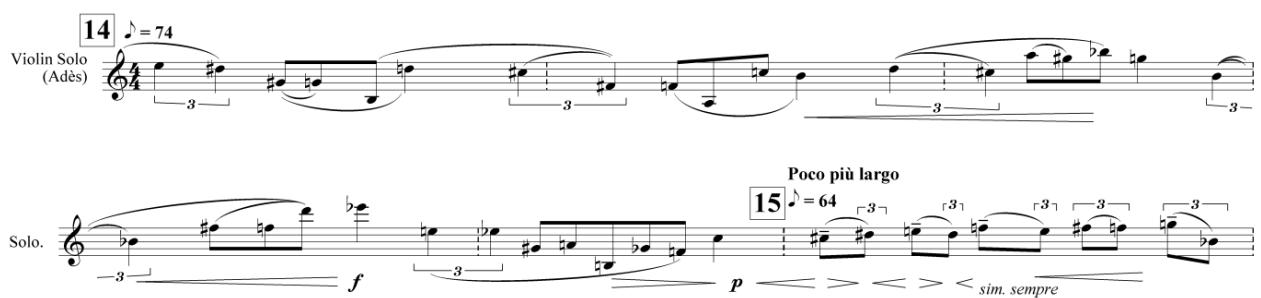
⁷⁶ Clements "Arditti Quartet."

Figure 29, Re-notation of violin solo rhythm at rehearsal mark 14 of Thomas Adès, *Violin Concerto* ⁷⁷

This figure presents the rhythmic pattern of the violin solo at rehearsal mark 14 of the violin concerto (2nd mvt). In this presentation it is easy to see a simple rhythmic ostinato expanded at the last by additive process followed by a bar of rhythmic development. Its 144 semi-quaver total could also be conceived as:

- 6 even bars of 12/8 compound time, or;
- 6 bars of 4/4, returning the triplet quaver its proper fractional value.

Adès's orchestral texture at the point in question happens to favour option b, and the solo part is in fact presented like this:

Figure 30, Violin solo at rehearsal mark 14 of Thomas Adès, *Violin Concerto*, 27

This project has appropriated the term iso-rhythm in the describing the articulation patterns at the very opening of his *Chamber Symphony* from fifteen years prior. The appropriation of the same

⁷⁷ Thomas Adès, *Violin Concerto (Score)*, (London: Faber, 2006), 27. This reduction calls a triplet crotchet a crotchet and re-bars the solo part, adjusting tempi appropriately.

epithet can also be justified in this figure. By listing and grouping the interval classes⁷⁸, it is possible to see how they too exhibit short patterns (sometimes additive) which may reinforce the sense of circularity:

Figure 31, Representation of Interval classes in Violin solo. [14] of Thomas Adès, *Violin Concerto*, 27.⁷⁹

1, 5, 1, 4, 3, 1, 5, 1, 4, 3, 1, 3, 1, 3, 1, 2, 3, 4, 1, 4, 1, 3, 1, 1, 1, 2, 5, 1, 5, 1, 2, 1, 1, 2, 1, 2, 1, 2, 3

Yet any banality in pitch material is undone by an imperfect alignment with the rhythm (the neo-isorhythmic process). Furthermore, any *rhythmic* banality, which the simple repetitions and slow tempo presented at Figure 29 might at first portend, is obliterated by the relational context of the solo to the orchestral meter. The unusual notational challenge of this relationship is acknowledged by Adès's own alternative notation:

Figure 32, Violin solo at [14] of Thomas Adès, *Violin Concerto*, 27. Including Adès' own alternative notation.

Figure 32 displays musical notation for the Violin solo at [14] of Thomas Adès, *Violin Concerto*, 27. The figure is divided into two main sections, labeled 14 and 15, each showing a comparison between an alternative notation and the standard notation.

Section 14: The tempo is marked $\text{♩} = 74$. It shows two staves: "Alt. Notation (Adès)" and "Violin Solo (Adès)". Both staves feature complex rhythmic patterns with triplets and slurs.

Section 15: The tempo is marked $\text{♩} = 64$ and includes the instruction "Poco più largo". It shows two staves: "Alt." and "Solo.". The notation includes dynamic markings such as *f* (forte) and *p* (piano), and the instruction *sim. sempre* (simultaneously, always).

⁷⁸ See, for example, John Rahn. *Basic Atonal Theory*, (New York: Macmillan Publishing Company, 1980).

⁷⁹ Colour is used here to annotate possible relationships between pitch class sets.

By finding what mathematics would term the ‘lowest common denominator’; a small note value into which each note of the passage can be neatly divided (one sixth of a crotchet, in this case); Adès is able to present his passage in conventional (i.e. ‘alternative’) notation.

It is also possible to see how the ostinato pattern falls exactly that note-length (a $1/6^{\text{th}}$ crotchet) short of a full 4/4 bar. Misalignment of soloist and orchestra is nothing new, but this prescribed destabilisation is subtle and meticulous. It compounds right up to the point of realignment over the 6 bars in question, only to restart. Perhaps the slow tempi and simple pitch content help facilitate the perception of this subtle bending of time - this minute *Concentric Path*.

Indeed the relation between Adès’s concept and this project’s Figure 29 is much clearer in view of the alternative notation. At the tempos indicated it is entirely possible to imagine the performer using sixth crotchet notes ($1/24^{\text{th}}$ notes, in irrational meter parlance) as the base counting units. Use in his earlier *Piano Quintet* of nested tuplets might have led one to imagine another kind of alternative notation somehow more permanently cognisant of base counting unit outside of the given meter:

Figure 33, Violin solo at [14] of Thomas Adès, *Violin Concerto*, 27. Alternative notation II.⁸⁰

The image displays two systems of musical notation for a violin solo. The first system, labeled 'Alt. Notation II' and 'Violin Solo (Adès)', shows measures 14 and 15. Measure 14 has a tempo marking of 74 and a 10:15 time signature. Measure 15 has a tempo marking of 64 and a 12:8 time signature. The second system, labeled 'Alt. II.' and 'Solo.', shows measures 14 and 15. Measure 14 has a tempo marking of 64 and a 10:15 time signature. Measure 15 has a tempo marking of 64 and a 12:8 time signature. Both systems use complex rhythmic notation with tuplets and time signatures like 10:15 and 12:8. The second system includes a 'Poco più largo' marking and a 'sim. sempre' marking.

⁸⁰ My alternative notation (II) for comparison.

However this alternative simply inverts the process of ‘gear change’ between two different meters. By using mostly triplets, Adès’s alternative notation largely avoids this problem. Yet another possibility for alternative notation exists which might be more consistent with Adès’s own precedent:

Figure 34, Violin solo at [14] of Thomas Adès, *Violin Concerto*, 27. Alternative notation III.⁸¹

This third alternative might be quite elegant in the absence of the bracketed tuplet markings (which are optional extras) and it is analytically self-contained. The additive time signature at rehearsal mark 15 could equally be presented as a singular 5/24 bar by dotting the first quaver in each. This kind of notation is rife in Adès’s *Piano Quintet* where the ensemble consists of five performers, but it does create the problem of a differing total of bars between parts in a way that even Figure 29 does not. In this alternative, the orchestral bar lines are denoted with a half length dotted line, however this superfluity of information would hardly serve to reduce confusion.

Adès’s original binary system of a solo line with an alternative notation presents both his original conceit, (his intent, at least partly), and a differing notational method which acknowledges an easier means of rendering that conceit; one not bettered here by alternatives derived from precedent in Adès’s own notation elsewhere. The simplicity of the material being rendered has been shown in

⁸¹ My third (III) alternative notation.

Figure 29 and by analysis which extricates it from the ensemble, and emulsifies its pitch trajectory into a treacle of numbers (Figure 31). This reductive shredding exposes patterns of quite stark simplicity which, when reintegrated into the ensemble, take on a level of complexity easily capable of generating a notational migraine. However, the title and sound world of this concerto suggests that this is not a matter of misaligning or disrupting some other important material for the sake of it, these subtle variegations *are* the material. Development emerges from complex interactions of simple ideas, of concentric paths, interactions so subtle as to sound natural and innate.

The successful execution in performance of the soloist's broken Tuplets in *Concentric Paths* may have buoyed Adès to revisit that rhythmic device in a bigger way. Two years later, working with Simon Rattle and the Berlin Philharmonic Orchestra, Adès takes a bigger risk in introducing broken triplets to the orchestral texture in *Tevot*.

Figure 35, Thomas Adès, *Tevot: (Score)*, (Oxford: Faber, 2008), 12. (2 after rehearsal mark F)



Adding to the daring of this new *orchestral* expression of broken triplet rhythms, the tempo in this figure ($\text{♩} = 88-120$) is much faster and more dangerous than the tempi examined in *Concentric Paths*. Furthermore, this section as a whole is exposed: it follows large thick blocks of (broadly) homophonic texture. A mere two years after experimenting with broken triplets, Adès now trusts (in addition to the soloists of *Concentric Paths* and *In Seven Days*) the rank-and-file orchestral musician

with these broken rhythms. There is no alternative notation; alternative notation which might look like this in the third flute 1 bar:

Figure 36, Alternative notation based on Thomas Adès, *Tevot*, 12. Flute bar (Cf. Figure 35, 3rd bar)



Such alternative notation as this is not especially complex. What is Adès's thinking as he pursues the 'broken' tuplet notation within the orchestral texture? It seems he is primarily concerned with communicating his conception of the rhythm to the musicians, which is to say how *he* hears the delineation of temporal objects, in the hope of changing the performers' mode of conceptualisation and, very subtly, their actual rendition. For example, the equality of articulation and duration of the E-flat and A-flat quavers in the original flute bar in question is much clearer than in the alternative. Likewise the original preserves the actuality of rapid *metric* variance.

In *Tevot* the concomitance of these rhythmic anomalies forms a jagged (but charming) canon as it descends through the texture. In both *Concentric Paths* and *Tevot* the complexity afforded by Adès's broken tuplets is mitigated by repetition. In the piano part of his later *In Seven Days*, Adès employs ever larger repeating compound patterns of multiple meters.

Figure 37, Piano part and alternative from Thomas Adès. *In Seven Days*, 32.⁸²

It is conceivable that this compound pattern, spanning nearly three bars⁸³, derives its emphasis on groups of seven from the title. Once again it is faster, ($\text{♩} = 77$), more than twice as fast as the passage examined in *Concentric Paths*. Nevertheless, because there are, as with all of these orchestral examples, two changes in base meter (as opposed to *Piano Quintet's* multiple trajectories), this rhythm could also be presented simply by assigning a global fundamental unit (as we did with *Concentric Paths*). The ambit and tempo of this pattern is much more ambitious. Apparently Adès is growing accustomed to asking performers to change between meters unexpectedly, including orchestral musicians. This division of the triplet seems to be a simplification of the kinds of rhythmic flexibility previously explored by the use irrational bars. In these pieces Adès

⁸² With enlargement of compound meters.

⁸³ The rhythm of the pattern also repeats beyond the extract given in Figure 37.

has done away with the additional barring which that required, preferring to allow performers to negotiate the minutiae of rhythmic ‘gear changes’ above the conductor’s much simpler beating patterns. It is a nod to the rhythmic polyphony of *Piano Quintet* made with a consciousness of the logistics of ensemble performance. Yet with each subsequent large scale piece Adès seems to become just a little bolder, in tempo, scale, and polyphony, conscious that training performers in new rhythmic devices is a patient art, and that entire orchestras cannot easily replicate the intimate agility of a *Piano Quintet* sized ensemble. Inclined towards rhythmic complexity, Adès is plagued by the demons of pragmatism, but his imagination seems not inhibited, but provoked.

VII. Conclusion

Reflecting on the music of Adès that we have examined, music which spans the first eighteen years in the career of a young composer, we might pause to take a long view of his development. In some of his early works such as *Chamber Symphony*, *Living Toys*, and *Arcadiana*, we find a fraught rhythmic language. Rhythmic processes destabilise and subvert all they touch, from the drumming isorhythm in *Chamber Symphony* to the broken sobs of *Auf dem Wasser zu singen*. *Powder Her Face*, governed by a libretto, miniaturises the *Femme fatale*, found in so much opera, including 20th century archetypes. Where Berg’s *Lulu* is a woman who undergoes profound spiritual and moral degradation, Adès’s *Femme Fatale* is one who ‘cannot pay her hotel bill’.⁸⁴ We have examined the overture with its allusions to laughter, and pretensions to tango, and seen how Adès uses additive processes across multiple meters, and shattering tuplets, to create a dramatic space marred by sin.

Yet, for all his playful referencing, Adès immediately follows *Powder her face* with *Traced overhead*, a piano work whose ethereal aural space redefines Adès’s fraught rhythmic language as a gently intricate counterpoint. Adès’s departure from *distorting* music with rhythmic detail, towards *conceiving* it as part of absolute music consolidates his rhythmically complex style. With *Piano*

⁸⁴ See Mival, William. “Powder her face” in *Nightwaves* [Radio broadcast]. (London: BBC, 1995).

Quintet we observe the apotheosis of Adès's complexity, one which is at first carefully applied, with new notational precepts, to large scale works like *Concentric Paths*. Successful performances and recordings of such works, and repeated collaborations with excellent ensembles like the Berlin Philharmonic, may have emboldened Adès to further evangelise in areas of notation such as broken triplets, giving them to increasing numbers of musicians. In this way he has finally realised one of 1930s Cowell's fundamental implied tenets that base-two divisions are not the last word in temporal space. In that sense at least, Adès has invited us to explore the merits of 'thinking irrational'.

Select Bibliography

Written Materials (Non Electronic)

Adès, Thomas. "‘Nothing but pranks and puns’: Janáček’s solo piano music" in *Janáček Studies (Cambridge Composer Studies)*, edited by Paul Wingfield, 18-35. New York: Cambridge University Press, 2006.

Adorno, Theodor W. "On the Social Situation of Music." In *Essays on Music*, by Theodor W. Adorno, 391-436. Los Angeles: University of California Press Ltd., 2002.

Adorno, Theodor W. *Essays on Music*. Edited by Richard Leppert. Los Angeles, : University of California Press, Ltd., 2002. *On the social situation of music*, p. 391-92.

Cowell, Henry. *New Musical Resources*. New Ed ed. New York: Cambridge University Press, 1996. First Published 1930.

Duckworth, William. *Talking Music: Conversations With John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers*. New York: Schirmer, 1995.

Messiaen, Olivier. *Technique de mon langage Musicale*. Paris: Editions Musicales, 1975.

Messiaen, Olivier. *Traité de rythme, de couleur et d'ornithologie Tome 3*. Paris: Alphonse Leduc, 1996.

Rahn, John. *Basic Atonal Theory*. New York: Macmillan, 1980.

Read, Gardner. *Modern Rhythmic Notation*. London: Gollancz, 1980.

Ross, Alex. "Roll Over, Beethoven." *New Yorker*, October 26, 1998, 110-30

Sartre, Jean-Paul. *Critique of Dialectical Reason: (2)*. 2 ed. New York: Verso, 2009.

Schenker, Heinrich. *Fünf Urlinie-Tafeln*. 2 ed. New York: Dover, 1969.

Taruskin, Richard. "A Surrealist Composer Comes to the Rescue of Modernism." In *The Danger of Music and Other Anti-Utopian Essays*, 144-52. 1 ed. Berkeley: University of California Press, 2008.

Taruskin, Richard. "Revising Revision." In *The Danger of Music and Other Anti-Utopian Essays*, 354-82. 1 ed. Berkeley: University of California Press, 2008.

Whittall, Arnold. "James Dillon, Thomas Adès, and the Pleasures of Allusion." In *Aspects of British Music of the 1990s*, 3-28. 1st ed. Hampshire: Ashgate, 2003.

Written Materials (Electronic)

Church, Michael. "Anthony Marwood: The magic violinist." The Independent.
<http://www.independent.co.uk/arts-entertainment/music/features/anthony-marwood-the-magic-violinist-476753.html> (accessed January 9, 2010).

Clements, Andrew. "Arditti Quartet, Wigmore Hall." The Guardian Online.
<http://www.guardian.co.uk/music/2005/apr/12/classicalmusicandopera1> (accessed May 9, 2010)

Faber Music. *List of works by Thomas Adès* <http://www.fabermusic.co.uk/resources/pdfs/240-worklist.pdf> (Accessed 04 April, 2010).

Service, Tom. "Piano Quintet, Thomas Adès." Ircam - Brahms - Base de documentation sur la musique contemporaine. <http://brahms.ircam.fr/works/work/21724/> (accessed May 9, 2010).

Whithall, Arnold 'Thomas Adès' *Grove Music Online* ed. L. Macy (Accessed 28 October 2009)

Scores

Adès, Thomas. *Arcadiana: Study Score*. Oxford: Faber, 2001.

Adès, Thomas. *Asyla: (Score)*. Oxford: Faber, 2005.

Adès, Thomas. *But All Shall be Well: (Score)*. Oxford: Faber, 2008.

Adès, Thomas. *Catch: (Piano Score and Parts)*. Oxford: Faber, 1999.

Adès, Thomas. *Chamber Symphony: Study Score*. Oxford: Faber, 2001.

Adès, Thomas. *Darknesse Visible: (Piano)*. Oxford: Faber, 2006

Adès, Thomas. *Life Story: (Soprano and Piano)*. Oxford: Faber, 1993.

Adès, Thomas. *Living Toys*. Oxford: Faber, 1993.

Adès, Thomas. *Powder Her Face: (Vocal Score)*. Oxford: Faber, 2005.

Adès, Thomas. *In Seven Days (Score)*. London: Faber, 2008.

Adès, Thomas. *Piano Quintet: (Score)*. Oxford: Faber, 2007.

Adès, Thomas. *Tevot: (Score)*. Oxford: Faber, 2008.

Adès, Thomas. *The Origin of the Harp: (Score)*. Oxford: Faber, 2008.

Adès, Thomas. *The Tempest: (Vocal Score)*. Oxford: Faber, 2008.

Adès, Thomas. *Traced Overhead (Score)*. Oxford: Faber, 1997.

Adès, Thomas. *Violin Concerto (Score)*. London: Faber, 2006.

Britten, Benjamin. *Death in Venice: Full Score (Faber Edition)*. Oxford: Faber, 1998.

Carter, Elliott. *Quartets, Strings* New York: Associated Music Publishers, c.1994.

Ferneyhough, Brian. *Quartets, strings*, no. 4 London: Peters, c1990.

Schubert, Franz. *Music Minus One High Voice Soprano, Vol. 1 Schubert German Lieder (Book & CD)*. Pap/Com ed. Unknown: Music Minus One, 1997.

Stravinsky, Igor. *Stravinsky - The Rite of Spring: Le Sacre du Printemps The Masterworks Library (Boosey & Hawkes Masterworks Library)*. New ed. New York: Boosey and Hawkes, 2004.

Discography

Adès, Thomas. *Adès Asyla: Chamber and Orchestral Works* Simon Rattle (Conductor) The City of Birmingham Symphony Orchestra. EMI, 1999. CDC 556 8182.

Adès, Thomas. *Adès: Living Toys* Markus Stenz, Stephen Cleobury (Conductors) London Sinfonietta (orchestra), et al EMI, 1998. Cat. No: CDZ 572 2712.

Adès, Thomas. *Thomas Adès: Life Story - Piano Works* Lynsey Marsh, Anthony Marwood, Louise Hopkins (performers). EMI, 1997. CDZ 569 6992.

Adès, Thomas. *Thomas Adès: Piano* Alexey Vladimirovich Stanchinsky (Composer), Conlon Nancarrow (Composer), Edvard Grieg (Composer), Ferruccio Busoni (Composer), György Kurtág (Composer), et al. EMI, 2000. CDC 557 0512.

Adès, Thomas. *Thomas Adès: The Tempest* Orchestra of The Royal Opera (Orchestra), Cyndia Sieden, David Cordier (Vocals), et al. EMI, 2009. 5099969523427.

Carter, Elliott. *Elliot Carter: The Four String Quartets* The Julliard String Quartet. Sony, 1991. 47229.

Ferneyhough, Brian. *Ferneyhough – Chamber Works* Roger Redgate (conductor) ensemble exposé. Metier, 2009. MSV 28504.

Filmography

Ades - Powder Her Face . DVD. Directed by Thomas Adès. Long Branch, NJ: Kultur Video, 1999. ISBN 0769783503.

Boulez, Pierre. Interview in "feature documentary." *Leos Janacek - From the House of the Dead*. DVD. Directed by Patrice Chéreau. Berlin: Deutsche Grammophon, 2008. 0004007344262.

Broadcasts

Mival, William. "Powder her face" in *Nightwaves* [Radio broadcast]. (London: BBC, 1995).