Portfolio of Compositions and ‘Local Harmonic Procedures in Thomas Adès’s *Traced Overhead’*

by

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Declaration

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I am extremely grateful to all of the performers who’ve contributed to the recording and performances of my pieces – you’re all terrifyingly good.

I am extremely fortunate to have an exceptionally supportive family – I cannot thank them enough. Similarly, I would also like to thank my friends and colleagues for putting up with me, in general. You all know who you are.
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**CD Track Listing** (All scores attached)

1. *Mirror Dances*
2. *H.O.C.* (Excerpts)
3. *Flickering Shards*
4. *Stanzas From Yerma*
5. *Fan Fiction*
Thesis Overview

Over the course of my PhD research, my music has undergone a gradual, but significant transformation. The key driver behind this transition has been an ongoing investigation into the following research questions:

1. How can my extant relationship with the harmonic idiom of modern jazz be combined with local intervallic techniques or procedures (principally informed by research into the music of Thomas Adès) to form compelling musical objects?

2. In what ways have the resultant musical objects interacted with other aspects of compositional decision-making? i.e. issues of structure, tessitura, rhythm etc.

The findings of these investigations are ultimately expressed in the form of the submitted compositions in the portfolio, which can be seen to undergo gradual refinement in procedure and application with regard to the use of integrated intervallic techniques. While part of the contribution to knowledge lies within the works themselves, the exegesis of my reflective practice seeks to provide a context for my music and outlines the ongoing relationship that my wider research interests have had with my compositional techniques.

My creative practice has prompted an investigation into the local intervallic processes in the music of Thomas Adès, which has provided a reliable source of inspiration. As an additional contribution to knowledge, I have demonstrably, through analysis, overturned aspects of previously established
thinking with regard to the composer's use of 'strands', as well as providing new insights into the techniques used in his early piano piece *Traced Overhead* (1995-96).

I ask the examiners to consider the portfolio of compositions as 65% of the submission, and the remaining 35% as the theoretical work on *Traced Overhead*.

In order to best communicate all of the above the thesis will be structured as follows:

- An overview and contextualisation of my compositional practice and research.
- A critical commentary of my most recent piece, *Mirror Dances*.
- Critical commentaries of remaining works in chronological order, ending with my orchestral piece, *FanFiction*.
- Conclusion and summary of findings.

The presented works and their key talking points in relation to the research questions (as discussed in their commentaries) are as follows:

**H.O.C.** (March, 2011) for Saxophone Quartet: substantial adoptions and adaptations of harmonic techniques; embedding harmonic techniques within jazzy harmonic language; use of harmonic templates; and expressions of my research into the harmonic techniques used by Thomas Adès in my music.
Performed at the National Portrait Gallery, London, by the Marici Saxophone Quartet. Recording of ‘highlights’\(^1\) included (CD2).

**Flickering Shards** (June, 2011) for Trumpet (in C) and String Quartet: textural exploration; significant adoptions of intervallic techniques; use of intervallic strands in melodic writing; embedding harmonic techniques within jazz-influenced harmonic language; use of harmonic fields; and expressions of my research into the harmonic techniques used by Thomas Adès in my music. Performed at Surrey University’s Studio One by The Ligeti Quartet and Simon Desbruslais. Recording included (CD3).

**Lashes** (March, 2012) vignette for Solo Violin; use of jazz chord progression as harmonic template; incorporation of intervallic techniques within jazz vocabulary; and an exploration of idiomatic writing for the violin. Unperformed. No recording included.

**Stanzas From Yerma** (November, 2012) for Soprano and Piano: use of intervallic technique in relation to narrative; extensive use of intervallic materials; and combinations of multiple intervallic processes. Performed at the University of Surrey PATS Studio One, by Catherine May and Lindy Tennent Brown. Recording included (CD4).

**FanFiction** (April, 2013) for Orchestra: use of harmonic fields/templates and the development of harmonic pace in my work; the incorporation and referencing of multiple influences through harmony and rhythm; issues of orchestration and narrative. Performed at The Ivy Theatre, 1

\(^1\) Unfortunately, due to problems with the portable recorder at the N.P.G. only pertinent highlights are included.
Guildford by the University of Surrey Symphony Orchestra. Sample-based mock-up included (CD5).

*Mirror Dances* (March, 2014) for Saxophone Quartet: use of harmonic fields/templates; motivic interaction, repetition and development of narrative; and expressions of personal intervallic technique. Performed at The University of Surrey PATS Studio One by the Delta Saxophone Quartet. Recording included (CD1).

**Personal Background and Practice Context**

My relationship with my instrument, the electric guitar, forms the lens through which I understand musical objects, both aesthetically and kinesthetically. When viewing this portfolio of compositions, it is important to acknowledge the influence that my practice as a performer has had on my work. Since having studied at Berklee College of Music in Boston, USA, my practice as a guitarist has been in the vein of jazz fusion, aspiring to the likes of John Scofield, Pat Metheny, Kurt Rosenwinkel et al. In my career as a performer/improviser, I’ve enjoyed several career highlights, such as: performing as part of ‘The Eclectic Guitar Orchestra’ alongside some of the most noteworthy guitarists in the world, including John Williams²; touring the UK with Toyah Willcox and Bill Rieflin (of King Crimson and R.E.M.) in alternative ‘art-rock’ band, ‘The Humans’;

² Other performers include (all guitarists unless otherwise stated) Craig Ogden, Declan Zapala, Gary Ryan, Bridget Mermikides, John Wheatcroft, Mark Rose (Double Bass), Amanda Cook, Peter Gregson, Steve Goss, George Hrab (Drum kit), Steve Hamilton (Keyboards) and Milton Mermikides.
performing as ‘The Spirit of Pete Townshend’ in the 2015 musical production of The Who’s *Tommy*; as well as touring instrumental fusion music under my own name and releasing various instructional products through jamtrackcentral.com.

My experience and interests as a performer has exposed me to a wide array of musical influences. Like many guitarists, my first love was rock music; Having learnt a few songs by Nirvana in my early teens, I was soon attempting more challenging material, often by ear. My interest in jazz came, primarily, through being exposed to ‘fusion’ (Billy Cobham and Jeff Beck to begin with), but can also be seen as an extension of my interest in ‘prog-rock’ as well as the music of Frank Zappa (a figure who has influenced my attitude towards music a great deal).

My discovery of The Mahavishnu Orchestra and John McLaughlin represented a seismic shift in my appreciation of what music was capable of, and prompted an intense interest in exotic harmonic language and the role of extended compositional forms in jazz (rather than the ‘head followed by solos followed by head’ form that’s often associated with the genre’s performance practice).

While at Berklee, I became aware of musicians like Kurt Rosenwinkel, Adam Rogers, and many other contemporary virtuosos who were pushing at the

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3 See [https://www.youtube.com/watch?v=i86dS7ezyHM](https://www.youtube.com/watch?v=i86dS7ezyHM) (a live trio performance of my tune ‘Phoeniix’)
4 One of the world’s premier outlets for such products. See [https://www.youtube.com/watch?v=TtFE1vCY1eo](https://www.youtube.com/watch?v=TtFE1vCY1eo) (my first instructional package with the company)
5 My guitar-playing father had already exposed me to the likes of Yngwie Malmsteen, Joe Satriani, Van Halen et al.
boundaries of jazz guitar with their sophisticated harmonic and rhythmic languages.

I first became interested in contemporary classical composition while completing my undergraduate studies at the University of Surrey. Having been a huge admirer of the music and playing of John Scofield, I was drawn to his collaborations with Mark-Anthony Turnage and it was this music that prompted my excitement for classical music: I was very quickly obsessed with the idea of writing my own music for other people to play, as well as excited by the textural possibilities made available via orchestration.

Initially, my goal as a composer was to write works in the vein of the 'third stream', but gradually found that explicit references to the language of jazz were not finding their way into the pieces that I was writing. Instead, my training in jazz shaped how I conceptualised harmony and so the language was innately expressed through my voicing of chords, my frequent modal approach to melodic writing, and in a compositional methodology that relied heavily on improvisation to generate material. Also, having developed an intense interest in the intricacies of notation and orchestration, improvisation within the works themselves was not something I was keen to bring into my composition; I had been satisfying the urge for improvisation in my guitar playing, and composition represented an opportunity to crystallise my most compelling ideas. Moreover, I didn’t always feel as though classical musicians really understood the rhythmic ideas contained within the jazz idiom – the finer points of swing, in particular –

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7 Gunther Schuller's term for the combining of jazz and classical soundworlds [Taruskin, 2009].
and in early flirtations with the third stream, my work, in performance, sounded like poorly realised jazz: devoid of its characteristic spontaneity and dynamism, but with some harmonic stylistic markers.

Finally, the incorporation of overt jazz language within classical music has powerful metaphorical connotations that I didn’t necessarily want to invoke, not least for the sake of resisting pigeonholing; jazz could be a part of the language, but I didn’t want my music to be about the jazz language. On the other hand, jazz’s harmonic concepts are the lens through which I understand harmony, and this undoubtedly manifests itself in my practice as well as in my analytical approach.

**Idiosyncrasies of Musical Language**

The study of jazz and the discipline of jazz improvisation require an extensive harmonic vocabulary and understanding. At Berklee, the main harmonic concept taught with regard to improvisation is that of ‘chord scale theory’ (often abbreviated as CST [Nettles, 1997]). CST seeks to marry any given chord within a progression with its most appropriate modal/scalic choice(s) to act as an extended palette of pitches for improvisation over the given chord. Throughout this portfolio, I make regular references to chords (or harmonic palettes) as being ‘Lydian’ or ‘Superlocrian’, and this is born out of this harmonic discipline. To briefly outline how these decisions have been made/interpreted,

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8 For a more exhaustive explanation of CST, see *The Chord Scale Theory and Jazz Harmony* (1997) by Barrie Nettles.
consider the following example:

![Figure 1: Modal choices of C7♭9,13. (Small noteheads show ‘avoid tones’).](image)

The first bar contains a hypothetical chord to melodically improvise over/with, and the following three bars contain potential modal options. The first choice, C Mixolydian wouldn’t work well as the D natural and the F would clash with the D♭ and E, respectively, and so are to be avoided (this is governed by a peculiarity of CST’s prohibition of certain kinds of minor 9th intervals that results from the stacking of certain secundal scales into tertian chord scales [Nettles, 1997]). The second choice, C Superlocrian, contains only one pitch that would not work with the chord: the A would ‘clash’ with the A♮ in the chord. Finally, the C Half-Whole 9 diminished scale, shown in the fourth bar, would be the most appropriate scale choice, as it contains no pitches that don’t work (according to CST) over the chord shown in Fig. 1. In this situation we resort to octatonic scales because there are no modes of the Major, Melodic Minor or Harmonic Minor (the 7th mode of Harmonic Minor would work, but it wouldn’t contain a B♭9) scales that contain a combination of the all pitches in the chord.

When composing, I sometimes reverse engineer this idea when coming up with chord voicings that don’t comply to tertian construction by labeling

9 Often abbreviated to ‘H/W’
unusually constructed chords by their most characteristically applicable mode, even if in inversion. More often than not, due to theories established in George Russell’s *Lydian Chromatic Concept of Tonal Organisation* (1953)\textsuperscript{10}, the choice of ‘root’ for the chord label is adjusted to the most applicable Lydian mode, primarily: Lydian (the fourth mode of the major scale); Lydian Dominant (the fourth mode of the Melodic Minor scale); or Lydian♯5 (the third mode of the melodic minor scale); or Lydian♯2 (the sixth mode of the Harmonic Minor scale). Russell’s motivation and rationale for constructing LCC is slightly different from my adoption of it, which represents a narrower, more idiosyncratic – and, admittedly, less theoretically sound – understanding developed for my own practice.

Played over a major chord of the same root note, Lydian doesn’t contain any ‘avoid tones’ because when stacked in thirds, no dissonant minor 9\textsuperscript{th} voicings appear (the other Major modes, Ionian and Mixolydian, have natural 4ths which clash with the major third in the chord according to CST). Even when collapsed into one octave, any minor 2\textsuperscript{nd} intervals that do occur act as leading notes to its primary chord tones, namely to the root and fifth of the mode (in C, these would be F♯ to G and B to C). For these reasons, Lydian becomes the default mode\textsuperscript{11}, rather than Ionian. When chords are not easily labeled or with an unclear harmonic function, for the purposes of improvisation (and by extension,

\textsuperscript{10} The Lydian Chromatic Concept is often abbreviated as ‘LCC’.
\textsuperscript{11} [Russell, 1953] constructs this argument slightly differently by noting that Lydian is the mode that occurs when stacking seven perfect 5\textsuperscript{ths}.}
composing), they can be interpreted as belonging to some kind of Lydian scale\textsuperscript{12}.

Take, for example, \textbf{Fig. 2}:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{fig2.png}
\caption{C Lydian Dominant Chord}
\end{figure}

Even though the chord doesn't contain the pitch of C, there is enough information within the chord for it to be categorised as belonging to C Lydian Dominant and not another kind of Lydian mode (the shared pitches in the scale are shown with the inclusion of stems). I must again stress that this is by no means a cohesive theory, but a pragmatic labeling system that is convenient for improvisers and saves the need for endlessly complex chord labeling\textsuperscript{13}. In practice, this is convenient to guitarists in particular as the restrictions of the idiom often impose rootless voicings and other omitted voices in accompanimental playing; we are often working in the realm of 'implied harmony/modality'.

\textsuperscript{12} Densely chromatic cluster chords, however, fall outside of this practice as they cannot conform to any of the relevant modes.

\textsuperscript{13} This system is not a wholesale overhaul of 'parent key' thinking. It is often best practice to think in terms of major or minor keys, and many chords that have some ambiguity are often easily identifiable as being of modes other than those of the LCC set.
I mention all of the above as various aspects of CST and LCC are part of the lens through which I view and understand harmony, along with more conventional analytical lexicons when appropriate. This, of course, has a subtle but noticeable impact on my practice and is therefore a pertinent issue when understanding my work and my descriptions of harmonic objects (though, that is not to say that other analytical methodologies haven’t been preferred when appropriate). For example, the frequent use of Lydian harmonies in my work has a loosely strategic rationale: I know all the notes will work.

As an extension of my practice as jazz musician, much of my research methodology (in relation to composition rather than analysis) consists of focused listening. While the contributions of the most pertinent and important works have been duly referenced in the commentaries, it should be noted that I am constantly thinking of where my work exists within a larger library of ideas during the period of composition.

While writing the commentaries in this portfolio, I have very rarely referenced any kind of rhythmic technique or process. Rhythm is clearly a key element of some of my later pieces, but it’s something I think very little about, on a conscious level, when composing. Fortunately, rhythmic material tends to emerge quite easily when generating ideas. When in a compositional mindset, I feel the sensation of ‘counting myself in’ and things emerge – I can only accredit this to many hours of improvising within metrical structures. On a more developmental level, there are things that I tend to do with rhythm when manipulating material, such as transforming the rhythmic phrasing upon
repetition, but this is done without constructionist processing and on a context-dependent basis.

**Compositional Habits and Considerations**

I do not have a ‘flow chart’ of tasks or processes when I’m preparing a piece, but there are a few habits (some might say ‘disciplines’) that I’ve developed. The creative process begins with an external impetus; while I’m often improvising and sketching and developing ideas on guitar, I don’t suddenly think, ‘I’ll write a string quartet today’. For me, there needs to be a deadline before the direct work starts, be it a competition cut-off date, a recording session, a first rehearsal or one enforced by the performer(s). I tend to let opportunity (or the opportunity to create my own opportunities) guide me in such matters. David Byrne’s words from *How Music Works* most succinctly sum up my approach to this issue: “Just because the form that one’s work will take is predetermined and opportunistic (meaning one makes something because the opportunity is there), it doesn’t mean that creation must be cold, mechanical, and heartless. [...] Opportunity and availability are often the mother of invention” [Byrne, 2012, p.13].

Knowing who will be playing the piece is generally the first step in my creative process. I want the best possible outcome when writing within any scenario, so I try to take into account how I might put together the work in a way that suits the idiom or situation. Take for example these two tasks:
a. Compose a work to be performed by a group of undergraduate students, or;

b. Compose a work for a seasoned saxophone quartet that specialise in contemporary music.

In scenario ‘a’ there will be a virtuosity ceiling, so it’d be an unwise move to write something beyond the capability of the players. I’m happy for this limitation to inform my work and I try to make the most of the resources that are available. This limitation allows me to be creative in both how I put the piece together and in the ways in which musical gestures are achieved. I’m also forced to become more familiar with idiomatic writing for the instrumental forces present; to a certain extent, I try to make the piece foolproof.

On the other hand, when writing for scenario ‘b’, I can be bolder with the writing with the assurance that these experienced professionals have encountered much more demanding pieces than mine. There are of course other advantages: I can look at their repertoire list and get an understanding of their aesthetic leanings; I can listen to recordings made by the ensemble and think about particular areas within their playing and sound that I could exploit; and finally, when in rehearsal or in correspondence with the ensemble, I can refer to individual pieces within their repertoire for a shared understanding of how a moment in my own music might work. For example, I might say: “I’m really going for a rhythmic, bouncy sound, like that Graham Fitkin piece you recorded.”

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14 Incidentally, this is what I’d said to the Delta Saxophone Quartet with regard to the third movement of Mirror Dances; as an ensemble, their repertoire renders them as very close to what I’d consider to be ideal performers of my music.
I see the exploitation of the ensemble’s idiom key to any piece’s success. Once the instrumentation is established, I typically will then research the recorded repertoire of the kind of instruments and ensembles I’m writing for in some depth in an attempt to develop a flexible and accurate mental model of how things will sound in the air of the concert hall. Though important in my own music, issues of style, historical context, genre etc. are of little relevance when I am gathering these materials; I’m principally listening to the sound of the instruments in their various combinations. Ideally, I find scores of the recordings to follow in order to immerse myself in the finer points of the notational idiom of whatever forces are present. Moreover, I feel that following scores contributes to a kind of subconscious confidence in the power of notation and provides me with the energy to begin committing ideas to paper. I have relied on this practice less as my confidence has grown, though I have, in hindsight, found it to develop stronger awareness between notation and sound.

The performance context also has a factor in the approach taken with any given piece. On reflection, this is not so much to do with audience reaction but a kind of critical ‘self-curation’. Every situation is different, but the kinds of questions I ask myself are as follows: how do I think my music should sound in this situation? The programme is full of composer ‘x’ with a theme of ‘y and z’; what can I do to make my piece have an impact within this situation? The other composers are likely to write a lot of loud music for the forces present, so should I consider a different dynamic strategy? I’m writing for a recording session and we have the luxury of editing, so should I take more risks with the instrumental writing? etc.
I will go into more detail regarding this kind of thinking within the discussions of individual pieces, though it’s mostly clear to me that my internal modeling of these contexts creates an inner, incubational space for musical ideas to gradually emerge. I try to imagine, as vividly as possible, the first few notes of my work hitting the air in the said situation, much like the way an architect considers their structure’s interaction with its surroundings. Looking through the works presented in this portfolio, this practice appears to have had the most impact on the formation of the musical character of the opening moments of the work. Even if I arrive at the opening material later on in the compositional process, it’s the first thing I reach for when beginning to sketch ideas for a piece. If I happen upon what might be usable material for elsewhere in the work, I’ll do my best to pin it down and develop it while the idea is fresh. This usually has the effect of bringing about the emergence of a compositional topic.

The use of a ‘topic’ (i.e. ‘dreamlike’, ‘aggressive’ or ‘a bouncing ball’) has occasionally been helpful when determining the character of the music, but, more typically, a compositional topic will surface upon consideration of the material as it develops. More and more, I’ve attempted to let the material inform how to proceed compositionally, relying on (or, at least, allowing for) the materialisation of an inborn topic. This, however, is a relatively late development in my compositional practice, built upon trust in my technique to manipulate material.

My process during the act of composition, while fairly free in nature, is informed by a loose hierarchy of elemental musical values. Above all, I seem to have valued chromatic harmony throughout my practice, stemming from a love
for romantic harmony and the harmonic language of jazz-fusion. The following passage, from John Adams's *Hallelujah Junction*, accurately reflects my own feelings towards harmony and its primary importance within my process:

“I now realize that my moment of revelation while driving in the mountains was all about harmony. Years later, during a public discussion with the composer and conductor Esa-Pekka Salonen, a question arose about what we composers, living in a postmodern world, thought about tonal harmony. Esa-Pekka’s answer was illuminating. He said that when he thought of the ten moments in music that had affected him the most, perhaps nine of those moments had to do with a change of harmony. His observation not only shed light on why tonality in the hands of a master is such a powerful emotional and intellectual tool but also hints at an explanation for why atonally conceived music proved to be so severely limiting in both its expressive range as well as in its ability to maintain large formal structures” [Adams, 2002, p.104].

While I share the views expressed by Adams and Salonen, I've realised that the preoccupation with local harmony in my work has caused me to neglect its relationships between larger structures. This is something I have gradually amended throughout the works presented in this portfolio.

In terms of harmony, I am compelled into writing at the very edge of my abilities and understanding, often avoiding labels or specific disciplines in my practice. On this point I can identify with Stockhausen’s assertion that “A creative person is always most excited when something happens that he cannot explain, something mysterious or miraculous. Then he is very nervous” [as quoted in Harvey, 1999, p.1].
This desire to seek out ‘mysteries’ is also expressed in my improvisational and open-minded approach to generating or working with material, in which I am to some extent handing the reins over to my unconscious mind: to dumbly move my hands over the piano keys or to play a retuned guitar and see if anything emerges that piques my interest. On a few fortunate occasions, I’ve had the pleasurable experience of my hands seeming to automatically twitch onto the ‘right’ notes.

Analysis and extrapolation comes later on in my process, and even when integrating process-based materials into my writing, the unconscious mind is often at work in deciding their presentation. For example, if the decision has been made to use a harmonic template in a passage, the template itself is often generated through improvisation, and speaks to an underlying set of aesthetic preferences.

Typically, the improvisational practices outlined above have led to a kind of harmonic language that falls into the cracks between jazz and romantic harmony, occasionally pulling to one side or another, often for some rhetorical or narrative-led reason; only now do I see that aspects of familiarity and defamiliarisation have also important ideas within my music.

It may be thought that the employment of intervallic processes betrays the words expended on my reliance on the unconscious mind, but I maintain that two methods are complimentary: I can allow my unconscious mind to improvise with generated materials, or I can submit an improvised phrase to various processes. The adoption of a process or technique can also loosen the grip of the conscious mind by undermining its power (it doesn’t have control over the
outcome) and can also provide the limiting factors necessary to unleash inspired creativity. This is particularly of use when faced with the daunting task of beginning a new work. Jonathan Harvey, in *Music and Inspiration*, makes a similar observation: “[…]sometimes technique is relied on in the early stages, leaving inspiration to intervene when the work is underway” [Harvey, 1999, p.73].

On the point of technique, my investigations into the harmony of Thomas Adès had demonstrated to me that compelling harmonic passages could be arrived at by way of intervallic processes and orchestrational invention. As such, I began to adapt and adopt some of these techniques within my own work. This helped me to relax my harmonic aesthetic and to allow a little more room for voicings that might fall outside of my ephemeral lexicon in order to preserve the integrity of the process.

Unfortunately, while there are occasional feelings of ‘gold being struck’, said processes do not always produce results that appeal to me: much is left on the ‘cutting room floor’, or I’ll move a note or two around to make it work and move forward from there. Throughout the portfolio’s exegeses, I will point out whenever such techniques are in play and how they have been used in individual pieces.

Finally, I spend a long time editing and scoring my work so that it may be realised without too many issues in rehearsal. Throughout my portfolio I have used Elaine Gould’s *Behind Bars* (2011) as a notational reference when scoring

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15 Around the time of writing ‘H.O.C’ for Saxophone quartet.
and have found that the decisions that are made when editing can add a final gloss to a work, both conceptually and sonically.
Mirror Dances

The David Lovatt competition is an annual competition held at the University of Surrey. Students are invited to submit proposals for works that, if selected, go through to the final in which their work is performed and workshopped by a professional ensemble. The ensemble then select a winner from the finalists. In this instance, the professional ensemble was the Delta Saxophone Quartet, an ensemble whose repertoire and playing style I’d become familiar with when researching for my previous saxophone quartet piece, H.O.C. My work, Mirror Dances, would go on to win the competition.

When working on my proposal, Kurt Rosenwinkel’s Zhivago (2001) (speaking especially of the version from Our Secret World (2010) album with Portugal’s Orchestra de Jazz Matosinhos) had loomed large in my pool of influences over the six months or so before writing Mirror Dances. One thing I found exciting about the music is how the simple, narrow and repetitive melody is recontextualised harmonically and texturally.

While the piece serves as the initial impetus of Mirror Dances, the musical links between the two are difficult to pin down. I wasn’t looking into the use of harmony or orchestration, but rather its use of repetition and its simplicity – Zhivago was ever-present in my mind when composing the piece.
My first instinct, when considering the medium, was to write in a way that would exploit the saxophone family’s loud and percussive qualities. It was while exploring the ensemble’s repertoire that I’d realised that this had all been done before, many times over, and conversely found there to be a dearth of material for the idiom that was both rhythmically charged and quiet. The exploration of this combination of parameters gave rise to the character of the opening movement.

I had written several versions of the ‘theme’ of Mirror Dances’s opening movement, and had found that its simplistic nature leant itself to being reworked and re-presented. I experimented with the order in which these reworkings could be presented and eventually decided to go with an order that gradually revealed the theme’s fully-developed form, as found in b.35.

The simplified version of the theme, found at the beginning of the piece, appealed to me because of its minimalistic tonal profile (types of 2nd and 4th intervals permeate the opening theme, both vertically and horizontally) and I
sensed in it a character reminiscent of Stravinsky’s neoclassicism, with its jaunty, defamiliarising approach to common progressions, such as the V/V to V (in B flat) in bb.3-4. It was decided that the first movement would be about exploring the conceptual space between the ideas in bb.1-4 and in bb.35-37 (shown in Figs.4-5, respectively). The idea of ‘targeting’ the completed theme helped me to evaluate compositional decisions leading up to it, thus keeping a tighter grip on the narrative of the opening movement of Mirror Dances.

Fig. 4: First four bars of Mirror Dances (all examples in concert pitch)

Fig. 5: bb.35-37 showing except from originally completed ‘theme’.
The tonal centre established in the opening and the catchy rhythmic motif lends itself to abrupt tonal shifts, such as the sudden, awkward shift to D major in b.5, which seemed to me like a further expression of admiration for the neoclassical style of Poulenc and Stravinsky. Researching further into Stravinsky’s neoclassicism, Geoffrey Chew’s article provided an idea that stuck out to me during the writing of the piece:

“The neoclassicism of The Rake’s Progress, [...] even in the least traditionally tonal passages of the work, may best be approached by analysing the distortions to which conventional tonal procedures have been subjected. From a technical point of view, this involves a study of the choices between tonal congruence (‘yes’ decisions) and non-congruence (‘no’ decisions) in the ways in which established foreground and middleground prolongational procedures are assembled” [Chew, 1993, p.257].

Chew’s ideas of Stravinsky’s ‘distortions’ to tonal procedures and the ways in which resolution and continuation are toyed with (this, I had interpreted to be the ‘yes’ or ‘no’ decisions from the quote) had provided a procedural model for Mirror Dances’s first movement.

In b.9, the initial theme is reinstated, but with the introduction of low ‘F’s in the baritone, quickly establishing the narrative device of self-similarity and repetition as the theme gradually develops upon each reiteration with variations in placement of accent, phrase length, dynamics, range (which is very limited to begin with) as well as its use of pitch and harmonisation.

It was felt that the opening movement needed some kind of closing gesture, and so I again relied on the intervallic expansion technique that I’d first
used when writing *H.O.C.*\textsuperscript{16} to come up with something. The sharp change of ensemble texture and harmonic language at b.38 is used to signal that the closure of the opening movement.

As shown in Fig. 6, the alto carries the first iteration of the characteristic contour of this closing passage (beginning on B♭), closely followed by a similar intervallic profile (slightly adjusted to taste) in the baritone. The baritone’s line, however, begins on the fourth note of the first phrase, which acts as a pivot pitch in the process. It also contains one altered interval (shown with an asterisk in Fig. 6) that was adjusted to accommodate the E♭ in the following bar: I didn’t want to repeat the pitch, but rather to elongate a descent to the instrument’s lowest pitch. Returning to the starting note of B♭, the soprano sax then takes the set, but with each interval one semitone larger than in its previous iteration (‘-5,+4,-5,-5’ becomes ‘-6,+5,-6,-6’). The tenor sax is the last of the ensemble to touch on the set (though it doesn’t complete it) as it pivots on the fifth pitch of the soprano’s set, an A above middle C. The rest of the music in this three-bar passage was freely written to be complimentary to the material that the selectively incorporated intervallic process gave rise to. The intervallic sequence (a sequence of four intervallic moves and, therefore, five pitches) does come to bear on the ‘five semiquaver’ rhythmic phrasing of the passage, and while the technique needn’t result in such direct or uniform rendering, it often does in my work.

\textsuperscript{16} This technique is an adaptation of Thomas Adès’s ‘expanding motif’. Its incorporation into my work is discussed in more detail in the commentary for *H.O.C.*, in which the technique is used more extensively.
The second movement is deliberately written to be in stark contrast in texture to the music that it follows, as well as more harmonically sombre in character. The initial proposal had the first movement running straight onto (what is now) the third movement, but the two ideas were a little too similar: something contrasting needed to be written between them. Around this time, the idea of the piece having a dance-like feel was becoming apparent, so to maintain consistency, a three-bar rhythmic phrase made up of two bars of 4/4 followed by a bar of 7/4 was rigidly imposed to evoke the sense of an imagined melancholic folk dance.

The three-bar phrase structure is underpinned by the baritone part, which consists of a repeated rhythmic cell, as shown in Fig. 7. With this idea of a 'sombre folk dance' in place, the material emerged very quickly and intuitively.
Fig. 7: Repeated rhythmic cell in baritone part of Mvt. II.

The introduction of the third movement (shown in Fig. 8), again, exploits a sense of contrast with its loud, rhythmically active character and its interlinking ensemble texture. Also setting the material apart from the other movements is a much more restricted use of harmony, initially using only a handful of chords and pitches. However, a link to the first movement is established in the soprano’s first phrase, which uses only pitches from its theme in the opening movement (shown overleaf in Figs. 9a-b for comparison).

Fig. 8: Opening of movement III
The initially limited use of harmony allows ensemble interplay and rhythm to come to the fore, but as I was extending the passage, I felt that a wider harmonic palette could be used. To do this, I came up with an additional sequence of chords (labelled Q to Z in Fig. 10), based on a variation of the initial phrase. These chords would be used liberally to vary the harmonic content of the established rhythmic motifs. Typically, I allowed myself some leeway with regard to slight harmonic alterations or omissions if it was felt the chord wasn’t working so well, or other more pragmatic and/or orchestrational rationales. Each of the chords shown in Fig. 10 are present in the movement, and Fig. 11 shows a marked-up excerpt from the movement wherein most of the chord changes occur (with the exception of Z which is found later, in b.86). It is clearly seen that the movement repeatedly returns to the ‘S+T’ pair, which provides a sense of continuity among the generally inconsistent phenomenal transformations that permeate both the first and third movements.
Fig. 10: Palette of chords for first phase of Mvt. III.

Fig. 11: Distribution of chord palette (from Fig. 10) in bb.57-68 of III.
The third movement's second phase is signaled by an abrupt change in dynamic, harmony and rhythm, in b.103, as it returns to an accompanimental figure that recalls the opening of the first movement. The melodic material of the baritone here is again characterised by its use of Mirror Dances's distinguishing intervals (types of 4ths and 2nds as shown in Fig. 12), with occasional inversions or octave transpositions to restrict its tessitura and achieve a desirable contour.

![Fig. 12](image)

Fig. 12: Baritone melody in bb.103-104 showing use of use of ‘+/-5’ (4ths) and ‘-/+1’ and ‘-/+2’ (minor and major 2nds).

This passage, beginning at b103, is governed by the use of modal templates that change at varied rhythmic intervals. Rather than use the mode as a non-hierarchical palette of pitches, I'm keen to establish the sense of modality, using 'distinguishing' pitches that characterise the said mode, including its root. The distinct harmonic fields are as follows: A♭ Lydian, D♭ Mixolydian, A♭ Lydian, E Lydian, E♭ Lydian, F Lydian Dominant, E Lydian, and A Lydian Dominant. Very little, bar intuition, governs the modal or rhythmic choices made, apart from a clear preference for types of Lydian and an irregular rate of change, as shown in Fig. 13.
When the music reaches its final harmonic field (A Lyd. Dom.), the set begins again, falling to the original A♭ Lydian field (constituting a dominant resolution by tritone substitution), at b.112. To ensure a sense of ‘return’, a variation of the initial baritone melody from b.103 is re-written in the tenor sax (shown in Fig. 14).
The set harmonic template is cut short by a sudden change of pace at b.118 where the set begins anew, but up a tone from before. Once more, to signify a return to the beginning of the set, a variation of the initial baritone melody appears on the alto sax (shown in Ex.15).

Ex.15: Baritone melody from b.103 re-written in the alto part from b.118

The final movement is an explicit return to the material of the second movement. Though the two movements begin identically\textsuperscript{17}, one initial chromatic adjustment in b.133 (an F\# in the soprano sax rather than a G) is made, with the intention of ‘itching’ the listener’s memory. This use of recapitulation both alerts the listener to the moment’s significance within the overall narrative, as well as to the subtle differences between the two movements.

\textsuperscript{17} Though, the \textit{effect} of the two movements is notably different via the phenomenon of recall.
At b.146, the final movement returns to a variation of its opening phrase, and is once again repeated (with variation) to come to a close on a C Minor chord. Like other key moments in the work, the baritone melody is dominated by intervals of 4ths and 2nds. In the final bar, however, the closing phrase (see Fig. 16) is mirrored from its earlier iteration in b.148, descending first by 4th from the G, then a 2nd down to the C in order to solidify the sense of closure.

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Fig. 16: Final 6 bars of Mirror Dances.
The interplay between repetition and continuity sets *Mirror Dances* apart from the rest of the works submitted in the portfolio. To me, it represents the eventual marriage between the local intervallic techniques that I have developed throughout my research, and aspects of overall narrative form.

The remaining commentaries will outline, in chronological order, how such techniques had developed within my work and how they interact with a gradually shifting personal aesthetic.

Though only briefly mentioned in the commentary for *Mirror Dances*, my analytical work on the music of Thomas Adès has had a profound influence on my own composition. As such, I have placed my investigation into the harmonic technique of Adès's *Traced Overhead* before the remainder of the critical commentaries in order to best contextualise their contents within my wider research interests.
Local Harmonic Procedures in Thomas Adès's *Traced Overhead* (1995-96)

Using *Traced Overhead* (1995-96) as a case study, this project seeks to build upon the current understanding of the ways in which Adès generates and manipulates ideas, as well as to challenge some of the previously accepted thinking surrounding the composer’s technique.

Firstly, I will introduce the reader to Thomas Adès’s career and achievements, as well as discuss the academic work surrounding the composer’s output in order to establish the theoretical context behind this project. In relation to this context, I will then specifically discuss some of the central harmonic characteristics found in the composer’s work and establish some key terms before turning to the case study of *Traced Overhead*.

My analysis will demonstrate that Adès’s use of descending stepwise strands in *Sursum* is manipulated to adhere to a cyclical harmonic structure found elsewhere in the work. In view of this, I will then examine other similar passages to establish whether or not such mechanisms are at work in their construction. The composer’s use of triads and seventh chords will then be assessed, as well as the ways in which the combination of simultaneous processes (I use the term ‘conceptual layers’) make up certain passages within the piece. Finally, the ways in which the local harmonic processes interact with larger formal considerations will be discussed, followed by a summary of findings and suggestions for further research.
Thomas Adès: Musical background and Career

Born in London in 1971, Adès was brought up in a highly intellectual and artistic environment; his Mother, Dawn Adès, is a noted authority on surrealist art, and his father, Timothy, though a linguist by profession, is also a skilled clarinetist. Taking to music at an early age, Adès exhibited prodigious talent as a pianist and went on to study at ‘Junior Guildhall’ at the Guildhall School of Music, London. He later went on to read music at Cambridge, where he studied with Alexander Goehr and Robin Holloway. During his teens, his piano playing had developed ahead of his composing, with a penchant for attempting adventurous, virtuosic repertoire. He came second in the semi-final of the 1990 BBC Young Musician Of The Year competition and at this point, re-examined his career trajectory as performer. In a conversation with Alex Ross, the composer states: “[The BBC competition] was on TV, and it gave me quite a fright. I suddenly found myself at quite an advanced stage as a performer. [...] Did I want to go through all this again, play the same things again? I went home and said, ‘I’m going to become a composer today, and do it properly.’ I started at the top note of the piano and went on from there” [Adès as quoted in Ross, 1998]. Starting, quite literally, from the ‘top note of the piano’, he wrote his Op. 1, Five Eliot Landscapes (1990) for high soprano and piano.

Adès’s ascent as a composer was rapid. On the strength of his first two completed manuscripts, he was signed up to Faber Publishing. In 1993, just three years prior to the writing of his Op. 1, and shortly after graduating from Cambridge, he became composer in residence at the Hallé Orchestra in
Manchester, who were to perform his first orchestral piece *but all shall be well* (1993).

Adès himself conducted the premier of his chamber opera, *Powder Her Face* (1995), at the 1995 Cheltenham festival, and the critical acclaim of the opera shored up his international reputation and confirmed his status as being among Britain’s leading composers.

1997 saw the premier of Adès’s mammoth orchestral work, *Asyla* (1997). Performed by a significantly enlarged City of Birmingham Symphony Orchestra and under the baton of Simon Rattle, the piece earned Adès the prestigious Grawameyer award in 2000.

His success thus far had placed the composer within several high-profile residencies, the most notable of which is arguably his appointment as Artistic Director of the Aldeburgh Festival in 1999, a position he held until 2008.

Adès’s second opera, *The Tempest* (2004), commissioned by the Royal House and performed at Covent Garden, further established the composer’s talent as a composer of operas. During the writing of *The Tempest*, Adès also wrote two works derived, in part, from material from the opera: the violin concerto, *Concentric Paths* (2005); and *Tevot* (2007), a 25-minute, single-movement work for large orchestra.

By the late 2000s, Adès’s reputation had fully transcended from the music world into the mainstream, non-music-specialist media. Theatrically titled articles, such as Peter Culshaw’s 2007 piece ‘Don’t Call Me Messiah’ in the Telegraph, focus on the subject of ‘the burden of being seen as the saviour of
English music’ [Culshaw, 2007]. Moreover, in a 2008 interview piece published in The Guardian, Nicholas Wroe states: “Andrew Porter, doyen of British music critics, contributed a series of adulatory sleeve notes to Adès’s early CDs. The limit of his doubts was to ask if Adès was maybe not Mozartian in his talent” [Wroe, 2008]. Moreover, in 2010, Adès was one of only a few dozen composers to be featured as a sitter in the National Portrait Gallery’s 2010 exhibition, *Great British Composers: From Elgar to Adès*, in a large painting in oil by Philip Oliver Hale.

The past decade has seen Adès engaging in more transatlantic activities, moving primarily between London and Los Angeles. Reflecting this shift, in 2008 Adès premiered *In Seven Days* (2008), a work jointly commissioned by the Southbank Centre and the L.A. Philharmonic. The work was Adès’s first piece to include visuals and was created in collaboration with Adès’s partner Tal Rosner. In the past 5 years, Adès has continued to compose prolifically, with major orchestral works, such as: *Polaris*\(^{18}\) (2010), commissioned by the New World Symphony; and *Totentatz* (2013), commissioned by Robin Boyle and premiered at the 2013 BBC Proms festival.

Throughout his career, Adès has been mostly reluctant to talk about his music in any detail. Aaron Travers joked in 2005 that “Thomas Adès does not like to be interviewed. He rarely speaks in public and almost never talks about his music. In short, he would be a terrible musicologist” [Travers, 2005, p.1]. However, in 2012, a series of interviews with the composer, *Thomas Adès: Full of Noises* (2012) was released by Tom Service, and though largely guarded and

\(^{18}\) Another multimedia collaboration with Tal Rosner.
obfuscatory in nature, represents his most open dialogue regarding the subject to date\textsuperscript{19}. One is hopeful that, given his recent voluntary appearance on BBC’s 2014 University Challenge Christmas Specials and his embracing of the Twitter social media platform, the composer is gradually becoming both a more prominent public figure and outspoken about his music.

\textbf{Current understanding of ‘Adèsian’ harmony}

Though Adès may still, at the age of 44\textsuperscript{20}, be considered a ‘young’ composer, there has been a growing body of academic study committed to his work. The dozen or so papers and theses centered on his work represent a level of academic interest that far surpasses that of his contemporaries. Of course, such interest in the composer has grown in line with the rapid expansion of his career and profile.

In 2004, Christopher Fox observed that: “The dearth of serious writing about the music of our younger composers is a depressing feature of contemporary musical culture in Britain. Devoting analytical effort and critical time to composers still making their reputations is perhaps too risky an

\textsuperscript{19} It’s perhaps interesting to note, that while Travers opens his paper, \textit{Interval Cycles, Their Permutations and Generative Properties In Adès’s ‘Asyla’}, with “Thomas Adès does not like to be interviewed. He rarely speaks in public and almost never talks about his music” [Travers, 2005, p.1]. Daniel Fox begins his paper, \textit{Multiple Time Scales in Adès’s ‘Rings’}, with the phrase “Thomas Adès often speaks about his music in scientific or physical terms” [Fox, 2013, p.1]. This somewhat reinforces the sentiment that Adès’s relationship with the public has shifted.

\textsuperscript{20} At the time of writing.
undertaking for academics anxious about their research ranking, and
postmodernism's validation of so many other forms of music-making has, of
course, diverted many critics into trawling shallower waters. Nevertheless it is
particularly remarkable that the music of Thomas Adès has been subjected to so
little critical scrutiny” [Fox, 2004]. Thankfully, Adès studies, as it might loosely
be called, has grown with promise over the last 11 years. Within the subject of
‘Adèsian’ harmony, the standout contributions are: John Roeder’s *Co-operating
Continuities in The Music of Thomas Adès* (2006)\(^{21}\); Aaron Travers’s *Interval
Cycles, Their Permutations and Generative Properties in Thomas Ades’ Asyla*
(2005); Stella Markou Iannou’s PhD thesis on Adès’s Op.1, *A Poetic Synthesis and
Theoretical Analysis of Thomas Adès’s ‘Five Elliot Landscapes’* (2010); and most
recently Philip Stoecker’s *Harmony, Voice Leading, and Cyclic Structures in
Thomas Adès’s “Chori”* (October, 2015). Moreover, various academics have also
contributed to the knowledge base by covering other aspects of the composer’s
output and technique\(^{22}\).

Thomas Adès’s consistent use and re-use of a somewhat limited but
characteristic set of intervallic techniques has not gone unnoticed among
academics and listeners, and represents the central theme of many of the papers
concerning the composer’s work. As it is my aim in this thesis to develop critical
discourse regarding the subject of how are we to understand the use of these

\(^{21}\) As well as its companion article, Roeder’s “A Transformational Space Structuring
the Counterpoint in Adès’s “Auf dem Wasser zu singen” (2009)

\(^{22}\) *Multiple Time-Scales in Adès’s ‘Rings’* [Fox, 2013], ‘Asylum Gained’? Aspects of
Meaning in Thomas Adès’s ‘Asyla’ [Venn, 2006], *Plural Styles, Personal Style: The
Music of Thomas Adès* [Wells, 2012], *Following The Prophecies of Song: Schubert
Lieder in Thomas Adès’s “Arcadiana”* [Adams, 2010] and *James Dillon, Thomas
Adès, and the joy of Allusion* [Whittal, 2001].
techniques in Adès’s work, only literature that is relevant to this subject, that of local harmonic processes, has been covered in any detail within this academic review; issues surrounding meaning, rhythm, post-modernity etc., interesting and important as they are within Adès’s oeuvre, lay outside of this project’s subject of investigation. That being said, I hope that my work on Adès can contribute to discussions concerning the connections between his use of harmony and the other pertinent aspects of his work.

With the exception of a few fringe pieces, the entirety of Adès’s output, from Op. 1 and onward, is laced with the use of a select repertoire of intervallic techniques, the musical results of which are at odds, aesthetically, with the dominant tradition and project of modernism that is associated with intervalically generated material (that of Serialism and its continuations/permutations). Whereas the listeners’ cognitive abilities fall short of being able to aurally locate the serial or intervallic structuring within even the most local of events in high-modernist works (Lerdahl uses Boulez’s Le Marteau as a characteristic example [Lerdahl, 1992]23), aspects of Adès’s idiosyncratic ‘constructivism’ are transparent, both visually and audibly, even if requiring a little unpacking at the point of analysis. For example, one can often hear Adès’s use of descending ‘strands’, but ascertaining what governs the rates of descent requires some analytical legwork.

That Adès’s techniques produce consistently comprehensible, and even quasi-tonal results is not necessarily surprising when the raw materials and

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23 In Cognitive Constraints on Compositional Systems, Lerdahl attempts to “explain why serial (or 12-tone) organizations are cognitively opaque” using the Boulez example as a case study.
means of transformation are understood, however, issues of the discrete techniques’ geneses, meanings and aesthetic implications remain slippery. The waters are further muddied by the fact that Adès’s music typically contains many different forms of allusions.

Take, for example the use of Adès’s ‘intervallic expansion’ motif, shown in Ex. 1. Various analyses have approached this motif from different angles. The motif fundamentally consists of increasing intervallic relationships between successive pitches. Stella Ioanna Markou describes the sequence as Adès’s ‘signature scale’ [Markou, 2010]; she points out its possible derivation from the octatonic\(^{24}\) scale, and exhaustively identifies its uses in the opening movement of *Five Eliot Landscapes*.

I have chosen to not use Markou’s terminology of ‘signature scale’ because in the vast majority of its appearances Adès does not use the pitch set as a palette for modal colour, as one might use a scale, but rather as a distinct sequence of pitches. It could be said that the sequence of pitches is more akin to an arpeggio, and is often used as such, though this carries with it other unhelpful technicalities\(^{25}\).

\(^{24}\) The ‘octatonic’ property of the sequence is more likely coincidental than intentional/derivational as the pitches are clearly generated by process.

\(^{25}\) For instance, Adès often truncates the sequence. So, given that the first four pitches are made up of small intervals, and that arpeggios can be played in patterned sequences, such a definition would rend all stepwise movement as a *broken arpeggio* of sorts, which renders the definition as something of a stretch in this case.
Samuel Adams determines that the genesis of the motif, as presented in the third movement of *Arcadiana* (1994), *Auf zem wasser zu Singen* (shown in Ex. 2), arises directly from the lieder of the same title by Schubert [Adams, 2010]. While the titular allusion is compelling, the argument that Adès is using the motif *itself* to allude to Schubert's lieder is limited to this singular case (the repetition of pitches before descending is the most notable similarity) and doesn't represent a continuous hat-tip from its occurrences throughout Adès's oeuvre – the use of the motif is too widespread and multifarious, and is radically different in intervallic profile to the Schubert example (see Ex. 3). I do, however, acknowledge that this argument is not singularly sufficient to disprove such a hypothesis of initial impetus, but given Markou's identification of the motif in Op.1 (written 4 years prior to *Arcadiana*) and that Adès's own account suggests that he 'started at the top note of the piano' [Adès as quoted in Ross, 1998], it seems far more likely that this is a 'found' musical object, and not in and of itself allusory. Similarly, other kinds of 'by 1' expansion techniques occur frequently in Adès's works, and their manifestations will be explored later on in this thesis.

**Ex: 1:** The first 8 pitches in a descending 'expansion' motif.
Ex. 2: Excerpt from *Arcadiana* (1994) Mvt.III: *Auf dem wasser zu Singen* (string quartet) showing the use of the descending expansion set in the viola and cello.

Ex. 3: The proposed (in [Adams, 2010]) origin of the expansion motif, an extract from Schubert’s *Auf dem Wasser zu singen* (1823)

In Roeder's analytical work on the same piece, *A Transformational Space Structuring the Counterpoint in Adès’s "Auf dem Wasser zu singen"* (2009), a connection between the descending curve with Schubert is made, without reference to its other occurrences:
“The movement begins strikingly by transmuting Schubert’s monophonic, regular accompanimental motive into a temporally and texturally varying polyphony of overlapping, pizzicato-glissando gestures” [Roeder, 2009].

The purpose of Roeder’s analysis here, however, is not so much that of illuminating issues surrounding the material itself, but rather of affirming the suitability of transformational theory for similar materials, and “shows that a transformational network of very elementary objects can flexibly accommodate such variability, inasmuch as we understand it as a space that structures object-changes as multipartite gestures” [Roeder, 2009]. While the visual means by which Roeder analyses the opening of the piece (a still from his animation is shown in Ex 4) is rich in activity, it again dodges the issue of impetus and precompositional process in Adès’s music. It could also be said that it makes a process that’s merit is in being easy to understand needlessly complex; it is already clearly evident on the surface of the score.

Ex. 4: Still image from ‘animation 5’ from Roeder’s “A Transformational Space Structuring the Counterpoint in Adès’s “Auf dem Wasser zu singen” [Roeder, 2009]
Potentially lending credence to Samuel Adams’s assumptions that ‘allusion’ gave rise to the intervallic expansion motif, Adès gives an account of genesis of a similar technique (the expanding chord progression found in the opening tango of Powder Her Face as having been developed from Carlos Gardel’s famous tango, *Por una Cabeza* (1935)):

“I’d been playing around with a region of expanding harmonies and I heard a narrow sequence of two of them in a tango I was listening to, and the opening of that had one in it, so I took it” [Adès, 2012, p.153].

Adès seems, therefore, to have expressed a preference for embedding this expanding harmony over more conventional alternatives. This resultant progression’s general shape (as shown in Ex. 5) is reminiscent of the expanding gestures of Ligeti but made diatonic and stylised (in this case, the stylistic harmonic underpinning of a tango). I suggest that Adès seeks to combine aspects of allusion, style and compositional grammar in much of his music, and that he forefronts and re-uses structures that fulfil these criteria. The composer’s own admission that “the impulse comes first, the method second” [Adès, 2012] serves as partial evidence for his desire to incorporate said structures from a primarily aesthetic point of view. Moreover, when Adès stated that he was ‘going to become a composer today and do it properly’ [Adès in Staines, 2010] and went on to begin *Five Eliot Landscapes* with the expanding motif, his use of the term ‘properly’ is inextricably connected to these constructivist ideals: the ‘proper composition’ referred to by Adès must have, at some level, necessitated

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27 A term borrowed from Fred Lerdahl, which describes a logical and self-evident integrity within musical structures. [Lerdahl, 1992]
constructivism. What is perhaps rare about Adès is that he continually reuses these resultant musical objects in other works, often as wholesale passages or decorative effects. Whereas other composers might use a transformational process to ‘get to the notes’, Adès appears to have picked a few processes that work, with their preferred inputs and results, and stuck with them.

This tendency for Adès to include these musical objects has previously been interpreted in different ways by academics. In Interval Cycles, Their Permutations and Various Properties in Thomas Adès’s ‘Asyla’ (2005), Aaron Travers makes the argument that this has been done as a form of commentary:

“Perhaps, though, there is another kind of commentary going on, that of one piece commenting on another piece, for as Luciano Berio has said in the past, the best way to analyze a piece of music is to write another piece using its materials. Is this not exactly what Adès has done? So the Fayrfax Carol could serve as both a stylistic commentary and an analysis—Adès is, therefore, both musicologist and theorist” [Travers, 2005, p.26].

The idea of Adès as musicologist and theorist is a compelling one, and does not detract from my earlier assertions regarding Adès’s view of ‘proper composition’; indeed, Travers later lends support to this idea:

“The significance of this notion is that we may be dealing with a composer who, though he rarely speaks about his music, or music in general, seeks to communicate analytical and musicological ideas through purely musical means. An analyst may therefore find valuable information about one piece by Adès in another piece of his” [Travers, 2005, p.26].
To extend Travers’s sentiment, it could also be pointed out that the mechanisms of a given process may be revealed more clearly in one place (within the same piece) than another. For example, a process used in the final movement *Traced Overhead* was considered when considering aspects of the opening movement, with the former being much simpler to comprehend (this is discussed in more detail later in this thesis).

Travers concludes that “[...] if the *Fayrfax Carol* were indeed written after *Asyla*, then it is very likely that Adès is using the former to analyze, or at least comment on, a passage of the latter” [Travers, 2006, p.26]. The author is in danger of overreaching here, and I would argue that this re-use has primarily pragmatic functions: an entry point into the compositional process, or a springboard to transport him into novel areas that transition from this material. This is in evidence in the many strategies with which Adès transitions from these structures into new ones. Taking two pieces with near-identical openings as an example of this self-referencing, *Tevot* (2007) and *Venezia notturno* (from *Arcadiana* (1994)), it’s noticeable that both are written with highly contrasting programmes and completed 13 years apart. Also, the ways in which the technique ‘resolves’ (or develops) in each piece differ significantly: if Adès is, as Travers suggests, using one piece to comment or analyse the other then his methodology is unusual. Travers’s general argument, however, that cross-referencing Adès’s output to aid analysis is critical to an accurate reading of his work, seems also to highlight a problem with Samuel Adams’s suggestion that the ‘expansion motif’ is derived from Schubert; the fact that it also appears in the
sauntering clarinet line of the opening of *Powder Her Face*, would give rise to the question of why Adès was referencing Schubert at the outset of a tango.

**Ex. 5:** Expanding progression, from the opening of *Powder Her Face* [Roeder, 2006, p. 133]

The issue of the initial impetuses behind these aforementioned techniques is made more slippery in light of Adès’s tellingly opaque and often flippant accounts of his own process(es) throughout his transcribed (and edited) conversations with Tom Service in *Full of Noises* (2012). Given the agendas present, the evidential value of such a source merits a discussion of its own, and while it enlightens as well as obscures, will be referred to throughout the project with caution.

Adès appears keen to deflect the questions raised by Tom Service that surround the issues raised in this thesis. This is made clear when, during a
discussion on the use of classical forms, Service is moved to press Adès on the issue:

“You make it sound as if all that just happened without any intervention from you, as if there were scarcely any decisions to be made about what to do with the material. But you must surely have been shaping, grappling it, grappling with it, all the time” [Service in Adès, 2012, p.9].

Adès’s answer for Service is characteristically deflective28. Similarly, when pressed on his consistent use of stacked fifths, he neglects to address the issue of re-use, vaguely comments on the construction, and goes on to speak about the virtues of the fourth interval:

Service: Let’s take something like your fondness for harmonies based on stacked fifths, say, something you use in your Opus 1 right up to where you are now. If you looked at your use of that same idea in different contexts, what would it tell us?

Adès: If you’re me, you would see that that’s simply a result of a way of approaching firstly a fifth, and then how one fifth relates to another; and then rather than going in a circle, they would go in a terraced shape. I mean, going further, that tells me a lot about one note. For me we’re really talking about the fifth’s inversion as an interval, the fourth – [...] The fourth is the most interesting interval, if you look at its history. [Adès, 2012, p.32]

The talk of fourths goes on for some time, but the parrying tactics employed by Adès, though frustrating, also suggest a potential anxiety about the

28 “I’m afraid in that case it can be a sort of Chinese box effect. That is: I answer one instability with another, and it can resemble a hall of mirrors. [Adès, 2012, p.9]”
subject. While I accept that Adès offers relevant material in response, he doesn't offer a direct response to the question.

There is a general tendency throughout *Full of Noises* to highlight the role of Adès’s intuition over design, often with impressionistic references to notes (that they “move all over the page”\(^\text{29}\) [Adès, 2012, p.25] etc.). However, the appearance of large scale structures, such as each movement of his violin concerto, *Concentric Paths* (2005), beginning with a pitch that is a semitone lower than the last, is evidence to the contrary: that there is indeed large scale planning in Adès’s music (other such large-scale structures are outlined in [Travers, 2006] and explored in this analysis). Additionally, with regard to Adès’s use of intervallic systems that are predominantly local in nature, we're perhaps given pause to reevaluate Adès’s account; when he says in *Full of Noises* that “you must imagine that the fourth is an object, like a single note” [Adès, 2012, p.33], we might project this sentiment, further, to mean that compositional objects, such as his signature ‘cycles’, or even triads, undergo similar transformations in his work.

**The ♯6 Cycle**

A single kind of voicing characterises much of the most strikingly ‘Adèsian’ moments in the composer's output, namely, that of a ‘stacked’ pair of fifth dyads with a minor second between the middle voices (see Ex. 6). Generally it is

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\(^\text{29}\) “The moment I put a note down on paper it starts to slide around on the page. [Adès, 2012, p.25]”
unfurled from the upper open fifth as part of a layered, arpeggio-like figure, such as in Ex. 7, showing the opening bars of Arcadiana (1994).

Ex. 6: Typically ‘Adèsian’ voicing as found in b.3 of Venezia notturna from Arcadiana (1994)

Ex. 7: Opening of Adès’s Venezia notturna from Arcadiana (1994).

Such harmonic structures are extremely common in Adès’s music, and even appear in his more recent works (Totentanz (2013) is one such example). It’s likely that this particular motif was initially ‘borrowed’ from the opening of Györgi Ligeti’s Violin Concerto (1990, revised in 1992) given its extreme similarity to the opening of Adès’s own violin concerto, Concentric Paths (2005).
Ligeti’s concerto begins with the same process – an open stringed fifth dyad on the violin, moving down a semitone and then adding fifth below that (as can be seen in Ex. 8).

Ex. 8: bb.4-6 of Ligeti’s Violin Concerto (1990-92) – note the two dyads of a fifth separated by a semitone in the middle voices.

Interestingly, examples of this process do not begin until after 1990 (it certainly doesn’t appear in Adès’s earliest works). Indeed, Arcadiana marks the first clear-cut example of this technique in Adès’s work, and, during this time, he was studying with Ligeti’s Hungarian countryman and contemporary György Kurtág. While not demonstrated conclusively, it’s not unlikely that this is a direct ‘lifting’ of resources from Ligeti. Adès, however, moves the process on further to become cyclical. This is most thoroughly examined in Roeder’s analysis of the opening of Arcadiana:

“[…] the initial gesture of Arcadiana presents a succession of four perfect fifths, a sequence which recurs frequently throughout the work. […] the pitch-class root of each fifth is $T_4$ of the root of its predecessor, so that the root succession
presents a complete $T_{4^{30}}$ cycle; this transformation cycle is manifested more concretely as a sequence of descending pitch transpositions each of eight semitones” [Roeder, 2006, p.127].

There is a suggestion within Roeder’s analysis that the dyads move on to one another in a linear sequence, but as seen in the *Arcadiana* example above (Ex. 6), the dyads actually blend together to form four-note chords, a sequence akin to the opening six bars of the Ligeti concerto; Adès appears to have read the first move as ‘step one’ in a larger process. It is, however, unclear as to whether the precompositional thinking behind the process in fact concerns the larger tetrachord unit (rather than the cycle of dyads) with transitional ‘pivot’ dyads (as seen in the opening bars of *Arcadiana* and represented in Ex. 9).

![Ex. 9: complete b6 cycle in Venezia notturna from Arcadiana (1994) showing tetrachords and dyads.](image)

From the opening bars of Adès’s violin concerto, *Concentric Paths, Mvt I: Rings*, we can observe that the dyads needn’t conform strictly to register (with the lower dyad of the first transformation, B and F♯, appearing above the G in the

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30 $T_4$ refers to a movement of 4 semitones. i.e. The cycle of major 3rds, or its inversion the b6.
solo violin part). Still present, though, is the ‘rubbing together’ of a 5th dyad (and stacked 5th triads) against a minor 2nd interval. While this moment in *Rings* undergoes a different overall process (as outlined in Ex. 10) we can still clearly see the transformation of the minor 2nd interval falling by a ♭6 (shown boxed in the example). For the purposes of this document, and for lack of a previous term that describes this kind of transformation, I will refer to this move as a ♭6 transformation throughout this analysis.

![Musical notation]

**Ex. 10**: reduction of opening harmonic movement of solo violin part of *Rings* (2005) from Adès’s violin concerto, *Concentric Paths*, showing variation of ♭6 cycle and ‘-1’ process.
**Traced Overhead: A case study**

Existing work on *Traced Overhead*

Thomas Adès completed his three-movement piano work, *Traced Overhead* (1996), shortly after studying piano music with Hungarian composer, Gyorgi Kurtag. The work is astonishingly idiomatic, even given its occasional and intimidating explosions onto multiple staves, and is highly virtuosic, drawing on the depths of Adès’s understanding of the instrument and its sonic possibilities; a New York Times article on the composer remarks that in *Traced Overhead* “[Adès] tries to evoke upward-swirling figurations and downward-cascading waterfalls simultaneously, and somehow pulls it off. The music quivers with spiraling riffs, piercing contrapuntal lines and pungent cluster chords that ecstatically leap about the keyboard” [Tommasini. 2007].

The piece is comprised of three movements: *Sursum, Aetheria* and *Chori*. The opening two movements are notable for their brevity. On the CD recording of *Traced Overhead*31, *Sursum* lasts only 46 seconds, and *Aetheria* lasts 2.14 minutes. The final movement, *Chori*, follows immediately on from *Aetheria* without a break and is significantly longer (more than double the length of the previous movements combined at 8.39 minutes).

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31 From the *Life Story* (2012) CD, a compilation of Thomas Adès’s music.
Previous analyses of the harmonic techniques specifically within *Traced Overhead* are limited to the following: Roeder’s examination of the descending pitch strands in bb.45-51 in *Chori*, and his fleeting observation about the use of strands in the work’s opening movement *Sursum* [Roeder, 2006] (Roeder’s work is also discussed in [Fox, 2004]); and Stoecker’s analysis of the cyclical structures that comprise the majority of *Chori* [Stoecker, 2015]. The findings of these analyses will be evaluated and cross-referenced/compared in this review.

Roeder’s analysis concerns both the stepwise movement of strands used and their layer-independent metrical properties, both of which Roeder discusses throughout his analysis in terms of ‘continuities’ (the continuities of pitch descent, and the rate of change in each layer). Roeder argues that these continuities account for phenomenological and temporal sensations of expectation and realisation inherent within regular/continuous movements of layers and/or rhythmic accents. Roeder also acknowledges the interplay between simultaneously occurring layers of strands-streams (or multiple continuities).

“[in bb.45-51 of *Chori*] Metre and voice-leading thus co-operate strongly so as to define the continuity of each stream. However, these strands remain sufficiently distinct in register, pitch-class content and characteristic pace as to produce a clear sensation of multiple time” [Roeder, 2006, p.135].

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32 It should be noted that many of the kinds of techniques used have been uncovered in [Markou 2010], [Roeder, 2006], [Travers, 2005] and most recently [Fox, 2013] but there exists no dedicated case study for *Traced Overhead*. 
On the use of strands, Daniel Fox agrees with Roeder’s explanation but adds an additional observation about the way in which Adès constructs vertical sonorities:

“[…] multiple chromatic descents weave through *Sursum*, the first movement of *Traced Overhead*. The descending chromatic lines function something like the suspension cables that hold up suspension bridges. Rather than building harmonies upon a bass line, the harmonies hang from the cables (like a bridge or an alpine cable car) as they descend through chromatic space. These chromatic descents are often palpably audible due to the simplicity of the pattern and their privileged placement above the fray” [Fox, 2004, pp.11-12].

Going further than Roeder, Fox describes the opening of *Sursum* as a top-down harmonic procedure. This is a flawed reading with regard to the passage in question, (as I will demonstrate later in this thesis, there is another process at work) though it stands up well when looking at other examples of descending strands and goes some way to account for the phenomenological effects brought about by the process.

Stoecker’s work on *Chori* seeks to theorise the cyclical nature of the multiple and concurrent trichord cycles that permeate the movement. He theorises that the cycles stem from generated palettes that can be represented by concentric circles: each circle represents a different cycle and the ‘spokes’ outline the resultant trichords (see Ex. 11).
**Ex. 11**: Stoecker’s graphical representation of concentric cycles (inner cycle: moving by semitone; middle cycle: moving by tone; outer cycle moving by semitone) showing the varied resultant vertical harmonies given different initial alignments [Stoecker, 2015, p.207].

It’s not entirely clear whether Stoecker is making the case that these kinds of devices comprise Adès’s pre-compositional palette/planning or whether they are a visual means of understanding the results of such unfolding intervallic movement. The primary trichords in the given cycles and the movement between different cycles both seem largely arbitrary, though a preference for widely spaced and consonant/triadic sonorities is clearly expressed in Adès’s writing. There is also an acknowledgement in Stoecker’s work regarding Adès’s general avoidance of running into ‘redundancy’ in the form of doubled pitches (though such moments occur, they often close cyclical activity, or prompt other changes within the work) and that no cycle of the nature outlined above is presented in completed form:

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33 These will be referred to as ‘Stoecker cycles’ within this project.
“The length of each aligned-cycle progression in this opening passage is fairly short: three, four, five, or six chords in length. Although Adès does not include a complete twelve-chord progression here (or anywhere else in “Chori”) he chooses fragments from each of the five aligned cycles that articulate at least one major or minor triad (in any version)” [Stoecker, 2015, p.213].

It is also noteworthy that Adès doesn’t begin cycles with trichords comprising of interval class [0,1,2] (or, in note names, where C=0: C,C#,D) to then send those pitches through the same process – there’d be too much redundancy and too much dissonance to satisfy Adès’s preference for consonant sonorities in such passages34. These rationales are likely to be the main motivation for any kind of inter-cycle shift within the writing, rather than some underlying significance to the intervallic makeup of the trichord that begins the cycle.

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34 Speaking of the first four bars of Chori, Stoecker notes: “Of the twenty-three trichordal sonorities in this passage, ten are major or minor triads: D# minor, F# minor, G major, A# minor, Bb minor, and B major” [Stoecker, 2015, p.213].
Ex. 12: Stoecker’s analysis of the cycles at play in the opening four bars of

*Chori.* Triads are indicated with squared text.\(^{35}\)

The fact that Adès is shown to skip to chords within a given cycle (as I have shown in Ex. 13) lends significant weight to Stoecker’s conclusion, that the composer is indeed using these cycles as a palette; Roeder’s theory addresses phenomenology whereas Stoecker’s accounts for its construction. To demonstrate this, Ex. 13 takes the top staff of the opening four bars of *Chori* and sends it through the ‘3/7 (11,10,11)’ cycle, posited by Stoecker, and thus strongly suggests its use in the passage’s planning. Indeed, we’re prompted to first view any such ‘strand-like’ movements as potentially cyclical in nature.

\(^{35}\) The opening cycle in the upper staff should be 3/7 (11,10,11)
Ex. 13: The upper staff in bb.1-4 of Chori navigating Stoecker’s [037] cyclical palette.

Even with Stoecker’s compelling work, the following issues remain to confound the analyst: what are the rationales for the starting points of such cycles; what provokes the unforced shifts within cycles; and why the trichords are layered as they are. On this subject, Stoecker suggests that it is the desire to encounter triads via process that motivates such decisions:

“The length of each aligned-cycle progression in this opening passage is fairly short: three, four, five, or six chords in length. Although Adès does not include a complete twelve-chord progression here (or anywhere else in “Chori”) he chooses fragments from each of the five aligned cycles that articulate at least one major or minor triad (in any version); the “root” for each consonant triad is enclosed within a box. Of the twenty-
three trichordal sonorities in this passage, ten are major or minor triads: D♯ minor, F♯ minor, G major, A♯ minor, B♭ minor, and B major. [...] there is a great deal of uniformity here in that all the aligned cycles consist only of interval-10 and -11 cycles, and every aligned-cycle progression, no matter how short in length, articulates at least one consonant sonority” [Stoecker, 2015, p.213].

My analysis seeks to continue on from Stoecker’s and Roeder’s work on Adès’s music by attempting to understand the ways in which composer manages and manipulates aspects of his music to conform to his idiosyncratic voicing protocols/preferences. I will also seek to demonstrate the following in this analysis: that Adèsi an ‘note-to-note’ transformational processes can also be applied to the composer’s harmonic thinking, in particular, various cyclical uses of triads; the ways in which individual sonic layers can be understood to contain several simultaneous conceptual layers36 within their construction; and how pitch-class streams can function in ways previously unobserved by other Adès scholars. Finally, it is my hope that the conclusions of this analysis will add to the understanding of Adèsi an harmony outside of Traced Overhead, and shed new light on the harmonic and intervallic thinking at play in later works.

36 While a group of 3 strands moving independently could be considered as multiple ‘conceptual layers’ this analysis will identify them as being grouped into one layer. The term ‘conceptual layers’ will be reserved for instances where simultaneous processes coexist. This is also done to distance the notion of ‘conceptual layers’ from associations with tessitura
Key Terminology

Throughout this analysis the issue of stepwise movement is an inevitably frequent talking point. As such, the numerical description of the moment of semitone and tone will be labeled ‘+’ or ‘-’ 1 or 2. I.e. the formula ‘-1-1-2′ would describe a movement of two descending semitones followed by a descending tone (i.e. C, B, B♭, A♭). No exception is made for pitch class movement (‘-1′ would also describe a move from E1 to E♭4, for example). I will also use this notation when discussing the difference in tonality between distinct groups of chords (i.e. an E triad below an E♭ triad). For ease of understanding, I’ve also used diatonic interval classes such as ‘5th′ or ‘6th′ when appropriate (rather than ‘7′ and ‘8′ as they would be called if adhering to strict interval class labeling); the nature of the material being analysed permits this without introducing confusion or ambiguity.

Throughout this analysis, the idea of the ‘conceptual layer’ is used to differentiate distinct processes and does not refer, in and of itself, to a registral phenomenon (though ‘upper’ and ‘lower’ layers will be referred to). For example, if three processes unfold on one staff simultaneously, the processes can be unpacked into conceptual layers for individual examination.

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37 This is most clear when discussing the material surrounding Exx. 24-27
Visual considerations

An analysis of *Traced Overhead* is aided by Adès’s visual differentiation between conceptual layers in the score. The use of stems, slurs, beams, additional staves and other such indicators of conceptual unity are often linked with the division of ideas and processes. Stoecker acknowledges this facet of the piece’s scoring when writing about Adès’s markings at an aligned cycle found in b. 3 of *Chori*:

“Adès highlights this unique event both visually and aurally. From a notational (visual) perspective, the B♭4–E♭5–E♭6 trichord on the middle staff, along with the B♭4/E♭5 tremolo, is beamed with B5 located on the top staff. Above the score Adès writes “battuto doppio,” with two downward-pointing arrows—an indication to the performer of the precise rhythmic placement of these two pitch events” [Stoecker, 2015, p.214].

One particular example from *Traced Overhead* cements this thinking:

Adès is at such pains to direct the reader of the score to observe the unfolding of a process that he uses an extended empty stave from b.28 in *Chori* to show the continuation of a process of dyads ascending by +1 pitch class, as outlined in Ex. 14.
Ex. 14: ‘+1’ process that completes after several bars of empty staves in *Chori*.

Adès comments on this issue of conceptual transparency in *Full of Noises*, as he comments on the complexity of Wagnerian harmony, using the analogy of ‘Wagner as chemist’:

“Wagner is mixing huge complex potions: if they had scientific names, they would have sixteen syllables. But that to me is less interesting than someone who separates the elements so that you can see them all in their separate jars. [...] I’m more interested in art where you can see the different elements in a clear glass jar, or Petri dish. In that case, the magic is even more powerful, more mysterious, because you can clearly see the elements that create this indefinable magic as separate entities. The tendency, the impulse, is to make something that conceals, something ‘composed’, but I actually work quite hard against that.” [Adès, 2012, p.56]

This quote, though written 16 years after the writing of *Traced Overhead*, is undoubtedly applicable to the work. All of the above supplements a caution to the intrepid analyst; rather than trying to prize out exotic connections, look first at what Adès has conceptually delineated for us (furthermore, many of the said processes can be heard as well as seen). One could speculate that Adès’s
reluctance to talk process in *Full of Noises* could be put down to him feeling as though he’d already given the answers via the score.

**Strands and Harmonic cycles**

The first easily recognised instance of descending strands in *Traced Overhead* comes very early on in the piece, in b.2. John Roeder gives an account of the continuous pitch-stream process at work in the opening bars of *Sursum*:

“[...] the first movement (‘Sursum’) of *Traced Overhead* presents three high-lying, registrally defined pitch streams, each descending strictly by semitone. These strands are in turn sporadically counterpointed by an expanding interval stream of parsimoniously connected low-register dyads. Although each pitch change in the upper register is thus strongly projected, the changes vary greatly in duration, from a semiquaver (for instance C♯♯6 to D♭6 in bar 3), to almost six crotchets (for example F5 to E5 in bars 3–6). The absolute regularity of the repeated voice-leading projection within each concurrent voice is thereby distorted, a process which might be likened metaphorically to the inexorable trickle of raindrops down a windowpane, each one rushed or impeded by the unknowable chaos of surface tension” [Roeder, 2006, p.135].

Roeder’s assessment here is useful with regard to an understanding of how the passage can be heard, but misses an important factor of its construction, as has been discovered in this thesis. Before reaching the issue of construction,
there are other pertinent aural properties of the opening that could be explored and connections drawn with distinct techniques used elsewhere in the piece. First among these is the observation that the managed movement of strands in the upper layer result in some typically Adèsian harmonic fields and triads. Many of the descending semitones in the middle voices create a sense of the Adès ‘signature chord’, and $♭6$ cycle (one such example is shown boxed in Ex. 15a and interpreted in bar Ex. 15b shares much in the way of intervallic profile with the solo violin part in Rings from Adès’s violin concerto, as shown in Ex. 16).

However, our perception of where one harmonic field ends and the next begins is disrupted and blurred by sustain via the use of pedaling and a generally legato texture.

Roeder’s ‘strands’ interpretation combined with the harmonic fields interpretation go some way to account for the listener’s experience of harmonic movement within the passage, but questions remain about Adès’s pre-compositional planning. There is compelling evidence within Traced Overhead’s third movement that confirms a wholly triadic way of thinking is behind the passage’s actual construction.
Ex 15a and Ex 15b: Emergent b6 cyclical relationships emerging from ‘-1 strands’ process in bb.3-4 of Sursum (shown boxed).

Ex. 16: The opening harmonies of Adès’s Rings.

Prior to the closing strands in the final bar of Chori is a sustained texture of expansive arpeggios. The entire passage works its way through the cycle of fifths as a result of it’s own internal descending pitch class sequence, as shown in Ex 17.
**Ex. 17**: graphical representation of the cyclical process that begins in b.61 of *Chori*, resulting in ‘cycle of fifths’ root note movement. Letters in bold represent the root notes of the triads, shown in boxes.

In this passage, Adès makes use of the dual function of the suspended chords as a kind of harmonic pivot: in the first instance in **Ex. 17**, the pivot chord functions linearly as ‘Csus2’ (given the downward step from the minor third of the *previous* chord) but retrospectively can be seen to function as a ‘Gsus4’ (given the resolution of the 4th degree to the major third of the *following* chord). While this is acknowledged, the linear interpretation (sus2) will be used when labeling for the sake of clarity, as well as to adhere with how I, albeit subjectively, perceive the chord due to the sense of a preserved root note (the ‘anchor’ of the root, established through the use of parallel major and minor triads, only shifts upon transformation to the third degree of the following set). Transformational networks such as this could also be described through the lens of other voice-leading frameworks such as Neo-Riemannian Theory’s ‘Tonnetz’, as shown in **Ex.18**, though one cannot suggest at this stage whether or not Adès had plotted the cycle using the Tonnetz matrix.
**Ex.18:** three-part cyclical process (‘1a’ follows ‘3’, ‘1b’ follows ‘3a’ etc.) as used from b.61 of *Chori* shown using Tonnetz matrices.

This process is brought to life by a typically Adèsian exploitation of extremes of tessitura and a virtuosic rapidity. Also worth noting is the scarcity with which Adès utilises the altered note in spite of the impact they have on the tonal construction of the passage. This is especially evident when Adès moves from one stage of the cycle to another very quickly as though toying with a sense of expectation and anticipation/realisation (and without missing expected notes or skipping forward in the cycle, as he has been shown to have done elsewhere).38

The entire cycle is outlined (overleaf) in **Ex. 19**, which shows the transformation of pitches as they occur. While not true of what I’ve labeled the ‘sus2’ chords (as they don't contain 3rds) the 3rds in the minor and major triads

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announce the change of harmony but rarely repeat until later on in the passage wherein the rate of harmonic change slows slightly.

**Ex. 18:** Entire cyclical process from closing arpeggios in *Chori* (bb.61-63). Solid slurs show movement of -1 and dashed slurs group the pitches belonging to the sus2 chord until the introduction of the new 3rd.
Looking back at the opening of *Sursum* we see that, though blurred with pedaling and an occasionally rapid pace of change, the unfolding of semitones give us the exact same cycle (as shown in *Exx. 20a-b*). Again, and without exception, the pitches appear so that entire triads are present before moving onto the next harmonic field, without skipping forward in the cycle. This clearly accounts for the mechanism by which the opening strands are governed: this is what Roeder missed. That the composer’s favored ♭6 cycle can be embedded within the material with the use of a sustain pedal (as shown previously in *Ex. 15a+b*) brings cause for speculation about its own genesis. What’s more is that Adès throws in an unexpected F♮, at the end of b.8, just as we anticipate the full completion of the cycle: it’s almost as though Adès is goading the analyst, not yet giving them the satisfaction of uncovering a complete cycle (yet 39).

**Ex. 20a:** strands unfold in order that outlines this progression in *Sursum* (identical in pitch-by-pitch movement to the closing arpeggio section of *Chori*).

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39 As shown in *Ex. 18*, Adès completes the cycle in *Chori*. 
Ex. 20b: bb.2-8 of *Sursum* showing the movement of pitches to create the harmonic cycle found in Chori’s ‘arpeggio’ section.

There may be a few questions raised over the appropriateness of my chosen harmonic nomenclature. Labeling of this sort is particularly problematic when considering two common scenarios within Adès’s music: when the chords
emerge as a result of moving strands but aren’t primarily chosen for their chordal function; and when the chords are in conflict with other simultaneously occurring harmonies in distinct registral streams. With regard to the first issue, conventional harmonies, particularly triads and/or harmonies built on $5^{\text{ths}}/4^{\text{ths}}$, do indeed emerge through such processes and through Adès’s voicing protocols. One conclusion drawn by Stoecker (as discussed earlier in this work) is that these triadic forms are selected for [Stoecker, 2015]. It is also worth noting that the composer uses triadic forms at points of closure or textural change (the D major triad at the end of Sursum is one such example, or the cycle of 5ths in the closing arpeggios in Chori).

With regard to the second objection raised, that of resultant non-tonal harmonies from multiple simultaneous harmonic layers, it is clear through the means of notation that the said layers are seen by Adès as conceptually distinct (but co-operating) entities. As outlined earlier, the existence of ‘conceptual layers’ is made clear through the editing decisions made in the score: the use of multiple staffs, unusual slurring, and connected beams/stems). Thus, Adès presents the reader with unpacked and clearly delineated musical layers that are to be theoretically understood as independent of simultaneously occurring layers. So keen is the composer to expose these conceptual layers that the score takes up needless real estate (i.e. the extended empty staff discussed on p.65) thus confounding the already daunting task of sight-reading the piece.

While the resultant harmony that emerges from these layers is clearly important to Adès, as evidenced in his frequent use of distinct registers to differentiate between voicings, the Adèsiand vocabulary is most clearly present within their individual registral streams rather than their summed parts. The
resultant and 'heard' harmonic language then comes together through the amalgamation of multiple co-operating processes, and while perhaps not planned for in precomposition, are certainly controlled and managed with skill for maximum colour.

The applicability of chord names is problematic in other areas of the work, such as in *Traced Overhead's* opening arpeggio(s) (as shown in Ex. 21) wherein Adès builds the arpeggio using chain of Minor and Major 3rd\(^{s}\). My analytical approach to such a passage has been to explore several rationales to its construction with the anticipation that other analyses made throughout the piece may bear out strong correlations with one of these interpretations and so inform any conclusions made about it.

![Ex. 21: Opening arpeggio of *Traced Overhead*](image)

At an intervallic level, the arpeggio at the opening of *Sursum* unfolds as follows (M = Major 3rd, m= Minor 3rd):

\[
M, m, M, M, m, M, M, m, M, m, M, M, m, M, m, M, m
\]

40 A technique also used in Adès’s *Brahms* (2001).
There are clearly some short sequences within the pattern, though at first glance, no single cycle governs the arpeggio's intervallic make up on a note-to-note basis. Due to these observations, one is led to believe that there may be a larger (harmonic rather than intervallic) unit at work. When interpreting the arpeggio as a sequence of triads, we see the following:

Ex. 22: Triadic interpretation of the opening arpeggio in *Sursum*

We are faced with the challenge of deciding whether Adès pivots at the 5th of chords mid-way through the process (at E♭) giving us E♭ and B♭ triads (shown below the staff in Ex. 22), or whether the triads are purely sequential, giving us G Minor and F triads (shown above the staff in Ex. 22).

The arpeggio(s) may also be interpreted as major 7th chords that pivot at the 7th degree until the midpoint at E♭ wherein the arpeggios pivot from the 5th, as shown in Ex23.

Ex. 23: *Sursum*’s opening arpeggio interpreted as a chain of pivoting Major 7th chords.
While both of these interpretations account in some way for the ‘heard’ arpeggio, another interpretation of the opening is consistent with ‘pitch-class strand’ analyses that can be found elsewhere in this thesis, and accounts for the sensation of simultaneously ascending and descending.

Ex. 24: descending pitch-class process interpretation of opening arpeggio gesture from *Sursum.*
With knowledge of Adès's penchant for the descending semitone, the passage is probably most astutely observed as a set of intervals that descend by ‘-1’ pitch-class upon repetition, and thereby invoke a sense of simultaneous ascencion and descent. This is true of the first three generations of the cycle, however, the introduction of the added fall of a tone (in generation four) disrupts the pattern. It is possible that this shift is inserted to disrupt the steady flow of ‘-1’, but it is also conceivable that the cycle is intervened with to prematurely arrive back at the B♭ arpeggio that begins the phrase (as shown in Ex.24). Thus, he could be seen to be returning to the first generation of a cycle, even if generations need to be skipped. This idea of cyclical return, premature or otherwise, is something that has been observed in several areas of Traced Overhead in this thesis⁴¹. Still, this explanation doesn’t wholly account for the C natural in generation five (we’d expect a C# from the aforementioned process) or the F# in the following bar that ‘concludes’ the phrase, and begins the ‘descending strands’ section of Sursum.

Analysis into the intentions for these pitches would demand an understanding of whether the F# in b.2 is being ‘targeted’ by the arpeggio or whether it is simply ‘arrived at’, but unfortunately this information isn’t available to us. On the other hand, a sudden widening of intervallic space can be heard at this point (the jump to the F#), and is perhaps used to create a sense of the piece being 'launched' to make its gradual descent.

⁴¹ See Exx. 13, 24 and 28
Harmonic cycles are also used as a constituent of other multi-layered textures in *Traced Overhead*. One such case study occurs after the tempo change in the second movement, *Aetheria*, at b.33.

Ex. 25: bars 31 to 41 from *Aetheria*. 
The passage of interest, shown on the previous page in **Ex 25**, begins at the high-tessitura forte C# in the upper staff\(^{42}\). A C# major arpeggio is heard in the upper part, until a trilled F#/G# is reached, which then falls a semitone to an E#.

A similar figure then descends from a C# but moves through a G major triad until an E#/F# trill is reached, in a manner similar to the initial musical statement. This idea, initially comprised of three distinct conceptual layers, repeats while the lower two layers undergo transformation below the C# ‘pedal’ that begins the passage. The first three instances of the lower layer, the trilled gesture (shown boxed in **Ex. 26**) can be understood as a descending stepwise strand (-1,-1,-2) decorated with an auxiliary upper-neighbours\(^{43}\) (shown with small noteheads).

The final iteration of this conceptual layer does not conform to the steady descent of the initial three, but does conclude with the pitch that began the layer (as though leaping ahead to complete the cycle) and coincides with a ‘pattern break’ also found in the middle layer at roughly the same point (explored in more detail later in p.83).

The middle layer of this idea is comprised of a sequence of triadic arpeggios, as revealed in brackets in **Ex. 26**.

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\(^{42}\) The music of the lower staff represents another, fourth, conceptual layer, but due to its remote metric and registral content will be considered as distinct from the three-layered process at work in the upper staff and examined in isolation later in this thesis.

\(^{43}\) It’s possible that the upper-neighbour notes comprise their own strand of ‘-2,-1’, but a perhaps more reasonable interpretation is that the trilled notes are selected for their arbitrary proximity to the first pitches.
Ex. 26: Reduction of multiple processes at work in upper staff in bb.31-48 in

*Aetheria.*

The arpeggios form a kind of intervallic cycle that arrives where it began, on a C# triad. It may be noted that I have been selective regarding the use of the lower staff when it suits my theory, such as the inclusion of the C major chord immediately before the F# arpeggio in my analysis. Fortunately, Adès's scoring conceptually links this very moment in the score with a downward arrow that links it to the dynamic of the upper staff, as shown in Ex. 27.
Ex. 27: Identification of low-register C major triad as being of the upper conceptual layers via the use of a downward arrow (note: the middle staff with cue-sized noteheads is marked earlier in the score as an ‘unplayed melody’).

Two interpretations of the pertinent cyclical properties of the ‘progression’ in the middle, triadic layer are shown in Ex. 28. The cycle can be seen to comprise of consecutive Major triads whose roots change in alternating tritones and 5ths, or as a pair of major triads that rise by a semitone upon transformation\(^4\) (an arguably more Adèsian understanding). The lack of voice leading between pitches belonging to the triadic conceptual layer suggests that the triad, itself, is the harmonic unit that Adès is manipulating, rather than emerging as a result of an intervallic process between individual pitch strands as used elsewhere in the work (though one can be constructed, it’s arguably too inelegant to represent common practice for the composer).

\(^4\) The said pair could either expressed in terms of either the 5th or tritone root-note relationships, the more important issue of semitonal ascent would remain the same.
Ex. 28: Two interpretations of the cyclical transformations of upper staff triads

(note names = root notes) in bb.31-48 of *Aetheria*.

Interestingly, the break in the cycle between the D♯ and B♭ triads coincides with the opening of the ‘unplayed melody’ section. Rather than positing an intervallic rationale for the leap forward in the cycle, one wonders whether there is a strong enough case to suggest that bars were just simply removed, wholesale, to aid the composition.

Earlier in *Aetheria*, Adès’s striking use of conventional harmony is also prevalent; the passage in question is shown in Ex.29. The movement’s third bar sees a continuation of the open-voiced strands technique. With foreknowledge of the triadic construction of the opening of *Sursum*, the upper layer of bb.3-5 can be interpreted as an unfolding of conventional harmonies, but not as an easily discernable ‘cycle’, as shown in Ex. 30.
Ex29: Opening Bars from *Aetheria*

Ex. 30: Descending strands and interpreted major harmonies from upper layer of bb.3-5 from *Aetheria*.

As is typical in Adès’s ‘strand’ constructions, the lowest voice descends by mostly tones while the upper voices plot a more varied trajectory of tones and semitones (with the exception of the semitone rise to the A natural). The passage could also be partially interpreted as belonging to one of Stoecker’s cycles\(^{45}\), but (unlike the passage examined earlier from *Chori*) doesn’t appear to have skipped

\(^{45}\) As long as the strands are made up of a consistent movement of semitones and tones, a cycle can be constructed.
to another part of the cycle when the sequence is broken (as shown in Ex. 31). This break occurs at the introduction of a secondary voice (in terms of scoring), at the B♮ in the fourth bar. It had occurred to me that Adès may have migrated to another ‘Stoecker cycle’, but my attempts to align the material compellingly have been fruitless or convoluted. That’s not to say that some system isn’t at work, but in this case I’ve struggled to locate its exact mechanism (if there is one). What can be noted about the passage is that while it may not be governed by a single process, the use of strands has been managed (or selected) by Adès to bring about tertiary harmony through parsimonious voice leading.

Ex. 31: Alternative interpretation of upper staff in bb.3-5 from Aetheria showing partial conformity to a 11,10,10 ‘Stoecker cycle’.
Aetheria’s staccato layer

The high-tessitura staccato chord layer that runs throughout the early stages of the Aetheria shows another aspect of Adès’s harmonic writing. There are three chord types used throughout the section: major triads; dominant 7th; and major 6th chords. The full sequence of staccato chords (with the lower staff showing their rhythmically coinciding pitches from the lower conceptual layer) is shown in Ex. 32.

Throughout this passage, the typically Adèsian ‘parsimonious’ voice leading is abandoned. There is an overall sense of there not being a functional progression, as such, but rather a palette of distinct voicings and occasional sequences, with little regard for a sense of phrase. Contributing to this is the shifting of what seems to be a ‘base set’ of chords by semitone (unfortunately, the exact nature of the base set has not been made entirely clear). For example, chord voicings reappear but a semitone lower. This property of the sequence can be seen with voicings (marked ‘i’ and ‘ii’ in Ex. 32) with their lower twins noted as ‘-1’ or ‘-2’ to illustrate the degree of their descent. Moreover, entire chord

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46 It could be argued that these are inversions minor 7th chords, which would be a valid interpretation of the collection of pitches. However, due to the fact that each instance of the chord is voiced identically (bottom to top: root, fifth, sixth, third) and the nature of the voicing itself (the predominant harmony I can perceive is the lower 5th and the major 3rd at the top with the 6th as a ‘colour note’) I would argue that my interpretation is the most elegant and phenomenologically accurate one. I would also argue that contextually a ‘minor 7th in second inversion’ chord can indeed exist but its function – and by extension its root note – is decided by context. Due to the nature of the sequence shown in Ex. 31 the analytical findings wouldn’t be drastically affected by choosing one alternative over the other as there does not seem to exist any present larger analytical finding that is contingent on the root note name.
sequences (boxed and noted as 'a' and 'b') are replicated with similar shifts (marked as 'b-1' and 'a-1'). While I've been unable to locate the specific elements of this passage's construction, with knowledge of Adès's propensities one might tentatively suggest that there is an underlying structure to this 'layer'. In particular, the third iteration of the 'b' sequence contains a passage that begins as 'b-1' and ends as 'b', thus suggesting some kind of predetermined sequence that has been obscured through liberal re-ordering and vertical shifts; this isn't an isolated instance of repeated sequences in the passage, though it is the most convincing.

Later in Aetheria, at bar 59, an almost identical sequence appears, with phrase structures intact, though in a much lower register the voicings, too, remain similar to their earlier high-tessitura counterparts (as shown in Ex. 33). From the first B7 to its final F the sequence is lifted wholesale from the earlier excerpt (from the B♭ at b.6). While it'd be tempting to conclude that this is evidence of the entire sequence being preplanned, it's also likely that the later sequence was taken from its earlier, already altered version from the beginning of the movement.
Ex. 32: Sequence of staccato chords with voicings intact from Aetheria. Boxes are labeled to indicate repeated passages. Slurs indicate unbroken sequences of staccato chords. Identical voicings labeled between staves.
The conventional harmonic structures used within *Aetheria* and the movement’s ‘unplayed melody’ (found at b.43) points\(^\text{47}\) towards a strong possibility of an allusion to Schumann’s *Humoreske* (1839). Unfortunately, attempts to locate any clear harmonic connection between the two pieces (or with other pieces by Schumann that explore the same sonic and rhetorical effects, such as his *Papillons* (1831)) have not been fruitful.

\(^{47}\) According to Faber’s blurb for *Traced Overhead*, the unheard melody is a ‘direct quotation’. I’ve yet to locate the ‘direct’ source of the unheard melody or other chordal constructions. It appears as though the use of quotation concerns the appropriation of the technique in and of itself, though I’d welcome analysis from Schumann specialists to point out otherwise.
Similar techniques in Adès’s work have also been attributed to Kurtag’s influence, the composer’s tutor shortly before the writing of *Traced Overhead* [Markou, 2010], though, again, I’ve found nothing to suggest that the melody itself is a direct quotation from this source.

**Strands and Gesture**

Adès’s intervallic technique extends even into brief and – as far as this reading of the piece understands – structurally insignificant moments. It is almost as though these techniques are so much a part of Adès’s vocabulary that they are employed at such moments without calculation. Such an instance is quick to appear in *Traced Overhead*; the first expanding motif can be found in the fourth bar (shown below in **Ex. 34**) while the listener’s attention is diverted to the layer of fluid Adèsian transformations unfolding in the upper register.

**Ex. 34**: expanding dyads gesture as found in b. 4 of *Sursum.*
In this instance, the expanding gesture is an example of two simultaneous strands descending at different rates – a technique that has been much explored in analyses of Adès’s work\(^{48}\). Whereas in *Traced Overhead* the sequence is used fleetingly, versions of the process are used elsewhere in Adès’s oeuvre as a means of generating key thematic material: the opening of *Auf zem wasser zu Singen*, or the second movement from *Under Hamellin Hill* (1992) to name but two of many instances.

*Ex. 34* Simultaneous -1 and -2 strands and their resultant dyads as they appear in b4 of *Sursum*.

In isolation the brief gesture may well be viewed as insignificant, however, its connection with another moment in *Traced Overhead* may tell us more about aspects of the work’s construction and adds to the already observed connections\(^{49}\) between the outer movements: in the piece’s third movement, *Chori*, there is another instance of the same technique being used (the passage in question is shown in *Ex. 36*). The similarities do not end there: a pair of dyads precedes each of the aforementioned expanding gestures. While *Sursum’s* gesture is preceded by vertical dyads, *Chori’s* is preceded by rapid two-note

\(^{48}\) Most notably [Roeder, 2006], [Stoecker, 2015], and [Markou, 2010].

\(^{49}\) The shared harmonic cycles in *Sursum* and *Chori*. 
arpeggios. As can be seen in Ex. 37, the dyad pairs are intervallically identical, with a difference of +2PC between each instance. Though the intervallic transformation used in the expanding gestures is the same, the resultant dyads are not a tone higher than their gestural partner (as we might expect by following the logic of their preceding dyads). In fact, if dyads of the same size are compared within the gestures themselves (i.e. the major 2\textsuperscript{nd} and minor 3\textsuperscript{rd} dyads) the second iteration is a tone below the original, resulting in the expanding gesture occupying pitch-classes a major 3\textsuperscript{rd} lower than we’d expect if the two iterations had been conceptually consistent with the dyads that they follow (as clarified in Ex. 38). This lends weight to the idea that the pitches used in such moments are relatively arbitrary and that the processes are adopted to embed compositional integrity to otherwise mundane gestures: tessitura takes precedent over process.

Ex. 36: Expanding dyad gesture in b.30 of *Chori* (shown boxed).
**Ex. 37:** dyad pairs that precede expanding gestures from *Sursum* and *Chori.*

**Ex. 38:** Comparison of dyads formed by expansion gestures. The lowest staff shows the pitches that would be expected had the pitch class of the dyads followed the logic of the preceding dyad pairs (i.e. a tone higher).
The second iteration of the expanding gesture precedes the most densely chromatic passage in the piece, as the expansion process manifests itself in the upper registers and takes on an altered form (as shown in Ex. 39).

Ex. 39: Expanding pitch-class strands in b.31 of Chori (shown boxed).

The first clear-cut example of the process in action is notable for the changes in its presentation; the strands here unfold as an amalgam of a single arpeggio-like line and staccato chords. The sense of expansion is distorted by the two lines unfolding at different rates and appearing in unexpected registers. The registral shifts in the example below (Ex. 40) represents a break from convention within the wider context of Adès’s use of these expansion processes: interval-class transformations communicate directionality more clearly whereas pitch-class transformations are harder to perceive.
Ex. 40: Identification of strict pitch-class strand movement in b.31 of Chori.

Though the above is a brief example, it offers a way of understanding similar passages\textsuperscript{50} in Traced Overhead: passages that betray strand-like appearance (i.e. don’t conform to parsimonious voice leading) may be understood as pitch-class strands.

Though similar in overall shape, the densely chromatic example below in Ex. 41 (from bb.34-36) doesn’t strictly work via the expansion model (that of a lower voice moving by ‘-2’ and the upper voice by ‘-1’). The use of pitch-class strands is, however, embedded in the passage’s construction. Again, the strands are distorted by their shifting of registers and the fact that two separate processes are unfolding in each hand, but the familiar unravelling of strands at varying rates (and thus not arrived at by Stoecker cycles\textsuperscript{51}) prevails.

\textsuperscript{50} Such as the arpeggio that opens Sursum, for example.

\textsuperscript{51} The ‘spokes’ necessitate that pitches move with each other. When they don’t, no alignment can be achieved.
Ex. 41: Momentary staccato tetrachord passage in bb.34-36 of *Chori*.

This staccato passage stems from dyads of a 5th in each hand with the left hand beginning a minor 9\textsuperscript{th} (or -1PC) lower than the right (C and G in the r.h. and B and F\# in the l.h.). Another noteworthy feature of this passage is that although the summative vertical harmonies largely fall outside of Adès’s chordal lexicon, the voicings in each hand have a tendency to avoid 3\textsuperscript{rd}s and favor types of 5\textsuperscript{th}s (including tritones and the inverted 5\textsuperscript{th}, the 4\textsuperscript{th}); even as processes unfold, Adès massages the ways in which they do so, so as to loosely conform to his voicing protocol while allowing for process and the pianistic idiom. The pitch strand movement within the passage is interpreted in **Exx. 42a + b**.
**Ex. 42a:** Interpretation of pitch-class strands in bb.34-36 of *Chori*. Stem direction and beams connect the pitch-class streams.

**Ex 42b:** four-strand construction of interpreted pitch-class strands that appear in the staccato tetrachord passage in bb.34-36 from *Chori*. 
Near-identical PC strand techniques are used elsewhere in the work. For example, in *Aetheria*, bb.40-41 (shown boxed in **Ex. 43**), we see a shorter passage in which the ‘upper’ pitch class strand descends by a tone and the ‘lower’ by semitone (as shown in **Ex. 44**). This is in addition to the three other processes that are simultaneously unfolding above it (as previously analysed in **Exx. 25-28**). Again, the pitch-class strands regularly move into different octaves, thus invoking simultaneous impressions of ascent and descent.

**Ex. 43**: *Aetheria* bb.38-41, with pitch-class strands passage boxed.

**Ex. 44**: Interpretation of pitch-class strands in left hand dyads of bb.40-41 of *Aetheria*. 
Similarities between outer movements

The closing bars of the outer movements of *Traced Overhead* contain some similarities that are markedly *Adèsian* in their horizontal construction. Though delving into a low tessitura, Adès’s management of distinct strata maintains some sense of clarity. It’s certainly questionable as to how transparent the construction of these moments are due to the muddy depths they reach; however, the keenness of Adès to maintain a semblance of structural integrity to what otherwise may be a more broad-brushed gesture in another composer’s hands speaks to his aesthetic values. The interval-class strands are again easy to identify by their consistent movement (the mixed use of -1 and -2 strands) and the discrete strands’ intervallic distance from one another (separated by roughly a 5th throughout).

The first set of strands at the closing of *Sursum* (shown overleaf in *Ex. 45*) descend at varying rates (evoking Roeder’s ‘multiple temporalities’) to a closing D major triad in 2nd inversion, betraying the murky chromaticism and dissynchronicity that led (fatalistically, in hindsight) to it.
Ex. 45: Closing bar of Sursum.

As shown in Ex. 46, the top two strands appear to merge at G natural where the ‘-1’ strand that collides with the middle ‘-2’ strand (starting on E♭) as they intersect (G♯ to G in the upper strand and A to G in the lower strand). The upper strand is connected by step to the cyclical material that begins at b.2 (as has already been discussed⁵²) though these closing strands are not a continuation of the earlier process. Again, it is possible that the enforced ‘merging’ is a transition from one Stoecker cycle to another ([11,10,10] to [11,11,10]), but lack of clear vertical alignment makes such an analysis problematic.

After the merging of the upper two strands, the new upper strand proceeds as a ‘-1’ strand and a new lower strand is introduced to maintain a three-stranded construction, and has clearly been reverse-engineered to ensure arrival at the closing D Major triad.

⁵² See Exx. 17-19
Ex. 46: Intervallic strands that comprise the closing bar of Sursum.

The third movement’s close undergoes a similar interval-strand process, though within the context of a more continuous quintuplet phrase. The strands this time are heading towards an idealized 5th dyad on an F, in which the keys are silently depressed but (hopefully) ‘heard’ only through a resonance trick (these pitches are shown bracketed in Ex. 47).

Ex. 47: Intervallic strands in the final bar of Chori.
One consistent feature of Adès's execution of both endings of *Sursum* and *Chori* is the tendency for the lowest stream to descend by tone, and the upper stream to descend by semitone. This feature conceptually links the 'descending IC strands' process to the 'expansion' processes used elsewhere, however, in these instances the use of strata and moments of inconsistent movement disturb the sense of regular expansion.

The similarities between *Sursum* and *Chori* go even further than the previously discussed closing passages and the cyclical harmonic construction of their preceding upper layers: the low-tessitura chords in *Sursum* and the chords under the arpeggio section in *Chori* (b.61) also bear striking similarities, as shown in Exx. 48a - b.

Ex. 48a: Comparison of harmonic content in related passages in *Sursum* and *Chori*. 
**Ex 48b:** analytical interpretation and comparison of the root-note movement from related passages in *Sursum* and *Chori.*

As can be seen in **Ex. 48b,** first four chords in the *Chori* example are the four chords of *Sursum* in retrograde. The progression in *Chori,* though a tone lower, contains almost identical voicings to its earlier iteration (as clear from **Ex. 48a**). On this point, I’m reminded of the observations made in this thesis about the ‘staccato strata’ in *Aetheria:* the vertical adjustments applied to harmonic objects and the reordering of sequences. It is likely that Adès is again manipulating an underlying palette of chords.

The harmonies used are phrased in pairs (as indicated by the boxes in **Ex. 48b**) and their root notes always move, up or down, by a $5^{th}$ within each pair. I have interpreted the bottom pitch of third intervals (upper pitch in 6ths) and the lower note of $5^{th}$ dyads (lower note in 4ths) as the ‘root’ in each case, in line with both conventional harmonic thinking and Adès’s own thinking\(^{53}\).

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\(^{53}\) Adès also sees intervals of a fourth in this way, with the upper note being the root: “I hear a fourth as an inverted fifth; the top note is the bass. I don’t know
Another (more speculative) connection between the outer movements is that the pitches in the closing triad of *Sursum* (A,F♯,D, or D major in first inversion) are present in the top three voices at the start of *Chori* (as can be seen in Ex.49). A similar device is employed in Adès’s *Arcadiana* wherein odd numbered movements can be connected together as one continuous piece (as can the even ones). I would tentatively suggest that this might be the case with regard to the outer two movements in *Traced Overhead*.

Ex. 49: Opening bar of *Chori*, showing D Major triad in upper voice

All of the aforementioned similarities confirm the idea that the third movement can be read as a recapitulation of the first, as would be expected in a sonata form. The sonata form link is by no means a controversial one: other pieces written around the same time, such as the *Piano Quintet* (2000) and *Sonata de Caccia* (1993), have been widely understood as using sonata form.

whether that is an evolution of the ‘cultural ear’ – perhaps it’s just me, but I feel it as a fact” [Adès, 2012, p. 32].

54 Of course, the first could also be seen as a microcosm of the last.
Moreover, *Traced Overhead* was at one point called *Sonata da Sopra* [Adès, 2012, p.6].

Many of the observations above about the harmonic content of *Traced Overhead* strengthen this association with sonata form, and this connection is one that I hope will be explored by other analysts in the future: despite my own failure to locate it, there may well be a harmonic model for *Traced Overhead* in a Schumann sonata. If there can be found a solid thematic connection with an alluded-to work, it would surely offer significant insight into the harmonic devices used in Adès’s piece.

**Conclusions and areas for further study**

Whereas Roeder and others have posited that passages such as the opening of *Sursum* are constructed with the use of multiple descending strands that unfold at different rates, this analysis demonstrates that there is at least occasionally precompositional planning that manages the order in which these descents occur. This has caused me to look at other areas where Adès uses strands to generate material and to rule out whether similar planning has been involved in their construction, including investigating the applicability of ‘Stoecker cycles’ to such moments. Given the observation that the results of these processes occasionally give rise to strikingly Adèsian harmonies (such as his ‘♭6
cycle\textsuperscript{55}, I would recommend a review of the techniques at work in similar moments within Adès’s oeuvre in order to discern whether the findings of this thesis aid in the unraveling of passages to reveal their underlying, pre-compositional construction.

I have uncovered the ways in which the composer’s expansion gestures have been constructed using pitch-class strands as well as with interval-class strands during the most chromatically dense moments of the piece. Such an observation may be used to aid understanding in other moments that defy parsimonious voice leading, but are nevertheless process-based. Furthermore, throughout this analysis, a methodology of cross-referencing the techniques used has revealed the multifarious representations of identical processes, as well as introduced evidence of large-scale planning in the work (most notably in the outer two movements).

The demonstrated uses of triads and conventional harmonic structures in *Traced Overhead* may well be the most important issue to emerge from this analysis and has overturned previous thinking about the opening of *Sursum*, in particular. It is my hope that this discovery may prompt an attempt to understand some of Adès’s writing with half an eye on the sympathy intervallic processes have with underlying harmonic content, including possible ‘root-note’ thinking (using intervallic processes to provide the root notes for harmonic progressions).

This analysis has caused me to re-examine other works by Adès to which these issues may be relevant. Take for instance the opening of his most recent opera, *The Tempest* (2004), wherein the movement of the upper parts appears to

\textsuperscript{55} As observed in in *Ex. 15-16*. 
be cyclical and typically continuous in its unfolding. However, the semitonal
descent of root-note values, as shown below in Ex. 50, may well have relevance
elsewhere in the work, independent of this particular process.

Ex. 50: Reduction and intervallic/harmonic analysis of the opening of The
Tempest (2004).

Given the insights made into Adès’s harmonic thinking in this analysis,
one might argue more solidly that the six harmonic units that comprise the
arpeggio-laden opening of In Seven Days (2008) may well have been the result of
Adès experimenting with using the various major 7th tonalities that include the
shared pitch of F♯, as outlined in Ex. 51.

Ex. 51: Harmonic interpretation of opening string line from In Seven Days (2008)
The notion of simultaneous strand-like processes also allowed me to better understand the opening of Adès’s *Brahms* (2001) wherein concurrent interval cycles predominate. While 3\(^{rd}\)s appear to be the primary interval behind the construction of the passage (a hat-tip to Brahms’s 4\(^{th}\) Symphony) Adès also uses a stream of descending tones as each arpeggio begins a new descent (as shown in Ex. 52).

Ex. 52: simultaneous strand processes at the opening of *Brahms* (2001)

Adès clearly drives hard for a culmination of natural forces, the ‘decaying’ semitone in particular, and a connection, through harmony and form, with history and tradition, and on this point I cannot help but echo Travers’s eloquent words that, though about *Asyla*, might well have been about *Traced Overhead*:

“Asyla is, on the whole, very tightly constructed, with a few odd moments here and there which throw off any attempts to pigeonhole it wholesale into this or that mode of composition.”
Indeed, future work may yield not only explanations for these moments, but also a completely new set of questions and ideas that such a rich composition continually presents.” [Travers, 2005, p.35]

Throughout this project I’ve been cautious to attribute the geneses of Adès’s harmonic ideas to other composers, preferring to focus on the content of the local ideas themselves rather than to get too bogged down in issues surrounding their provenance. However, it has become gradually apparent that the music and tutelage of György Kurtag was of particular importance to Adès when composing Traced Overhead. At the very beginning of his compositional career (shortly before completing his Opus 1, Five Eliot Landscapes in 1990) Adès had studied piano in chamber music with Kurtag in 1988/89. Alas, even at the time of this project’s completion this author’s level of familiarity with Kurtag’s music is tragically low. I would suggest that collaboration with a Kurtag expert might well reveal further links between the two composers’ music and their compositional processes.

Adès makes scarce mention of Kurtag’s influence in Full of Noises, though his connection with the Hungarian’s music goes further back, having been introduced to his tutor’s work, Messages of the Late Miss R. V. Troussova (1980), while at Junior Guildhall: “[...] I can’t explain what it was but I was instantly conscious that it was alive in every sinew: every note was a blood cell, carrying oxygen [Adès, 2012, p.136].” He later admits to some attempt at imitation:

“That piece, Troussova, is from the Seventies, so that would have been one of the very first pieces of absolutely recent music that I
would have heard. And of course I immediately started trying to imitate it in some way and got it completely wrong. Yet it can be a way to start, to try to imitate and realise that you’re not that person [Adès, 2012, p.137].”

All that’s missing for this link to be more compelling is a demonstrable overlap of techniques and/or materials. I believe that the findings in this thesis regarding Traced Overhead and Markou’s work on Five Eliot Landscapes would be useful resources for such a project: both of the studied works were written shortly after Adès’s period in Hungary, and each contain, as demonstrated, an array of harmonic and intervallic techniques. I am further compelled by my reading (albeit limited) about Kurtág’s music. For example, the following passage, from Beatrice Barrazoni’s article, Kurtág’s Music: The Spectacle of Nature, the Breath of History, from op. 7 to 27, may well have been about Adès’s oeuvre (with particular regard to ‘pregnant’ musical figures and 'natural forces'):

“What is new however in Kurtág's music in my opinion is the extreme variety as well as pregnancy of musical figures and how the composer originates, than makes them multiply and live in his works: it happens through setting off formal processes of employment, which for their brevity and gestural force seem to allude to spontaneous processes of generation, of life and death of the natural world. There is a sort of "spirit-"ism in Kurtág's music which, more or less consciously, tends always to discover a dynamic force that can be turned into an evolving process: what is attractive for the composer in most of his pieces is in fact the initial movement of elementary cells, outwardly chaotic but none the less well organized, that broaden out in the course of the piece and invade the register, [...] following precise...
strategies and directions. It is this inner mobility and energy that comes from this basic material, always in the course of transformation and irregular in its own rhythm, that hints at processes and rhythms of biological development, as well as to the flow of the natural element [Barazzoni, 2002, pp.253-254].”

Finally, my analytical work on Adès has had a significant impact on my own practice as a composer. The ways in which I have incorporated aspects of Adèsian language have been outlined in the remaining commentaries in this submission. The next piece of mine to be discussed (H.O.C.) represents my first earnest exploration and adaptation of intervallic technique, Adèsian or otherwise.
H.O.C.

H.O.C received its premier at the National Portrait Gallery in London and was performed and developed in collaboration with the Marici Saxophone Quartet, a professional, London-based ensemble. The writing brief was to compose a work that drew inspiration from any painting or sculpture displayed in the room where the piece would be performed: Room 21. Aesthetically speaking, the works in the room (most of which from the 19th century) didn’t easily align with either the more abstract compositional ideas that I was interested in, or the Sax quartet idiom; I tend to associate the Saxophone with music of the 20th century.

Eventually a work was chosen: Sir George Hayter’s House of Commons (1833-1843). The painting depicts (as its title suggests) the packed interior of the House of Commons, and from this, I felt I could compose a work that drew on the ideas of debate and conflict. I have no problem with writing to a brief, but on this particular occasion the looming deadline had forced a decision.

Before the writing of H.O.C., I had been researching the various harmonic techniques employed by Thomas Adès, as well as those of Oliver Knussen with an aim to expand my harmonic vocabulary beyond the jazz idiom. In particular, I was interested in adapting some of the techniques uncovered in John Roeder’s ‘Co-Operating Continuities in the Music of Thomas Adès’ (2006) and in Julian Anderson’s ‘Harmonic Practices of Oliver Knussen since 1988: parts I and II’ (2002). H.O.C. was used as an opportunity to incorporate some of the concepts understood from these analyses.
In terms of sax quartet repertoire, parts of the work draw quite freely on Stephen Goss's *Uneasy Dreams* (2006), especially the material that exploits the saxophone's capacity for soft, rounded timbres. Some of the more rhythmic material was loosely influenced by the writing of Graham Fitkin, particularly that of *Hook* (1991). Finally, the saxophone writing of Mark-Anthony Turnage in *Blood on the Floor* (1994) was another direct source of inspiration. *H.O.C.* can be seen as a dialogue between these influences and the use of intervallic techniques.

The first adoption of the intervallic techniques developed from my research into the music of Thomas Adès is found in the soprano melody at b.30. The idea is adapted from Adès's 'expansion motif' (as shown in Fig. 17); whereas Adès applies the 'increase by 1' process to consecutive pitches\(^{57}\), I expand the intervallic profile of a phrase to generate its variations.

![Fig. 17: Intervallic construction of Thomas Adès's 'expansion motif'.](image)

\(^{57}\) For a clear example of this, see the opening of 'Auf zem wasser zu singen' from Adès's *Arcadiana* (1994). Its use is discussed in [Roeder, 2006], [Roeder, 2009] and [Markou, 2010].
Fig. 18: Reduction of bb.29-35 showing expansion technique in the soprano sax and its harmonisation. (Numbers above the soprano staff indicate the intervallic space, in semitones, between successive pitches)

As can be clearly seen in Fig. 18, the expanded and developed reiterations of the first motif begin from the final pitch of the previous iteration. Upon repetition, the intervals between each pitch of the phrase is enlarged by an additional semitone (an intervallic profile of ‘-1,+2,-3’ becomes ‘-2,+3,-4’ upon repetition). It should be said that the use of such a system in my work at this stage was intuitively informed and selected primarily for its resultant aesthetic quality. I do not find that the process itself has an intrinsic value other than to add a vague sense of expectation and expansion, though I enjoy the creative
challenge of how to phrase and harmonise the generated material, and that of embedding it within my own compositional language. That being said, one limitation I placed on this particular passage was that the pitches of the melody should remain unaltered. This informs some of the note choices present in the accompaniment, such as the F♯ dropping to an E in b.32 of the alto part to make way for the F♯ in the soprano melody (as indicated previously in Fig.18).

The harmonic language here is also decidedly aligned to the vocabulary of modern jazz: a casual reflection of the saxophone’s unavoidable legacy within the genre. To coincide with this, I subtly vary the phrasing of the soprano’s melody, intuitively playing with durational values in order to engender an improvisational feel.

At b.36 I reuse and extend the same ‘expansion’ process but within a radically contrasting texture. This passage begins with a brisk line in the soprano, which dovetails with the alto (this line goes one generation further through the process than its previous iteration) and soon moves to four independently moving parts that occasionally synchronise in harmony and gesture. In order to highlight the use of the expansion process a quasi-repetitive rhythmic phrasing is used, at least initially, that groups the relevant interval sets (this is also true of the earlier use of the technique at b.29).

Due to the desired level of activity in the passage, I felt that I needed some way of getting to the notes as my ear was failing to provide me with complimentary phrases. As such, I moved forward with the use of a mixture of generative techniques, and once I’d gathered some materials I was able to begin experimenting with their placement on the score. The entire passage and
indication of where techniques have been used are shown in Fig. 19, which is broken down in the next paragraph.

The set of pitches brought about by the earlier expansion technique are used liberally throughout the passage. In the intervallic analysis in Fig. 19, I’ve also allowed for octave transposition (shown with asterisks) for the sake of clarity. The opening dovetailed phrase that transitions from the soprano to the alto and terminates at the point a ‘-12’, interval (the octave) is expected.

The possible ‘expansion’ permutations of the initial set are as follows:

Initial set: [+3-6+8] - Expansions: [+4-6+9], [+5-7+10], [+6-8+11]

The initial set can also be contracted (the tenor entry uses a contracted form):

Initial set: [+3-6+8] – Contractions: [+2-5+7], [+1-4+6].

Where these sets are at play in Fig. 19, they have been labeled with the relevant intervallic sequence. The passage also continually refers to the outcome of the original process [F♯, A, D♯, G etc.] and these instances are labeled with ‘original’ in the example.
Fig. 19: bb.36-42 from *H.O.C* showing various techniques (‘original’ = set of pitches derived from ‘expansion’ phrase as found in b.36 in the soprano).
As well as the expansion process, there is also a brief flirtation with the ‘rotation’ technique in the tenor part of b.37. The rotation technique is outlined in Julian Anderson’s analysis of Oliver Knussen’s, ‘Harmonic Practices of Oliver Knussen’s Music since 1988: Part 1’ [Anderson, 2002]. The technique’s mechanism is shown in Fig. 20.

The opening tenor part from this excerpt begins with the theoretical ‘first possible’, ‘contracted’ version of the original intervallic contour (starting from ‘+1’), which then attaches to a rotation of the original set (via the tritone), and briefly continues along expansion lines from the rotated set. Though hardly used, the rotation technique would be adopted more enthusiastically in the next piece, *Flickering Shards*.

![Fig. 20: Rotation technique as applied to first two generations of the ‘expansion’ phrase from H.O.C.](image)

The baritone part in bb.40-41 (from the same example) also marks an adoption of the idea of ‘enclosures’: using various upper- and lower-neighbour notes to approach target tones (the construction of the passage is shown in Fig. 21). This is something that I had been using in my improvisational vocabulary as
a performer for a long time, but thought that I could engender a sense of multiple enclosures by incorporating them into a single melodic line. This phrase also comprises a brief example of pitch-class movement in lieu of proximate intervals: a sudden move to G♭, an octave lower than it should be, in b.41.

Fig. 21: Use of multi-layered enclosures in baritone part of H.O.C. in bb.40-41.

All of these techniques have been used to generate notes and act as a springboard for creativity, but they also have the collateral effect of imbuing the passage with a non-modal intervallic profile that, I feel, anchors a sense of audience anticipation. This is particularly true of the continually returning F#, A, D#, G (etc.) motifs, and self-similar contours and rhythms.

Marking a shift in the texture, at b.41 the tremolo ‘Adès’ chords signal an ejection into a new section. The two-chord voicings move in a way that I’ve termed as the ‘♭6 cycle’ in my theoretical work on Thomas Adès.

The use of intervallic processes continues into the following section, wherein the polyrhythmic arpeggios in the soprano and alto parts undergo a multi-layered pitch-class strand process, as shown in Fig. 22 (reduced to one octave). The dyad of a 5th is maintained in the outer voices, and each voice descends steadily by ‘-1’. The middle voice, however, after rising initially by

58 Much of the passage is composed, intuitively, in response to these generated and process-based materials.
59 See pp.50-54
'+1'\(^{60}\), descends by ‘-2’. The process collapses when the middle stream merges (as shown with an arrow in Fig. 22) with the lowest stream (at this point I instead sustain the use of the G\(\flat\)/F\# to avoid a thinning of harmonic content). The thinking behind the passage is to use the continuous 5\(^{th}\) dyad and additional middle voice to create a reliable and secure harmonic palette with a sense of downward pitch-class motion that is distorted through arpeggiation.

Fig. 22: Pitch-class strands used in soprano and alto parts in bb.43-44.

Running alongside the soprano and alto process is a similar process in the tenor and baritone parts. While the tenor part descends by ‘-1’, the baritone undergoes a brief expansion process. Just as the process would carry the melodic line outside the range of the instrument (to a C below the staff) the music moves by the same amount of semitones but in the opposite direction to a B\(\flat\) (it’s likely that I got confused and calculated a ‘+5’ move instead of the ‘-5’ movement that should have followed the F in b.43). Though the starting point and the durations are managed with harmonic strength in mind, the processes used in the lower register do not follow the ‘every crotchet’ rate of change found in the upper parts.

\(^{60}\)This gives the process more mileage by postponing the collision of the lowest two strands.
Fig. 23: bb.43-44 showing intervallic movement in tenor and baritone parts.

After a short pause, a similar passage follows but with a more straightforward construction. The descending dyad of a 5\textsuperscript{th} is maintained, but the baritone’s ‘expanding interval’ line contributes to the additional pitches in the arpeggios found in the alto and soprano parts (with the exception of the C\# in the second chord that replaces the expected D\# from the baritone strand in an attempt to soften the B major triad). The expansion process of the baritone line has the additional, collateral effect of increasing the intervallic space between it and the rest of the ensemble, which results in steadily expanding lower dyads (see Fig. 24).
Fig. 24: Intervallic processes at work in b.45 from H.O.C.

The process in b.45 terminates at the point where an E♭ is arrived at in both the soprano and baritone strands. After a bar’s rest, another very similar instance of this technique occurs (with redistributed rhythmic properties) and transitions the piece into its next section: an extended melody, first heard in the soprano, that eventually works its way through the alto and tenor, in bb.48-70.

This passage (the construction of which is shown in Fig. 25) begins with a melodic line that descends by a semitone and then a perfect 5th. This phrase is then repeated, but with each pitch a semitone lower, and with some rhythmic variation. At the end of b.51, the pattern is broken by a B where a C would be expected, and this prompts the next phrase to begin a semitone lower than expected (a tone lower). The process continues as expected until the pattern breaks at b.57 and a new intervallic profile is established for the remainder of the passage. This new process is only altered at b.67 when the melody moves onto the tenor and the phrase repeats a semitone lower than expected. The
rhythmic variations and occasional disruptions to the phrases’ intervallic profiles toy with audience expectation, and, in conjunction with the harmonisation that enters at b.57, helps to create a rich, multi-layered musical experience.

![Figure 25: Intervallc construction of melodic thread from bb.48-70](image)

The harmonic accompaniment that enters at b.57 (as shown in Fig. 26) bears much in relation to the harmonic character of earlier sections of the piece, with lots of jazzy and hexatonic harmonies.
The pattern of contrasting textures extends on into the final passage, which leads into the rhythmic climax of the piece at b.82. From b.82 onwards, I take a simple motif that draws on vocabulary from Mark-Anthony Turnage and Graham Fitkin, and then break it up into fragments and make it work with different metres.

*H.O.C.* marks the point at which intervallic procedures began to play a central role in my compositional practice, thus unlocking a new approach to harmonic language in general. That being said, the resultant processes are
always managed so that they sound compelling and exist comfortably alongside material that has come about without the use of such techniques.

**Recording notes**

The submitted track contains an edit from the recording of the original performances. Unfortunately, there were a few problems with the audio from the portable recorder. As such, the edit contains the parts of the performance that were unaffected (these clips contain most of the talking points mentioned in the commentary).
**Flickering Shards**

*Flickering Shards* was initially written as a competition piece for the Aberdeen University Music Prize. The competition’s brief was to write a 5-6 minute work for string quartet and trumpet. There were very few pieces in the existing repertoire for this kind of ensemble that interested me, so I had been thinking a great deal about what kinds of textures would work. With half an eye on the fact that this was an entry for a competition, I wanted to create something that made use of inventive and compelling textures that dealt with ways of integrating the trumpet.

Reflecting on what had been effective in my previous pieces, I also wanted this piece to achieve or explore the following:

- Structures that exploited textural and thematic contrasts
- The use of intervallic techniques to engender a sense of geometry/space/movement...
- ...within a stylistically aware harmonic language.

The work begins with a succession of unison A±s, which are achieved using a variety of techniques throughout the ensemble (shown overleaf in Fig. 27). This texture was informed primarily by Julian Anderson’s *Khorovod*

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61 I was also aware of Hanz Werner Henze’s *Sinfonie Nr.6* (1969) and Harrison Birtwistle’s *Tragoedia* (1965) that each start with similar techniques to Anderson’s *Korovod*, but to different aesthetic ends.
(1994), which opens with the chamber orchestra ensemble all playing C♮ in different rhythmic configurations. The opening of *Flickering Shards* moves this idea on by employing dynamic/timbral motifs, and explores different unison combinations within the ensemble.

The Trumpet’s entries are initially modulated with the ‘wah-wah’ of the plunger mute, and are twinned with percussive cello pizzicato. I didn’t want to give the impression that this would be a ‘trumpet and accompaniment’ piece, and felt this way of opening the work would communicate this agenda at the outset.

The first genuinely melodic material is found in Violin I at b.13, with a lyrical, descending line that winds its way towards a B♮ in the following bar. As shown in Fig. 28, the phrase is largely based on the idea of a set of dyads of a fourth that descend by a semitone, thus imbuing a strong sense of expectation.

**Fig. 27:** Opening of *Flickering Shards* showing dynamic motifs and textural detail.
and pitch projection. Other pitches are also included to break up the pattern and add triadic inflections to the melody as it flirts with the tonality that underpins it (the continuous A pedal). Following this phrase, the violin melody is freely elaborated on in bb.15-20, and composed using a variety of modal palettes that use the A pedal as either their root or a Dominant pedal. Intervallic processes are occasionally deployed, such as in b.19 (as shown in Fig. 29), but in general, the writing here is very much ‘heard’ rather than process-based.

**Fig. 28:** Intervallic and harmonic construction in bb.13-14 of Violin I.
The first significant melodic content from the Trumpet begins at b.25. The melodic writing here is contrasted with the earlier violin lines, with its slower, broader writing. A descending semitonal strand from E to B was used when constructing the passage, with other, intuitively selected notes included to break up the line. The descending ‘-1’ strand was intended to work along a single registral plane, but when looked at as a pitch-class thread also reaches the targetted B♮ unintentionally early, as shown in Fig. 30. Again, the descending thread is used to subtly engender a sense of continuity and descent.
Upon reaching the B natural in b.35, the trumpet ejects itself from the texture into a short solo cadenza, bringing about a sudden change in momentum with its semiquaver quintuplet phrase. The trumpet’s cadenza is constructed as a drawn out, downward spiral with the use of compound melodic strands. The use of strands is most clear towards the end of the phrase, where the upper line continually descends by semitone. At the opening of the cadenza some of the pitches were reordered (to taste), but the general directionality of the process remains intact. The construction of the entire cadenza is shown, below, in **Fig. 31**.

**Fig. 31:** Strand construction in the Trumpet cadenza (bb.35-38)
The most exotic texture in *Flickering Shards* begins in b.43. The passage is constructed with a long, lamenting melody in the tenor register of the cello (briefly transitioning onto the viola’s part) accompanied by all manner of harmonics. These harmonics accumulate in a kind of amorphous cloud above the lyrical cello, and sporadically pick out pitches from its melody.

The Trumpet part in this delicate, quiet passage is severely muffled with the use of a practice mute, and compliments the melody with sparse, countermelodic material and valve tremolos. Gradually the trumpet’s erratic but muted outbursts compete for our attention and create a stark contrast with the legato and lyrical cello. The intention here was for the severe muting (and *f* dynamic marking) to create a rhetorical sense of resistance and of the trumpet trying to reclaim a place of primacy within the ensemble. There is some loose construction in this material, with the use of outside/inside dyad pairs\(^{62}\) (as shown in Fig. 32), and its repeated return to B natural is used to create a sense of continually coming to an impasse.

\(^{62}\) ‘Inside’ here refers to the pitches of a dyad that are within the span of the previous dyad but similar in size (bottom voice moves up, top voice moves down). ‘Outside’ refers to the opposite.
At b.69, *Flickering Shards* again shifts its textural and stylistic direction with a meandering ‘walking bass’ line in the cello, an extended trumpet solo and pizzicato interjections from the rest of the ensemble. Texturally, this passage owes its conception to Mark-Anthony Turnage’s *Fat Lip* 63 (2004) as well as the ‘quasi-chitarra’ 64 textures in Julian Anderson’s *Khorovod*. An expansion process is again used to get the cello’s ‘walking bass’ moving (though with an added pitch to break up the pattern, as shown in Fig. 33). The process is abandoned fairly quickly, however, as the ear takes over; on the whole, the part is constructed as

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63 From Turnage’s *Scorched* (2004) suite, a set of orchestral arrangements of John Scofield tunes.
64 ‘Strummed’ multiple-stopped pizz. on the strings. ‘Up’ and ‘Down’ arrows signify the direction of the strum.
though it was improvised, with the rare moment of synchronicity with the rest of the ensemble.

Fig. 33: Expansion processed used in the ‘walking bass’ from b.69 in the Cello part.

Much of the trumpet’s material is modally constructed (it mainly uses the half-whole diminished scale or modes of the Melodic Minor scale) and is phrased with a jazzy and improvisational feel. However, to imply a sense of the trumpet’s persistence, some of the material looks back to earlier melodic contours in its part. As well as drawing from earlier melodies, the Trumpet solo also looks forward to the key, process-based material in *Flickering Shards*’s closing passage.

Most of the music heard from b.85 onwards was constructed in tandem with the writing of *H.O.C.* and through my experimentation with expansion and rotation techniques. Fig. 34 shows the sketch of the initial ‘row’ and a few of the generated lines that came from it. Embarrassingly, there are occasional miscalculations in some of these lines. Note that the third pitch in the ‘expanded’ line contains an A♭ when it ought to be a G♮; this, of course, had a knock-on effect on the rest of the line. This discrepancy doesn’t greatly bother me; the lines are only really generated so that I’ve got material to work with, and if I allow myself
to change the notes as I please when scoring then accuracy needn’t be overly
critical in its calculation.

**Fig. 34:** the first sketch of the initial row (‘Row 1’) and the expansions and
rotations that would be used in the closing passage of *Flickering Shards*
(including mistakes).

As shown in **Fig. 35**, the initial row is, again, constructed with a
descending ‘-1’ thread from E to B, but in its variations the free movement of
octave transpositions and altered pitches disguise this effect. The row’s first
appearance is in b.80 during the Trumpet’s solo, where it was retrofitted in
order to foreshadow the music to follow in an attempt to unify the contrasting
characters of the two passages.
The use of the row becomes more apparent in the closing passage as the music's texture abruptly shifts to one dominated by brisk semiquaver lines in the violins and trumpet. The use of the row and its variations in bb.85-90 are shown in Fig. 37, with any altered notes or mistakes – it’s not clear to me which is which – marked with asterisks. For clarity, and to avoid the confusion that may be caused by the octave transpositions, the directionality of the intervallic movement has been analysed with the same contour as the original line (with any rotations analysed as having taken up the contour from the relevant point in the original row).
Fig. 37: Locations of generated permutations of the initial row in bb.85-90.

The generated rows are used in various ways in this section. ‘Row 1’ appears in both the Violin I part (beginning on the last quaver of b.85) and in the Trumpet part (b.89). The expanded version of the line (with mistake included) appears three times in the Violin II part: in b.86, b.90, and transposed down a tritone immediately after its second appearance. The second rotation appears in the Violin I part, on the last quaver of b.87. This line was at some point
'contracted' (the opposite process to expansion), which provided the basis for the heavily adjusted opening phrases found in b.85 of the violins. For whatever reason, I didn’t use the first rotation and decided not to move beyond the first expansion.

As is clear by now the means by which the lines come about is of relatively little importance, but their being there allows me to compose with the lines rather than have to come up with lots of material from scratch. That being said, all the lines sound – to me – related to one another in their overall intervallic profiles and contours as a result of their process rather than by ‘ersatz’ similarity.

Sadly, Flickering Shards did not progress in the competition, though I find it to be one of the more successful works in this portfolio. In the context of my work so far, it represents several breakthroughs, especially in the areas of intervallic construction in melodic writing and in the exploration of more adventurous ensemble textures.

**Recording notes:**

The pizzicato strings in Flickering Shards’s ‘walking bass’ section (bb.63-73) are a little loose. Also, with proper rehearsal, I’d expect the music from this passage to the work’s close to be a few BPM faster.
I’d decided, on a whim, to write a short, light-hearted ‘showpiece’ for solo violin – something for an encore. Tired of coming up with harmonic ideas, I felt the need to enforce a pre-existing harmonic structure on the piece. In this case, a jazz standard popular in the gypsy jazz tradition, *Coquette*\(^{66}\) (1928), was chosen. I’d been playing with a local gypsy group called ‘Swing Gitane’ and so was familiar with the progression and knew of some interesting things that could be done with it. Also, the stylised nature of the piece would also help it to stand out within the context of a concert.

I thought it’d be a fun idea to take some standard gypsy vocabulary and ‘Grappelli-isms’, and to try to work with the material in a way that adopted some of my own harmonic and melodic sensibilities: with the pressure taken away from having to write the work’s harmonic skeleton, I could focus on being inventive within the harmonic template. The vocabulary used in the piece is not transcribed in the conventional sense, but drew on an internalised understanding of the genre, having studied it to the point of improvising with it.

The goal for *Lashes* was not to present an authentic homage to Stephane Grappelli or Django Reinhardt, but to create a piece that would be a stylistic hat-tip to the genre and also work well within a programme of classical works.

The piece begins by faithfully following the chord sequence with flowing, chord-tone-heavy lines. **Fig. 48** (shown overleaf) shows the melodic

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\(^{66}\) Originally composed by Johnny Green and Carmen Lombardo.
construction of the first eight bars with the chord-tone functions labeled, above.

One might query the use of chord tone ‘6’ on the downbeat on several occasions, but this is a stylistic feature of the genre (unsurprising, given the overwhelmingly frequent use of major and minor sixth chords), especially when approached chromatically.

**Fig. 38**: First 8 bars of *Lashes* showing chord-tone use in relation to harmonic template of *Coquette*.

Following the entire 32 bar form, the simple harmonic structure should be more secure in the listeners’ memory, and as such there’s a little more space for harmonic manipulation. The most remote harmonic territory broached is the second chorus, chorus begins at b.41 (the first bar of the second A in the AABA
form). Here, intervallic sequences are employed, but are calculated and managed so that the listener doesn't lose the perception of the underlying harmony. Each of the first five bars in this passage begins with an E (a usable chord tone for each of the underlying chords) and then descends using a sequence of tones, semitones and descending 4ths (or its inversion, the ascending 5th). At E9, in b.42, the sequence is altered in order for the sequence to retain its harmonic context and then freely runs its course until E needs to again be reached at b.45. At this point, because the sequence is the same as in b.41, the sequence is broken up to avoid repetition (a ‘-5’ is skipped) and begins an octave lower. As can be seen in Fig. 39, the opening of each harmonic change is managed in order to communicate the harmony via arpeggio or use of chord tones.

![Diagram of intervallic/harmonic construction of bb.41-47.]

**Fig. 39:** Intervallic/harmonic construction of bb.41-47.

Gradually, the piece's relationship with the underlying meter and form becomes more and more abstract. The harmonic structure is preserved, however, albeit delivered via a pointillistic deployment of extended techniques; the key of
D major is helpful here, as the open strings can be employed in several areas of the progression, such as the use of a harmonic glissando on the A string as a Dominant 7th arpeggio in b.56 (as can be seen in Fig. 40).

Fig. 40: bb.56-70 of Lashes showing pointillistic extended technique while maintaining harmonic template.

After the second chorus, the sense of flow is suddenly arrested by a key change to E♭ and a briefly halting meter as the piece enters a kind of ‘cadenza’ phase at b.65. It’s in this cadenza that the styles of contemporary classical writing and gypsy language are most opposed. The suspension of meter around this point allows the performer to have some fun with the inner dialogue and contrasting styles within the piece. The passage in question is shown in Fig. 41.
Fig. 41: Excerpt from ‘cadenza’ passage of *Lashes*.

The final piece of intervallic technique is found directly after the four-note arpeggios towards the end of the cadenza (at dynamic mark ‘**ff sempre furioso**’).
as the work reaches its highest (non-harmonic) pitch. It descends using a
repeated intervallic profile of ‘-6,+2,-5’ which happens to result in a hexatonic
construction. Starting on ‘D’, the process outlines a V7 chord in E♭ (B♭7) with
‘half-whole’ diminished modality. This process is outlined in \textbf{Fig. 42}.

\begin{center}
\includegraphics[width=\textwidth]{intervallic_process.png}
\end{center}

\textbf{Fig. 42:} Intervallic process found at \textit{ff sempre furioso} dynamic mark.

\textit{Lashes} represents a slight shift in my compositional process in terms of its
use of large-scale harmonic templates. It can also be seen as the point at which I
began to think seriously about the effects of working with style and genre in a
more developmental way; whereas before I’d used ‘style’ as a means to create
narrative contrast, in \textit{Lashes} I’d begun within the style and developed the
narrative by exploring its limits and outer edges, both harmonically and
texturally.
Stanzas from Yerma

The then interim head of composition at the University of Surrey, Dr. Tom Armstrong, had arranged a concert that would feature his challenging song-cycle *Aerial Dynamics* (1996). Dr. Armstrong and the performers had agreed that a new piece by a Surrey student should feature in the concert. Despite having never written for a soprano soloist before, I gladly took up the opportunity.

My initial impulse was to seek out a text of suitable length from which I could develop the musical content, though I had had a vague sense of the kind of piece I wanted to write:

1. The piece was to have a direct text-led narrative – the text should be clearly heard.
2. The fact that the soprano is a female, though obvious, should not be a trivial aspect of the work. The part is to engage, in some way, with notions of femininity – the part should *belong* to a particular female character.
3. The relationship between the piano and voice should aim to avoid conventional solo/accompaniment forms, with emphasis placed on orchestrational invention in the piano part.

Finding a text that would serve these criteria presented a significant first hurdle. I have an admittedly patchy knowledge of public-domain (out of copyright) literature, and it was only by chance that I’d heard the very end of a BBC Radio 3 production of Federico García Lorca’s 1934 play, *Yerma*, and
thought that it may well provide a suitable text. I had read the play before and could recall that it contained several ‘song-ready’ monologues. After deciding upon the portion of text I was going to work with, I felt it necessary to do some further research on the play in order to understand it further with the hope of working with a richer pool of ideas. Moreover, the sensitive themes of the play necessitated a respectful and considered approach.

‘Yerma’, when translated from Spanish into English means ‘barren’, and this serves as the central metaphor of the play; due to the overwhelming societal pressures in early twentieth century rural Spain, Yerma’s frustration and shame at her own inability to conceive eventually leads her to murderous hysteria. Rather than being a misogynistic melodrama (as a too-brief synopsis may suggest), Lorca’s play is a critique of traditional Spanish society and its damaging gender roles, as Correa explains in his article, *Honor, Blood, and Poetry in ‘Yerma’*:

“[...] the tragedy *Yerma* is essentially Spanish. The very theme of maternity is especially so. The Spanish woman possesses what we might call an exclusivist or exaggerated idea of maternity. The cradle song is her obsession from childhood on. [...] The structure of Spanish society, with all the powerful force of tradition, has imposed upon its women a duty, a mission; before all else she is to be a mother” [Correa, 1962, p98].

With this understanding, we see that both inward and outward confirmation of her womanhood, and by extension her very purpose in society, is cruelly denied to Yerma. Such disenfranchisement – which, in the play also takes

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67 It is not confirmed, medically, in the play that she is infertile.
on a divine, fatalistic quality – eventually leads to her deteriorating mental state, which capitulates in Yerma murdering her husband, Victor.

My goal here, of course, was not analogous to Lorca’s; criticising this bygone Spanish society’s treatment of women was not something I was equipped to deal with. Neither did I directly consider incorporating musical language associated with Spanish music. My relationship with the source material reflects Jonathan Harvey’s assertion that “many composers have recognized that the nominal source of a piece’s inspiration is of less importance than the echoes it evokes for the musician” [Harvey, 1999, p.40]. I was, however, interested in the ways in which Yerma’s inner world could be expressed in order to create a dramatic and emotionally engaging work.

I’d decided to use the following monologue from Act II (the original Spanish shown on the right hand side):

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68 Had I been writing a lengthier work I might well have approached the task differently.
69 The spaces between stanzas are my own
Ay, what a field of stones!
Ay what a door closed to beauty,
to ask for a son, and to suffer,
while the breeze offers flowers of the
slumbering moon!

These two springs of warm milk
I have, in the courts of my flesh
are twin beats of a horse's hooves,
to shake the branch of my anguish.

Ay, blind breasts under my dress!
Ay, doves without sight or whiteness!
Ay, what grief of the captive blood
goes nailing wasp-stings into my neck!

But you must come, my love, my child,
because water gives salt, and earth fruit,
and our wombs hold tender children
as the clouds are filled with sweet rain.

This excerpt stood out most, not so much for its evocative and
metaphorical style, but more for the stage direction that immediately precedes
the excerpt above, ‘dreamily’, which provided a useful topic from which to
proceed. Similarly, the poetry informed my initial feelings concerning how the
work might be analogously structured; though originally without delineated
stanzas, there’s clearly a 4x4-line structure suggested through its contrasting
subjects and imagery.

With the text, topic and structure of the piece decided upon to some
degree, I now had enough by way of impetus to begin developing musical
material.

Having sent a first draft to the performers, it became apparent that the
work was not suitable for programming: the performers were concerned that the
piece was too long (approaching ~8 minutes) and that this piece would use up
too much of the singer’s stamina during the programme, as well as pose too
much of a strain on rehearsal time. Given the virtuosity and stamina required for
the rest of the programme, it simply wasn’t feasible to perform and prepare
*Stanzas from Yerma* in its first form, as Catherine expresses in our email
correspondence:

“[...] we were expecting a song of maximum five minutes. We feel that
your piece as it is is more of a scena and in range/tessitura of more
operatic scope than would fit in the programme as we have balanced
it. Normally, if I were to sing a scene like this, it would be the only
thing on programme, or the central piece of a programme. However,
our programme leads towards Tom Armstrong’s challenging song
cycle, *Aerial Dynamics*, and it would be a shame to burn ourselves out
before we get to that, as it is the whole reason we are doing the
recital” [Email from Catherine May].

The work was to be made shorter and easier, or it wouldn’t be performed.
I, of course, acquiesced to these circumstances and scrapped the music of the
second stanza altogether, leaving the work as a three-panelled triptych. The
material in the second stanza was the most riskily intricate material in the work,
and evidently – given the work’s improvement as a whole through its absence –
its least effective passage. As well as making this cut, I also reduced the severity
of the tessitura in the soprano part and mollified various aspects of its
‘accompaniment’, in the piano.

The limitations enforced by the concert’s programming and the feedback
from the performers had contributed in a much-improved piece that relied far
more on the development of fewer ideas, thus supplanting the work with greater
conceptual cohesion.
In the pre-composition stage, the first material that I developed stemmed from the idea of intervallic ‘enclosures’. This, in itself, clearly has all kinds of connotations and connections with the story: bearing children; the inner self and the external self; and of being imprisoned within the hostile confines of rigid social dogma. I’d improvised with these ideas in mind as a set of loose parameters and settled on the material shown in Fig. 43. This idea, while conceived initially as a single line, was soon interpreted as two trichords, the latter ‘inside’ the former, as shown in Fig. 44.

![Fig. 43](image)

**Fig. 43:** core pitch material of *Stanzas from Yerma*

![Fig. 44](image)

**Fig. 44:** intervallic construction of core thematic material in *Stanzas from Yerma*.

My initial response to the material was to apply the same kinds of expansion techniques that I’d become accustomed to using in order to generate
usable permutations. The notion of expansion within the context of my work had no initial intended metaphorical meaning, though such a metaphor would later inform some decisions made during the compositional process.

The chosen version of the expansion technique involved beginning generations of each set a semitone lower than the final pitch of the previous set, which led to expansion on an additional structural level (the intervallic distance between the opening note of successive sets, as shown in **Fig. 45**).

![Fig. 45: Intervallec expansion technique as applied to the main theme](image)

The number of generations were limited to four, initially, as the fifth generation would include an interval of an octave between the third and fourth pitches in the set – this, I felt, would dampen the sense of contour of the within the phrase.

Upon improvising with this material at the piano, the next idea to emerge was in terms of the line's harmonisation. For this, I decided to use another intervallic process, which is shown in **Fig. 46**. While I thought of the two processes as independent conceptual layers, I managed the left-hand part so that the resultant vertical harmonies would conform to my aesthetic preferences (the
outcome of this process is shown in Fig. 47), and from this material came opening motif.

![Intervallic process in the left-hand layer.](image)

**Fig. 46:** Intervallic process in the left-hand layer.

![Cumulative expansion through combination of two the processes, their management into vertical harmonies (shown bracketed).](image)

**Fig. 47:** Cumulative expansion through combination of two the processes, their management into vertical harmonies (shown bracketed).

The ideas, shown above, materialise in various ways throughout the piece. The opening music (shown in Fig. 48), for example, contains two-bar phrase structures constructed using the opening four generations of the combined processes. The phrasing of each was decided upon through the consideration of the tension/stability inherent in the harmonic progressions. I did not seek to
preserve the same sense of expansion at the surface level, and whether the listener experiences the use of the expanding sequence is questionable.

Continuing with the idea of being ‘enclosed’, the four phrases are punctuated with abrupt, unrelated material from above and below as shown boxed in **Fig. 48**.

From b.9, the music is extrapolated on freely, drawing heavily on the pianism of the opening phrases, but having abandoned the need for intervallic processes.

**Fig. 48**: Opening bars from *Stanzas from Yerma* (pitch materials unrelated to the set are boxed)
To further foreground the set material, the vocal entry is comprised of the first set, but down a semitone. Using the pitches of the original upper-layer process verbatim resulted in difficult-to-sing contours and a lack of sympathy between pitch and text. Instead, the soprano’s part in the opening stanza makes reference to the set through the frequent use of the ‘+2,+leap,-x’ contour, all instances of which are shown boxed in Fig. 49. The soprano returns to the original set of pitches (derived from the initial two trichords) to signal the next section at the ‘to the slumbering moon’ lyric.

Fig. 49: Instances of ‘+2, +leap, -x’ configurations in soprano part.
The second stanza begins with a fragment of the original process – but transposed down a tone – in its first bar in the piano part. The rhythm is informed by the nature of the contour from the original material, with its wide intervals providing natural accents, imbuing a 2+2+2 phrase structure in the right hand. The placement of vertical harmonies in the left hand (also derived from the initial process but with an omission of the E/B dyad that a strict rendering of the process would place on the 6th beat) underpins the phrase with a more conventional (3+3) 6/8 metre. This figure, as can be seen in Fig. 50, is not allowed to progress due to frequent interruptions from non-process-based material, which sends the motif back to the start. These impasses, combined with the chromatic and repetitive nature of the phrases are all used to contribute to a sense of Yerma’s frustration.

Fig. 50: bb.31-36 from Stanzas from Yerma.
The accompaniment arrives back to its original pitch set at b.61, but the interjections persist. The entire process is only 'fully' revealed as Yerma's frustration reaches its pinnacle with the lyric ‘...nailing wasp stings into my neck!’. Due to the passage being presented in a lower register, and remembering the limit on the number of generations, I'd moved a few pitches around (marked with asterisks in Fig. 51); some intervals in the right hand past such points do maintain ‘authentic’ intervals, but the contour is altered to maintain an overall downward motion and a semblance of clarity as the tessitura plummets.

![Fig. 51: modified intervalllic processes in bb.73-78 of Stanzas from Yerma.](image)

The soprano part from the second stanza is markedly different from the writing that precedes it; whereas ascending tones dominated the earlier phrases,
they are now avoided all together, and replaced by frequent ‘lamenting’ descending semitones (as shown boxed in Fig. 52). Sudden leaping intervals and indeterminately pitched materials are also used to suggest a manic and unstable mental state. The opening material from the soprano part is also hinted upon in b.57, but with a contracted form (with an ascending semitone rather than a tone).

![Sheet Music] (Fig. 52: bb.44-73 showing use of minor 2\textsuperscript{nd} intervals.)

The piece ends with a kind of ‘clearing of the air’ and timelessness as Yerma finally addresses the idealised baby with ‘but you must come my love, my
child’. These words had to be emphasised and, as such, this passage is very slow and uses a sparse, high-tessitura accompaniment, marking a dramatic contrast with the close of the hectic middle stanza.

The soprano part, here, is in a very high register, and while this may affect the audibility of the lyrics in most cases, the chosen phrasing allows plenty of time for words to form.

The intervallic profile of the soprano’s melody now eschews semitonal movement altogether, and, while beginning with the ascending tone that characterises the majority of the piece, is largely made up of leaping dyads.

The piano’s material during the final stanza initially consists of bar-long dyads above the vocal line, and uses only white notes. Between the third and
second stanzas the pianist is asked to silently depress a low cluster chord in conjunction with the depression of the sostenuto pedal in order to set up sympathetic resonances to be exploited later in the passage.

The music turns slightly sour at the mention of ‘wombs’ at b.89 (“and our wombs hold tender children, as the clouds hold sweet rain”) wherein the first accidentals appear in the accompaniment. The accompaniment also becomes ‘staccatissimo’ at this point, which brings the sympathetic resonances into action, creating a kind of pan-harmonic haze to accentuate the word ‘clouds’. This coincides with the return of the opening two right-hand chords at b.90.

The character of this music presented me with a challenge when ending the piece; musical time had become extremely difficult to judge, as resonance and reverberation are contingent on the acoustic environment as well as the piano itself. Moreover, it’s possible that the pianist may be unable to silently depress an adequate cluster for the passage to achieve its full effectiveness. As such, the exact nature of the ending is left to the Pianist’s discretion: they may wish to luxuriate in the resonance, or, if less successful, fade away. The piano’s pitches here are the same as the opening three pitches from the original motif.

*Stanzas from Yerma* represents a concerted effort on my part to limit the number of ideas and processes that make up a work. The intervallic profile established in the work’s opening offered something that could be manipulated to various metaphorical and musical ends. Prolonged reliance on this material allowed me to work towards greater structural unity in spite of the radically contrasting musical surfaces. I am grateful to the performers for coercing the
incorporation of these limitations: ultimately, the imposed restrictions resulted in a much more successful piece.

I felt that the restricting of musical episodes to single ideas had given me insights into different ways of interacting with narrative and the challenge of composition itself. Moreover, the limitations placed on certain aspects of the writing allowed me to be more creative with others, bringing to mind the words of Igor Stravinsky on this subject:

“My freedom will be so much the greater and more meaningful the more narrowly I limit my field of action and the more I surround myself with obstacles. Whatever diminishes constraint diminishes strength. The more constraints one imposes, the more one frees one’s self of the chains that shackle the spirit” [Stravinsky, 1942, p.65].

**Recording Notes:**

The piano playing in the second stanza contains a few mistakes, and as such the ‘precise’ nature of the music is compromised as well as the dynamic build towards the climax at b.91. I am, however, convinced that this passage could work well with sufficient preparation time – I completely understand that these mistakes were due to the time restrictions placed upon the performers, who, in the main, do an exceptionally good job. There is one lyrical slip in the second stanza: ‘Without sight or witness’ should be ‘without sight or whiteness’.
Having wanted to write an orchestral piece for some time, the opportunity eventually arose in the form of an orchestral concert that would feature student compositions. At this time, my aesthetic values had been undergoing something of a shift with regard to two key areas: aspects of repetition had become more important; and the notion of harmonic pace had taken up a privileged position in my compositional thinking. This was also informed by the increased use of repetition in Thomas Adès's later works. On the issue of repetition, the composer states: “Often people aren’t aware that music is in motion in front of them all the time, that with each note it’s either close or further away, it’s not in the same place that it was before. It can’t be. If you play one note twice, it’s going to have different implications, because you will have been altered by the first one” [Adès, 2012, p.25]. The idea of repetition would be explored further in my work *Mirror Dances*.

The first 30 seconds of music from *FanFiction* began life as a part of an unfinished work for solo guitar. The piece begins with an ascending arpeggio, constructed from a pair of triads, a semitone apart (B♭ and A, as shown in Fig. 53). With its ‘-1’ movement between triads, this arpeggio is directly informed by my analysis of the opening of *Sursum* from Thomas Adès’s *Traced Overhead* (1996). Following the opening arpeggio, the music continues along triadic lines,

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70 [https://www.youtube.com/watch?v=5fTyUYAElls](https://www.youtube.com/watch?v=5fTyUYAElls) The opening 14 bars of FanFiction can be heard from the 58 seconds into the linked video.

71 See pp. 75-78
moving quickly through open spaced voicings and inversions in bb.6-13. This passage is inspired by a confluence of The Mahavishnu Orchestra's *Dance of the Maya* (1971), Pat Metheny’s *Unquity Road* (1976) (shown in Fig. 54) and Scott Henderson’s *Tore Down House* (1997).

**Fig. 53:** Reduction of opening bars’ harmonic content from *FanFiction*.

**Fig. 54:** Excerpt from Pat Metheny’s *Unquity Road* (1976), the partial inspiration for *FanFiction*’s bb.6-13.

When orchestrating bb.6-13, the wide leaps in the arpeggios presented something of a challenge when attempting to maintain a full and active texture. Eventually, I was led to permitting some overlapping between the mid-register cello parts, comfortable that the sense of line would be preserved by the differences in texture, and supported elsewhere in the orchestration (a reduction...
of the strings in this section is shown in Fig. 55). This created a more heaving and tumultuous texture that owes much to the opening movement of Thomas Adès's *In Seven Days* (2008) which uses the same unorthodox effect in the low strings of its opening movement.

![Fig. 55: Reduction of strings and harmonic progression from bb.6-13 of Fan Fiction.](image)
A short phrase is used to launch the work into its next phase, as the global register dramatically rises, in b.14. These short interruptions to the flow of ideas are an important part of the narrative structure of *FanFiction*: as well as being a recurring feature that help maintain a sense of continuity, they're also useful in bringing about swift narrative changes between disparate musical ideas (the first of these ‘interruptions’ is shown, to the right, in Fig. 56). The unfolding of ideas is quite brisk up to this point, and there is a drive throughout the piece to maintain a sense of fanfare, and forward movement.

Following b.14, the texture drastically changes, with legato melodic writing and light accompaniment. A high F pedal sounds off at different times in the percussion, piano, piccolo, and flute. When added to the string texture and the melodic writing in the oboes and clarinets, this pedal helps to engender a sense of foreground, background and middle-distance in the orchestration, differentiating

*Fig. 56*: ‘interruption’ passage.
it, spatially, from the music that’d come before it. The texture and rhythm of this part of the piece is, admittedly, a blatant allusion to the orchestral writing of John Adams\textsuperscript{72}.

After only two bars of this lighter texture, the interjecting material returns with reduced orchestration in b.16. The music then returns to the ‘Adams’ texture, but with an elongated version of the theboe melody (which is first heard in bb.14-15) in the Vcl. and Bsn. (in bb.17-19).

![Fig. 57: original oboe melody (left) and its occurrence and elongation in Vlc+Bsn](right).

Following another interruption at b.23, the ‘Adams’ texture again returns at b.25, but is this time harmonically anchored with the introduction of the G in the basses. The arpeggio, previously in the clarinet, is transferred to the piano part, with an E♭ replacing the E♮. This imbues the passage with a G Mixolydian ♭6 modality, and later becomes F Lydian Dominant when the basses descend by a tone (not a seismic shift as these modes are diatonic to one another). The alteration in harmony and range of tessitura signals a narrative change, preparing for a move away from this texture as a recurring idea.

\textsuperscript{72} Namely, John Adams’s \textit{Chairman Dances} (1994), \textit{A Short Ride in a Fast Machine} (2004) and, to a slightly lesser extent, \textit{Harmonielehre} (1985)
The irregular interruptions, changing durations and slight modifications to the returning ‘Adams’ textures contribute to a sense of narrative instability and, I hope, sets up a series of anticipations within the listener: are we going to return to this idea again? are we finally moving on? How long will the piece stay with this texture? etc.

The interjection in bb.29-32 is longer than its previous iterations, and finishes with a recapitulation of FanFiction’s opening arpeggio, thus signaling a significant point of transition. The passage that follows it in b.33 continues along ‘Adamsesque’ lines, with its overlapping arpeggios and post-minimal layers, though with novel melodic/harmonic material. Here, the principle melody is in the low strings, though a secondary melodic idea is also introduced in the bassoons, which is expanded on later passages (shown in Fig. 58).

![Fig. 58: Bassoon ostinato in b.33.](image)

The music of bar b.37 briefly returns to the arpeggiated material first heard at b.6. This is brought to an end by another interruption passage that leads onto a return of the music from bb.33-36, though this time with several competing melodic lines. The melodic writing here has two distinct influences: the String writing owes much to the neoclassical writing of Igor Stravinsky; and
the writing in the Clarinet invites parallels with Frank Zappa’s modal clarinet writing in, for example, *Dog Breath Variations* (1988).

With a few adjustments to the Bassoon ostinato from b.46 the tonality transitions to C Lydian (as shown in **Fig. 59**). At this point, the orchestration becomes more lush and decorative, which is then contrasted in b.48 as the tonality shifts to D♭ Lydian Dominant and the orchestral texture becomes much more staccato and rhythmically angular (as shown in **Fig. 60**).

![Fig. 59: Bassoon ostinato in C Lydian](image)

![Fig. 60: Bassoon ostinato in D♭ Lydian Dominant and rhythmically altered](image)

After another measure of ‘interruption’ material, b.52 sees a sustained ‘Stravinskian’ texture of layered, folk-like melodies and rhythms until the texture builds to a multitonal\(^{73}\) and polyrhythmic climax from b.68. Here, the Bass Drum

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\(^{73}\) There are various melodic strands going on that have their own intervallic/harmonic make up, but there’s often not enough information to imbue them with anything unambiguously modal. The idea was more generally to have different melodic strands going on simultaneously and experimenting
and piano’s ‘solo’ that’s written in its own triple-time meter draws on moments in Stravinsky’s The Rite of Spring (1913), most obviously, the Procession of Oldest and Wisest One section. This passage marks a shift in the work from overt ‘block form’ structuring (another hat-tip to Stravinsky\(^{74}\) to the use of more sustained ideas.

An abrupt drop in dynamic occurs in b.77. After a brief pause to allow reverberations to clear, FanFiction again changes direction, transitioning to minimal orchestration and ambiguous modal/chordal harmonic fields. From this point on I felt the need to ramp up the harmonic pace of the piece and to keep a sustained sense of harmonic movement throughout its climactic final third. Though the harmonic delineations are not always explicitly communicated, the sequential harmonic fields are often distant (i.e. not sharing many notes from field to field) in order to engender a sense of the shifting harmonies but with minimal pitch information. The gradual and uneven descent in the clarinets and violins help to connect the disparate fields and provide a conceptual through-line in the passage.

\[^{74}\text{In ‘The Stravinsky Legacy’, Jonathan Cross marks out several of the composer’s works as being ‘Block Form’ in construction [Cross, 1998].}\]
Another abrupt shift occurs in b.101. Here, the woodwinds dominate with simple, layered motifs that pass through various harmonies in the manner of the music heard near the beginning of the work, in b.6. When the strings begin to enter the texture from b.105 the material of the opening passages is more explicitly referenced. This time, however, the harmonic centre lies a semitone lower than before (by this point, a knowingly ‘Adèsian’ compositional habit).

The post-minimal woodwind writing here owes much to the fifth movement of Adès’s *In Seven Days*, wherein the independent motion of individual woodwind instruments contribute to a complex, lattice-like texture. In b.111 the Woodwinds relent, allowing the strings and piano to dominate with more extensive roving material that encompasses more minor tonalities (as can...
be seen in Fig. 62). A gradual crescendo of sustained (and carefully selected) ‘common-tone’ pitches in the brasses contributes to the emotional climax of the piece, before eventually dying away as the harmony reaches relative stability.

The final ‘interruption’ passage ends with a variation of *FanFiction’s* opening arpeggio in b.123 (a semitone lower than before and with some elongation). The use of *rallentando* and the further deceleration caused by the change to crotchet triplets in the arpeggio ramps up the tension. This is soon relieved by a dramatic thinning of orchestral texture, a drop in dynamic and a
kind of ‘Mahlerian’ appoggiatura (a deliberate allusion to a common aspect of Mahler’s climactic writing). The reduction of the passage in question is shown, in comparison to an excerpt from Mahler’s 2nd Symphony (1888-94) in Figs. 63a-b.

Fig. 63a: Reduction of bb.123-124 from FanFiction.

Fig. 73b: bb.696-714 from Mahler’s 2nd Symphony
From b.124, and for the first time in *FanFiction*, the harmonic pace and sense of pulse is suspended. Throughout this passage, the writing is more abstract and, though not overtly similar, is something I think of being related to Oliver Knussen’s *Flourish With Fireworks* (1988) (one of the reference scores I was using when writing this piece), particularly as the activity begins to pick up at b.133.

Having tried several different endings, I finally decided on what was essentially an allusion to film music, contrasting, rhetorically, with the more abstract and ‘serious’ music that it follows on from.

The title for the piece came about as the work began to take shape. Obviously, this is an explicit reference to the literary category of the same name, which consists of fan-created stories written about pre-existing characters. Writers in the genre are also free to combine fictional worlds, such as bringing Harry Potter into the Star Wars universe, and so on. As well as having an obvious tie-in with the work’s many allusions and homages, the title also refers to its occasional ‘fanfare’ character.

Local intervallic processes have largely been ignored in *FanFiction*, with only a few moments of ‘-1’ transitions that derive from my research into Adèsian harmony. However, through the use of motivic repetition and carefully constructed sequences of harmonic fields, the work is imbued with harmonic consistency. These features also aid in bringing about a sense of changeable harmonic pace, a theme that continues into the writing of *Mirror Dances*. 
Conclusions

While the level to which intervallic techniques have been used in individual pieces varies, the project as a whole shows a clear narrative arc with regard to their use. The investigations into – and creation of – intervallic processes is most prevalent in H.O.C, Flickering Shards, and Stanzas From Yerma, which all have a distinctive aesthetic quality due to their use. The final two works, on the other hand, FanFiction and Mirror Dances are likely the most successful due to a more selective adoption of said techniques. This selectivity is informed by having studied the qualities and resultant musical characters of such processes and knowing how and when they might be effectively employed, even if used sparingly. Most importantly, this selectivity allows me to see the roles of local processes within the context of a larger narrative.

I would also add that any adjustments or enforced limits to material arrived at by process are as revealing of a personal aesthetic as other more innate aspects of my compositional vocabulary. Moreover, while the integration of intervallic processes into my compositional language has been multifarious, cohesion has only been achieved through the heavy reliance on an understanding of chord scale theory when considering their contextualisation and realisation.

My analytical work on Thomas Adès has made demonstrable contribution to knowledge, particularly in regard to the harmonically informed management of strands (the discovery of the underlying harmonic cycle behind the
construction of Sursum). As well as this, the ways in which I’ve absorbed Adèsian vocabulary in my own work is evident, throughout, both in terms of individual processes and in the ways multiple processes are managed (especially in Stanzas From Yerma) to create harmonically cohesive forms.
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