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Acoustic Composition 3

A Quartet of Daydreams (2005/09) (Revised 2010/17)
Single Movement for String Quartet

This single movement string quartet was initially composed between 2005/06. The score was edited during 2009, further revised during 2010 and again during 2017 in preparation for performance of an abridged version.

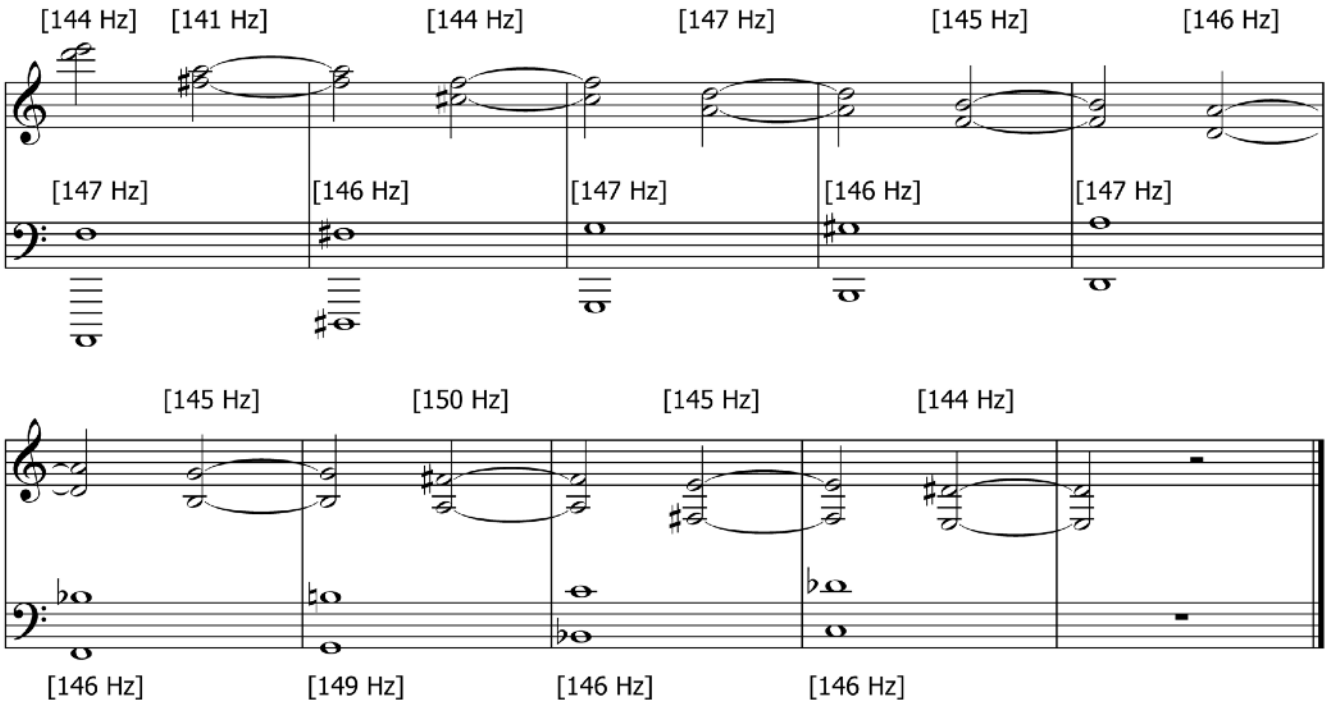
Whilst planning pitch organisation for an entirely different piece, process had fragmented into three specific strands and the pitch of D had become theoretically isolated within the meta-formula. The composer recognised an opportunity to further develop some of the principles of heterodyning harmonies explored within *Natural Resonance* for string quartet.

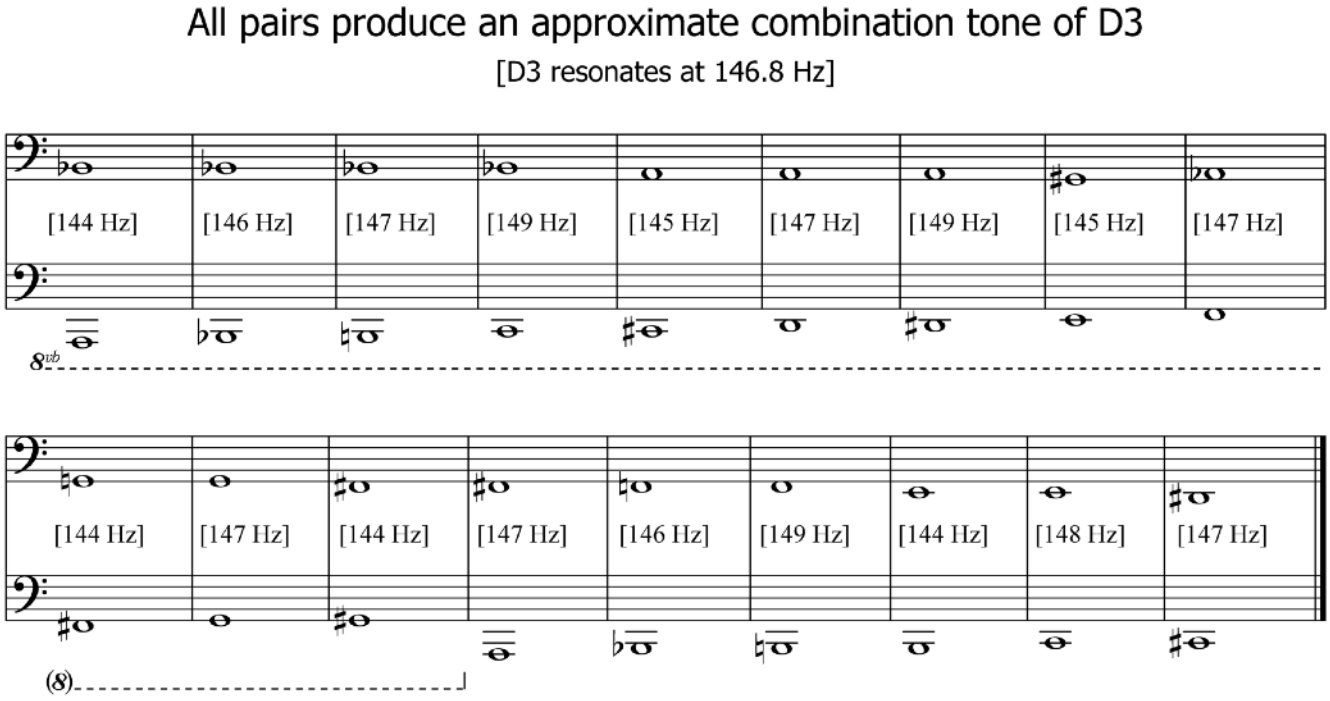
Early work with acoustic resonance theories highlighted their most idiomatic properties: beautiful consonances, slow-shifting intervals and passing dissonant tension, but since this initial research into the literal interpretation of acoustic resonance, it was recognised that heterodyning principles could also be applied theoretically to generate motivic material in direct relation to a specific note (frequency), regardless of whether that note actually resonates. One could also imply 'invisible' pitches:

All pairs produce an approximate difference tone of D3

Though never physically present in this example, D3 is a theoretical constant within both staves: an 'invisible' pitch

[D3 resonates at 146.8 Hz]





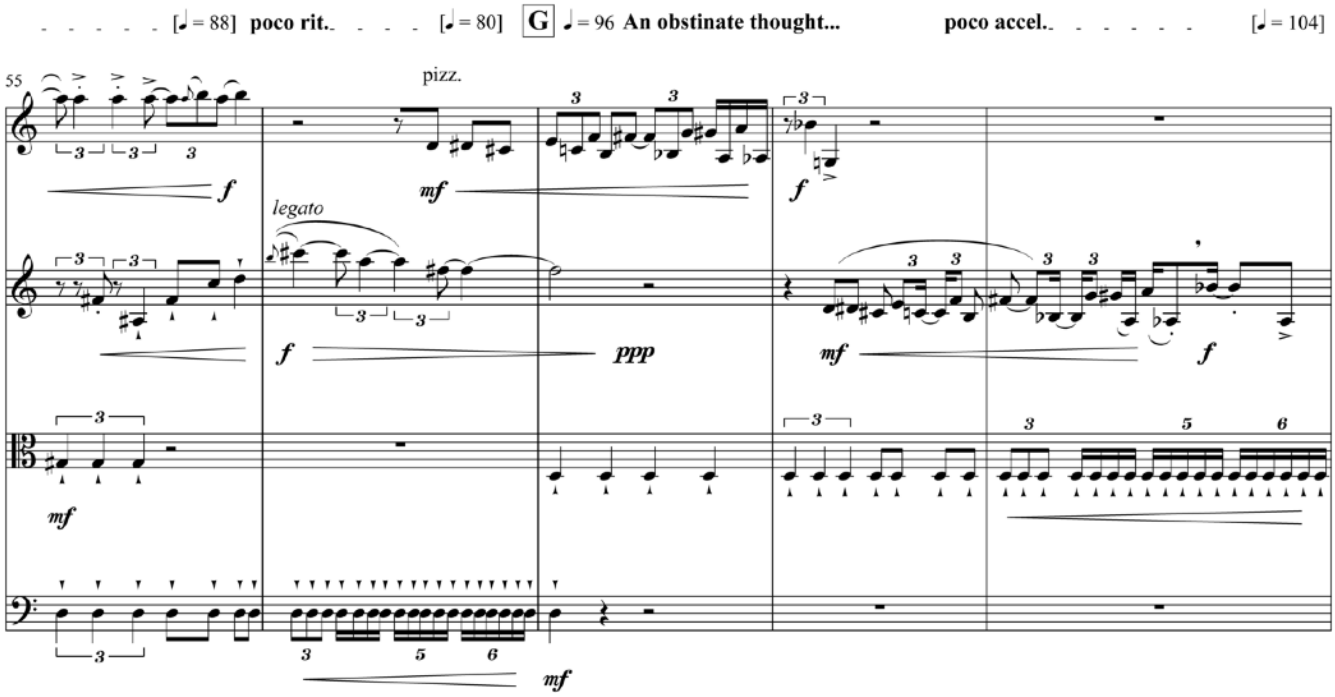
Having composed quite casually with the harmonic series during *Pictures on Your Wall* for trombone and percussion and allowed the idiomatic properties of the instrument to shape multiphonics within *Mictlan* for bass recorder and tape, in this piece, the composer establishes a far more considered approach to the phenomenon of acoustic resonance and heterodyning frequencies first studied within *Natural Resonance* for string quartet.

This *Quartet of Daydreams* explores more defined and reproducible compositional techniques using heterodyning principles of vertical harmony and linear melody/motif directly related to the pitch of D and its variable register within the range of the string instruments (see Pitch Organisation PDF).

Although a seemingly complex movement at first glance, the form for this quartet can be divided into a handful of compositional units or 'musical mobiles':

1. Chromatic Pitch-Wedge:

Some of the material in this score was generated through chromatic contrary motion. Though seen in the work of many composers, chromatic contrary motion and the combined timbres it can produce is used extensively and effectively in the score for Sir Harrison Birtwistle's *Silbury Air* (1977). A chromatic pitch-wedge around the pivot note of D seemed the ideal way to start and so Figure G in the score (bar 57) was the original opening statement. A chromatic pitch-wedge is played *pizzicato* and then *arco* by the two violins in turn. In a process akin to reverse engineering, the pitch-wedge was broken down and dissected, working backwards in search of its simplest (and quietest) component. To use an analogy in relation to external influences, the music retraced the origins of this initial thought. The following example can also be considered as a concise template for the whole movement.



The first 60 bars of the score leading up to figure G are reminiscent of the soundworld of Lutosławski's *String Quartet* (1964): subtle timbral exploration, rhythmic and motivic development, with primary roles for dynamic and gesture.

2. D Ostinato/Pedal-Tone – An obstinate thought:

Extra-musical stimuli and theoretical origins led to the conception of a persistent or obstinate thought from which all daydreams could evolve. This translated into a repeating D pedal-tone (primarily D3), which first appears at figure F in the score and underlines the pitch-wedge at figure G. Even when this ostinato finally stops, the pitch of D is regularly present in the parts, either literally or theoretically. This pitch is the primary source throughout the quartet; all material was generated from and around it.

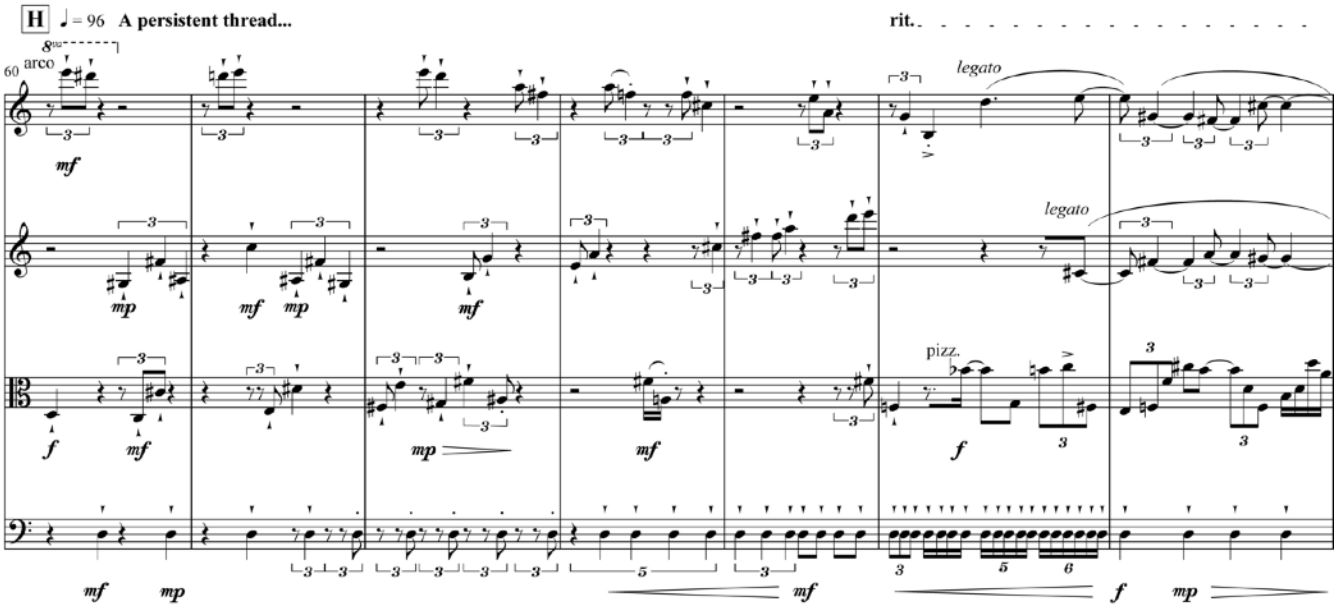
3. Motivic Gestures – Heterodyning Frequencies:

At figure H (bar 60), the pedal tone is joined by motivic gestures employing resonance theory relative to the pitch of D3: specifically difference tones:

The 1st violin plays E7 [2637Hz] and D♯7 [2489Hz]. The difference is 148Hz and the closest concert pitch, or approximate difference tone is D3 [146.8Hz].

The viola plays C3 [130.8Hz] and C♯4 [277.1Hz]. The difference is 146.3Hz and the approximate difference tone is also D3.

In the following bar (61), the 1st violin plays D6 [1174Hz] and E6 [1318Hz]. The difference is 144Hz and the approximate difference tone is again D3.



These examples are indicative of the way acoustic resonance theory is used to generate motivic material throughout this quartet and at times imply the theoretical (invisible) presence of D.

4. Motivic Gestures – Dance and Development:

Once established (see Score Preface for Form Chart), this motivic material was composed with instinctively, working with linear inversions, transpositions and elaborations, exploring how far the musical line could be stretched: how far the 'daydream' could be exaggerated. This propagated a rhythmic interplay of canonic repetition and contrapuntal imitation, which evolved into a dance-like character of textural interaction, with each part supporting and even completing the other's phrasing. This material passes through a mini-sonata form towards the end of the piece, with an extended development section.

5. Melodic Daydreams – Heterodyning Frequencies:

The fifth and final primary compositional unit of this score was also inspired by external narrative. The mind can easily be distracted from focussed thought, drifting through memories and daydreams. This translated into lyrical interludes, or passages of 'melodic daydreams', where the motivic gestures that dominate most of the writing unfold into relaxed fluidic melodic statements.

Mirror Form and Reprise:

From Figure II (bar 238) in the score, a return to material reminiscent of the opening 60 bars offers elements of mirror-form and reprise to frame the sonic journey, balance formal proportions and close this collection of daydreams.

A Brief Reflection: Quartet of Daydreams

Extra-musical inspiration was an important factor in this research. It stimulated ideas that translated directly into tangible and reproducible musical units (musical mobiles). The predetermined pitch material and practical research proved equally influential, as theory and philosophy combined symbiotically within the creative process. The writing within this quartet seems more analytically focussed than previous pieces from the composer, as one can clearly track the evolution of all material from a single seed: the primary pitch of D.

The available palette and potential variables produced from adherence to the fundamental philosophy of composing with 'ancient and natural resources' seemed to be expanding with each new score.

Contact:

For further information and resources contact the composer at: contact@ianpercy.me.uk