

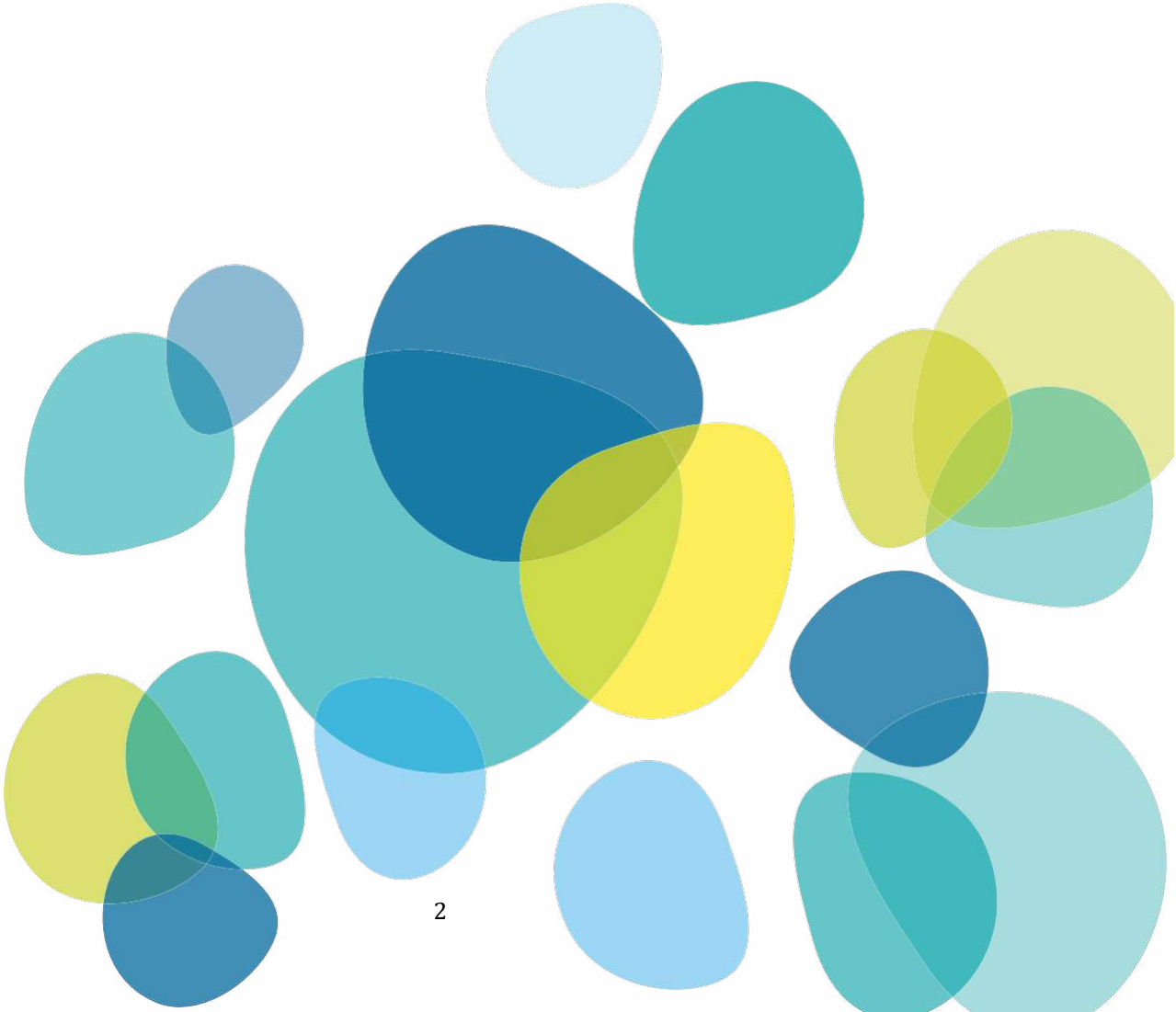
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KATY ABBOTT | COMPOSER

INTRODUCED SPECIES
Work Process Diary
+ Analysis

Dr KATY ABBOTT

2014



Intention

This process diary aims to document the compositional process for the work *Introduced Species*. It is not a chronological approach but rather thoughts taken from the odd diary entry written during the composition of the work; to give insight into the practical workings of the compositional process.

*This document is based upon a document prepared for the Melbourne Symphony Orchestra's **Up Close and Musical** Program 2014.*

This document takes the following form:

- A: Introduction to the work
- B: Analysis of the work
- C: Student Composition and analysis exercises

This work is a musical story based on a painting by Australian artist, Matthew Quick and was conceived with a specific program in mind. The structure adheres to the programmatic element of the artwork on several levels.

The work looks at musical issues around capturing intention and musical cohesion through compositions tools including instrumentation, idiomatic capabilities of each instrument, rhythm, dynamics, articulation, pitch development and orchestration.

A: Introduction to *Introduced Species: Symphony No 2*

Introduced Species is a commissioned work from The Melbourne Symphony Orchestra together with the [Albert H. Maggs Award](#), through University of Melbourne. After receiving this award in 2011, conversations began with the MSO in 2012 to use the Award for a new orchestral work aimed at VCE (upper high school) music students specifically addressing the music syllabi.

Having already written another work of similar nature (*The Peasant Prince*, 2009) for The Adelaide Symphony Orchestra's Education program, I was keen to tackle this type of work again.

Note: ABC Classics made a recording of *The Peasant Prince* (March 2020) with the Tasmanian Symphony Orchestra and the hero of the story Li Cunxin not only narrated the work on the recording but also did a version in Mandarin.

Over the last few years, I have become more interested in musical storytelling and upon reflection see this practice in my catalogue of works.

From 2009 – 2012 as a resident artist at [Abbotsford Convent](#), I met many wonderful writers, artists, and designers. One conversation in 2011 with visual artist Matthew Quick sparked the idea for *Introduced Species*, which is outlined further below.

The work is three continuous movements with duration of approximately 18 minutes:

- 1: Awakening (6')
- 2: Plummet (4')
- 3: Trash Vortex (8')

***Introduced Species* – the artwork, *Matthew Quick* – the artist**

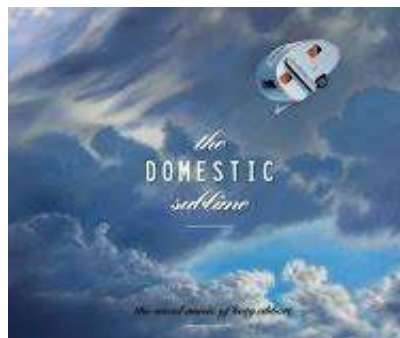
Matthew Quick is one of my favourite visual artists. His work fascinates me; not only because he is seriously clever with a paintbrush but also because of the political ideas and obtuse presentation style of these ideas. I find his paintings arresting in their own right even without any political or programmatic agenda. His CV lists many, *many* awards, which recognise his ability and originality. More about Matthew Quick can be found at matthewquick.com.au

I am fortunate to have Matthew's artwork on my four album covers.

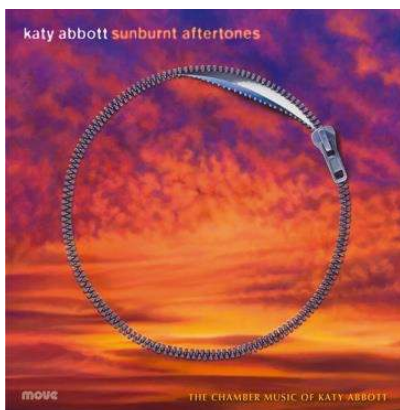
Example 1.



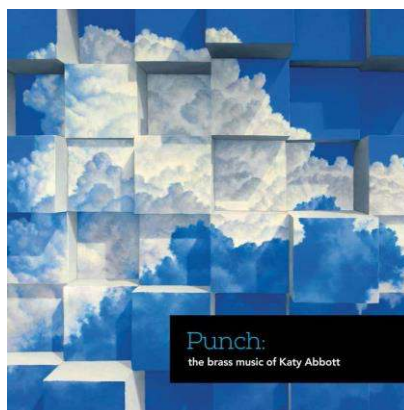
Pure Exuberance (2012)



Pure Escapism (2008)



Pure Honesty (2009)



Pure Exuberance (2012)

All these paintings are from Quick's *Pure Series*. You can read about Matthew Quick's [Pure series here](#).

I would often discuss the creative process with Matthew and other artists at the Abbotsford Convent and sometimes would just pop by Matthew's studio and watch his works develop.

His series *Introduced Species* is of particular interest in this setting.

Example 2. *Catch 22* (2011), from the *Introduced Species* series: Matthew Quick.



You can read the artist statement for *Catch 22* [here](#).

Example 3. *Intrepid Travellers* (2011), from the *Introduced Species* series: Matthew Quick.



Quick makes this statement about the work:

'Inspired by a true story: In January 1992, the cargo ship Ever Laurel was caught in a North Pacific storm, spilling overboard several 12m containers holding 28,800 duck bath toys.

The first beaching was in Alaska, some 1500km away. Over the years there were more along the US West Coast, Russia, and Hawaii. Tracked by scientists, the ducks' journey has shed insight into ocean currents and wind patterns, spawning computer simulated models, articles, and books. As a fable on the consequences of globalisation and the reality that is oceanic pollution, they have inspired artists and writers.

Against the vastness of the ocean, this childish plaything, man-made and indigenous to the bathtub, evokes the indomitable spirit of the first epic ocean voyages.

*And in a parody of Herman Melville's 1851 classic *Moby-Dick*, the out of scale human element adds whimsical curiosity to this quixotic 20-year odyssey'. From <http://www.matthewquick.com.au>*

The genesis of the programmatic idea

A discussion about the story behind *Intrepid Travellers* made me curious to follow up on a remark Matthew made about some of the ducks still circling within 'The Pacific Gyre' (as known in Australia) or 'The Trash Vortex' in the North Pacific Ocean; one of the ocean's 'garbage patches.' I was startled to understand that this circular ocean current is approximately 19 million square kilometres in passage and contains a huge amount of rubbish, in particular plastic. The photo below is an image of some of the rubbish that has washed up from the Pacific Gyre.

Example 4. An example of rubbish washed up from one of the world's Garbage Patches.



Image Credit: Jason Kam, via Flickr, Creative Commons Licence.

Below is a diagram of the world's five ocean garbage patches:

Example 5.



Of particular concern to me was the idea suggested by scientists that the plastics *are* actually breaking down in the water to a molecular level. This means the particles that make up the plastics are able to be inhaled by fish and other species as well as form a layer on the top of the sea described as *chemical soup* or *chemical sludge*. Since learning this I have become way more serious about inhibiting my use of plastic bags. This idea made up some of the programmatic and musical synthesis impetus for the *Trash Vortex* movement.

This idea of chemical sludge is illustrated in musical form in Movement III.

A photo (retrieved from Facebook) of these plastic bags reveals an almost 'characterised' image of the objects as jellyfish. Creepy and sinister...

Example 6.

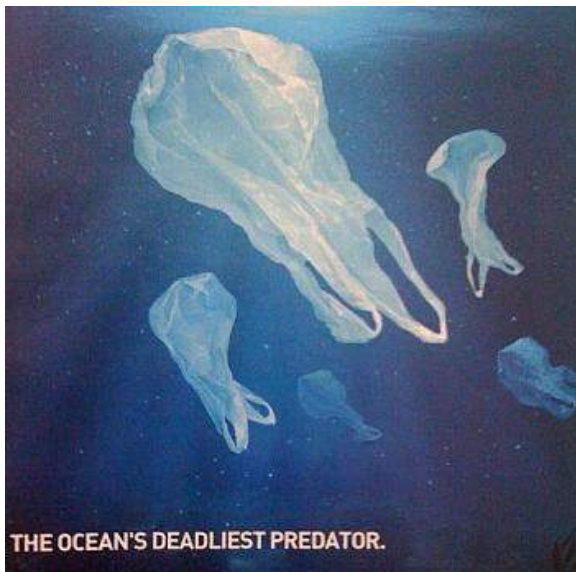


Image Credit: Unknown

Beached whales have been making news over recent years following autopsies that show much rubbish in their stomachs. The autopsy from the whale in the picture revealed it had swallowed 59 plastic items, which contributed to its death through intestinal blockage.

Example 7.



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With all this in mind, a story began to unfold in my mind. Writing a diary during the process certainly aided the layers of the story both programmatically and musically as I was able to reference the diary throughout.

Note: During an SSO VIVID Festival performance of *Introduced Species* –Dr Ruth Barcan gave a lecture: *Plastic Fantastic*.

B: ANALYSIS (framed within the compositional process)

The following pages pull-apart elements of the content of *Introduced Species* as well as documenting some of the compositional process.

i) Analysis: once upon a time...

The story behind Quick's *Intrepid Travellers* is fascinating on a number of levels, not the least, wondering what has become of the ducks circling the world's oceans -so small, so defenceless. I've heard they wash up on shore and can collect a handsome price on eBay. Apparently, they remain in good condition, having only lost their packaging and yellow colour.

My imagination went into hyper-drive and knowing that an orchestral piece was on the horizon, I began to dream about what might possibly become a new piece. What tickled my fancy, I realised, was the idea that the ducks were real-life characters. They were destined, in a *Toy Story* fashion, to live their lives in the confines of a bathtub in America; be loved, played with, cherished, and ultimately discarded, when in fact, they could be free to roam the earth on the high seas and experience life on the edge. Ridiculous, I know.

This is a diary entry note from very early on:

Movement I: I imagine the peaceful ducks, boxed, and packaged aboard the 'Ever Laurel' on their way to eternal bath-time bliss, lulled by the lapping waves against the boat. An awakening then occurs, gradually pulling the ducks out of sleep and into action. Their oversized bodies inhabited by oversized Disneyesque personalities. They are quickly heralded and begin formation to escape the ship. Movement I could end with the ducks launching themselves from the vessel by gathering and flinging themselves into the air, into freedom. What is the collective noun for a group of ducks flinging themselves from a ship?

Movement II: Spray from waves launching upwards, slow-motion ducks flying high, sunlight glistens on the spray and the somewhat wide-fixed stupid grins of the ducks and they begin their descent to the ocean, their new home.

Movement III: As the ducks land on the water, the listener is reminded that the ducks are not real, but rather bits of rubber, adding to the already dirgy murk of the garbage patch; the chemical sludge. The dark reality of the Pacific Gyre and our creation of it. But what about the 'out of sight, out of mind' nature of our psychology in interacting with the problem? An ocean groans.

ii) Analysis: Structure. Which comes first – the duck or the egg?

In this case, the story inherently informs the structure and both the title, and the story influences the instrumentation and musical material.

The structure for each movement is as follows:

Movement I (Awakening): Introduction – Lullaby – Awakening – The Escape

Movement II (Plummet): Suspension – slow motion (pixilation) – descending to the sea

Movement III (Trash Vortex): Surging dirge, reality, beautiful melodies intertwined with the trash vortex texture – repeat (not literal) – Albatross circling – ending.

Note: The ending was not written until the remainder of the symphony had been orchestrated (see Trouble Shooting). The ending had a number of iterations from fast to grungy to its current form.

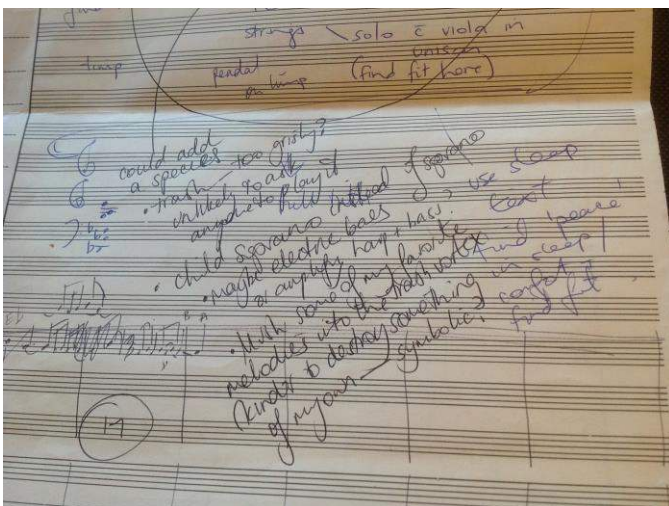
iii) Analysis: Introduced Species – Ducks, grenades, soy-sauce fish, and musical cross-fertilisation

Quick's *Introduced Species* series includes unusual species that have been introduced into a natural environment. Examples include soy-sauce fish-shaped capsules (*Catch 22*, 2011) and grenades hanging from cherry-blossom trees (*Low Hanging Fruit*, 2011).

In keeping with this concept, the musical work also has species added. The species introduced to the final score differ a little from my original ideas in part due to logistics and in part for musical reasons.

Interestingly, musical themes and elements from this work have also been taken out and cross-fertilised to other pieces I wrote in 2013, adding a more give-take relationship to the introductions.

Example 8. Scribblings from an early brain-storming session. Text in black indicates the possibilities.



The final list of introduced species are:

Name	Species
• soprano and baritone saxophone	musical instrument
• amplification and delay on double bass	technology and electricity
• recycled themes from other pieces of mine	music (see List of music below)
• plastic bags	rubbish^

^Although my initial idea for the work included the introduction of rubbish, I quickly eliminated it for practical reasons. I was stuck to how to incorporate the rubbish in without being cheesy. However, when I was composing the quiet finale of the work, I wondered if plastic bags may work. I will find out in rehearsal!

List of music taken from the work and cross-fertilised. Without trying to be too precious about it, I've tried to take the modern catch cry of 're-make, re-use, re-cycle' which, in Melbourne, Australia, is fast become the norm. See [The Secret Life of Things](#) as one example of the way Australians are using innovation in this area.

<u>Name of theme:</u>	<u>New work that includes that theme</u>
• Glisten theme	Glisten for solo piano (2013). 4 mins Recorded by Ian Holthm on Tall Poppies disc <i>Inspirations</i> (2013)
• Glisten theme trombone, and guitar (2013). Theme occurs in movement 3).	Midnight Songs (for flugel horn,

Musical melodies/gestures from some of my other works are intertwined into the *Trash Vortex* movement. In particular, a melody from *The Empty Quarter* (2008) is incorporated into the swirling rubbish gyre symbolising our ability to waste and throw away something beautiful into the muck or in the case of the vortex – the muck into something beautiful. Also, the interrupting loud chord cluster idea was inadvertently taken from my first symphony *Souls of Fire*. The chord cluster idea occurs twice in this symphony. Interestingly, in both cases here *and* the work from where it originates, it symbolises the human ability to forget a bad or negative feeling (such as grief) and then suddenly remember with crashing reality.

*List of music taken from other works and cross-fertilised into *Introduced Species*:

<u>Name of work</u>	<u>Appearance in Introduced Species</u>
• No Ordinary Traveller (vibe chord)	Movt. 1, bar 24+ (vibraphone) Movt. 3, bar 88+ (strings + hp)
• The Empty Quarter (cello melody in final section)	Movt. 3, bars 3-7 (upper strings) Movt. 3, bars 8-11 (hn & tbn) Movt. 3, bars 13 – 16 (within tutti)
• Aspects of Dreaming (SATB) bass line from 'I lift my head' quasi-improvisation section, mid-way	Movt. 3, bars 24 – 37 (brass) Movt. 3, bars 58 – 61 (WW & brass)
• Souls of Fire (interrupting large chord cluster idea from the second movement)	Movt. 1, bars 156 – 159 + Movt. 3, bars 43- 45

iv) Analysis – The Order of Things

I always begin with two plans: the first plan is a process plan – the steps as I see them to complete the work, as reflected in this document. The second plan is a structural plan for the piece (see below). I usually don't fully adhere to either of them, but it gives me a way forward.

Example 9.

<u>The plan</u>	<u>The reality</u>
1. Short Score (development of material, structuring of ideas in a linear fashion to outline the symphony to from beginning to end, rather like outlining an essay).	1. Research about the programmatic elements and brainstorming the ‘story.’
2. Orchestration (orchestration of the short score and subsequent building and laying of themes and textures)	2. Development of gestures
3. Editing, editing, editing	3. Short score development
	3. Orchestration as well as re-writing of the ending. This period of writing also includes the ‘layering’ and interweaving of material.
	4. Editing, editing, editing
	5. Rationalising

This plan may seem simple but implicit within this step-by-step plan is a lot of teeth gnashing, bewilderment, re-working, joy, conversations, waking-up-in-the-night with ideas and pondering and problem solving while swimming (where I tend to solve most of my orchestration problems and seem to think about structural ideas).

It is important to note each composer has their own system to deal with the score development. Some go straight to the orchestration template; others work in programs such as Logic and then transcribe the results. Some wake up in the morning and have it all mapped out (I wish that was me!). I have experimented with various processes and found the process in example 9 above works well for me. I like to define the larger structure and musical ideas in short score before committing to orchestration. Of course, during the composing of the short score, ideas for orchestration are always popping up. These are simply dealt with by writing a short note on the short score, such as in example 16, which shows the short score of the lullaby theme.

v) It's all very well to structure and develop a piece but how do you build-in intention?

Clarity of intention is very important. How does the audience (and the performer) know what is going on inside your head? In my mind there are three keyways to make musical intention known:

1. Musical gestures
2. Idiomatic writing
3. Words

1. Musical Gestures – the dating game

Although pitch is a very important element in the creation of music, beginning with the creation of a series of whole musical gestures was important for this piece. A musical 'gesture' can be described as a musical phrase comprising of some of the elements usually found in a score such as pitch, dynamics, phrasing, and articulation with some intuitive inclination towards instrumentation. These elements provide the 'character' for the notes. They are perfect little pieces in and of themselves and for me they are only 1 – 4 bars in duration.

In this work, 10 – 15 musical 'gestures' were composed (although in retrospect they were really just scribbles on the manuscript and not fit for public consumption!) before committing to any musical ideas. The gestures were unrelated to each other, and the process was designed to give me a feeling of freedom through simply 'noodling' and then notating any improvisations. They were conceived ad hoc and in different settings: playing the piano, during exercise, letting my mind wander in idle moments. I was experimenting with my methods of devising ideas. It was mostly successful.

Giving character or intention to the dots you place on the page really means notating exactly what you are composing. I often have students come into a lesson with dots on the page. However, when they play or sing their music to me, it is immediately obvious that the notated sketches contain only scant information. Often, dynamics, tempo, phrasing, articulation are sung or played but only pitch and rhythm are written down. Spending time listening to your own playing or singing of your own music is important and self-awareness is imperative in this process. Often, dynamic movement, articulation (ex. staccato/legato) and nuance (such as grace notes, glissandi etc) are already inherent in the music coming from the body. Spending time to be aware of these other elements can really aid notating intention.

Once I had a collection of gestures, I 'auditioned' them with the ever-reliable *gutfeel* as to check their suitability for the piece. Only some made the cut, although, in retrospect I am surprised as to how many eventually did get worked in and they were so handy when I was stuck for an idea! I will try this way of writing again.

2. Idiomatic writing and extended techniques

Writing well for the instrument for which you are composing. Does the line fit nicely under the fingers? Are the notes within the range of the instrument? Can the percussionist move from instrument to instrument with enough time to put down mallets and pick up the drum sticks? Is the musical line/gesture/idea/shape conceived well for the instrument in question? These are the questions that run through my mind constantly when composing and all relate to idiomatic writing.

When I first started writing music, I would write a list of idiomatic possibilities for the instrument for which I was writing – as many as I could think of plus a number I researched. This meant that I was consciously thinking about the possibilities for *that* instrument during the writing process. The list would sit by my desk and jog my memory. When composing, it can be difficult to keep all of the processes and things to consider at the front of one’s mind. I therefore have processes of composing I use that enable me to include all the elements I need to make a sophisticated and well-integrated work.

For example, if I am writing for a string instrument, a list of idiomatic possibilities might have the following (and more):

Example 10.

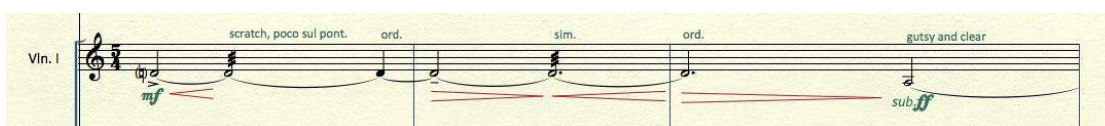
Bowing	Techniques	Texture	Other
slurred	harmonics (nat or artificial)	sul ponticello	agile
detache	double/triple+ stops	sul tasto	huge dynamic range
spiccato	non-vibrato	mute	ability to suddenly change dynamics
jete	glissandi (incl. slow gliss)	pizz/snap pizz	different ‘qualities’ on each string
col legno battuto	pitch bend	gritty/scratch	open strings
tremolo (un/measured)	grace notes	flautando	ability to quickly change character
repeated up or down bow	bow behind bridge	sotto voce	

Here is an example from *Introduced Species* comparing a phrase written idiomatically for the instrument and an example with the details removed. Note, example 11 really could be played by any instrument with a similar range but example 12 is particular to a string instrument:

Example 11 Movement 3, bars 1 – 3. Violin 1.



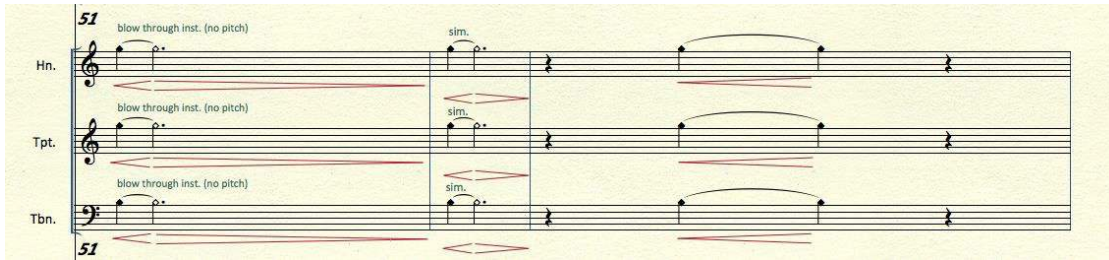
Example 12. Movement 3, bars 1 – 3. Violin 1.



I certainly do not advocate that scores be littered with markings for the sake of them, but rather careful thought is taken to write for the instrument in question using the qualities that make it a clarinet or vibraphone, etc.

There are no really unusual effects in *Introduced Species*, however there are many extended techniques utilised. I prefer to always contextualise the way extended technique occurs within a piece from simple ‘everyday’ techniques such as flutter-tongue by the flute to less common sounds as blowing air (un-pitched) through the woodwind and brass.

Example 13. Movement 2: bars 51 – 53. Brass.



I try to avoid using extended techniques for the sake of them. The idea of contextualising sounds (in this work) is to provide a more colourful way to tell the story; make each shape and texture deliberate and defined. In the example here, blowing sound through the instrument seems to anchor the high-pitched upper strings and the descending harp line (see page 50 of the score).

3. Words

Sometimes a simple word in English as notation can convey more than over-articulating a phrase with musical notation. Over the years, I have found it beneficial to include small words or phrases into the score. Sometimes, dots and lines are not enough and even if they are enough, a word can be simple and very clear. Below are some of the words from the score of *Introduced Species*.

Example 14	Using words to communicate	
Lullaby	sighing gliss	ethereal, distant
melancholy	gutsy and clear	with breathy tone
with anticipation	steady, bold	with clarity
like a 'Disney' magic spell	delicate	with warmth
with emerging hope	fragile	glassy

vi) Analysis: The themes and development

Below are the main melodic and textural themes. Each attempts to capture the intent of the story.

It's all very well to analyse a musical line to dissect pitch, rhythm, etc. but it should be noted that this is done in retrospect (for me at least). The themes were composed intuitively. To me, it is more interesting to say how the themes and gestures demonstrate their intent.

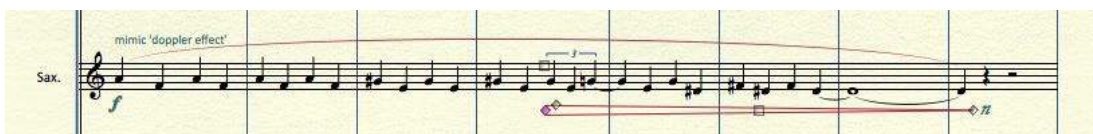
Example 15. The themes and where they are found.

Theme/Texture	I – Awakening	II – Plummet	III – Trash Vortex
Siren			
Lullaby			
Awakening			
Escape			
Glisten Theme			
Trash Vortex			
Plastic Bag			
Albatross Theme			

Below are the main themes both melodic and textural in chronological order:

Siren theme: Where’s Wally?

Example 16. Siren theme from Movement 1, bars 14 – 21.



The marking ‘mimic Doppler effect’ refers to the sound commonly heard by say, an ambulance where the sound source although remaining at the same pitch, appears to change due to its relative position to the listener. The pitch fades in dynamic as the sound moves further away but also descends in pitch.

Similarly, here, the dynamic markings begin at *forte* and end at *niente* (nothing) and the minor third pattern descends by semitones. I was considering using $\frac{1}{4}$ tones in this descending pattern for the soprano saxophone but decided on a less accurate and more symbolic approach.

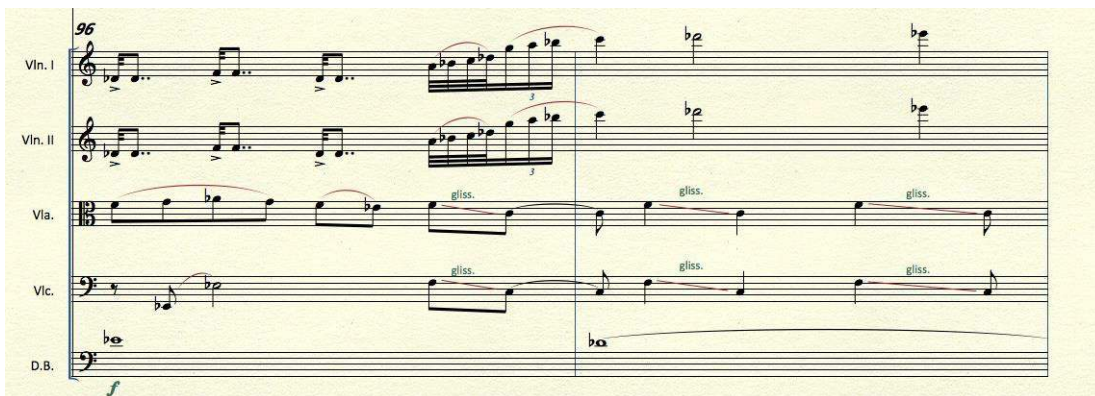
The siren theme most often occurs in the saxophone and muted trumpet parts but can be found throughout all movements of the symphony. Because I also came up with the idea of the siren early in the writing of the short score, I became aware of the pitch material (minor third) and the rhythmic material

(straight crotchets) as possibilities for layering and development and decided to deliberately incorporate it in. This meant that when modulating or consciously using intervals as compositional tools, I would choose a third. This became apparent in the modulating sections of movement 2. I also found the consistent crotchet feel of the siren useful as a tool to refer back to this theme.

During the orchestration process, with this theme in the front of mind, it was also possible to weave it into other sections of the work. This has a number of functions, the main being to help bind the work together in one coherent piece and to give a sense of 'all is not well' to the listener. The steady minor third or major third pattern is mostly used but sometimes there are variations such as intervals of a 4th. In example 17, the siren is in the lower strings.

It's a little like Where's Wally, hidden in-between the other musical material.

Example 17. Movement 1: bars 96-96. Strings. Siren theme in 4ths – viola and cello.



Note that the steady crotchets still exist yet, in bar 97 are on the off beat. The strings also play the interval with a glissando which blurs the siren somewhat. Most often in the writing process, I did not intentionally set out to incorporate the theme in. As I 'heard' the symphony, either in my head or through midi playback, the theme seemed to emerge from the other material.

Lullaby

This lilting melody is laid over a 5/8 and 6/8 base. These time signatures were used to avoid a 'square' feel to the theme as the setting is a lullaby on a ship. The seemingly random changes of internal rhythm within the 5 beats from 2 + 3 to 3 + 2 removes predictability from the shape. Example 18, below, is taken from the short score in its original version. However, after being orchestrated, the melody in this section developed a little more. Note the unkempt score: incorrect beaming, lack of dynamics and idiomatic gestures (articulation, phrasing). This is all okay in short score form. As discussed above, the short score is used to try and get as much information from the brain to the page without getting bogged down in too many details. As long as the details make it into the final document.

Example 18. Short score version of lullaby theme.

Notice the boxed 'reminder' markings in the short score.

Example 19. Movement 1, bars 46 – 55. Soprano saxophone part in full score. (Note, this example is in concert pitch, but the full score is transposed).

Bar 46 47 48 49 ↓ 50 51 52 53 ↓ 54 55

The short score version of the lullaby theme is quite similar to the final version (example 19). The significant changes are the change of pitch in bar 49 where the D becomes a Db and bar 53 where the A is made to an Ab. This adds a level of 'darkness' to the mood but also allows the D in bar 52 to sound brighter as a result.

The constant G bass provides a stable anchor for the ducks slumbering in their ship containers.

Awakening

Awakening is a very square theme as it is 4 beats to a bar using crotchets and the pitch seems to find its way around the sides of a rectangle and is repeated in bar 2.

Very consciously however, I used the meandering lullaby theme and simplified it to create the duck's awakening theme. The aim of this theme from a programmatic perspective is the ducks gain awareness as sentient beings and are called from slumber with this theme to gather themselves and escape from the ship.

Example 20. Movement 1, bars 91 – 97. Brass section (concert pitch).

Notice that the smallest value note in the theme (in the horn part) is as large as a crotchet. The trumpet part is used to double and hold important notes in the theme whilst the trombone has the cheesy bass line. The bass line is a simple descending scalic-line. All the accidentals from the lullaby theme are taken out (i.e., The D and A are restored) and the ‘feel’ is more grand. The strong beat 1 in each bar provides stability and the familiar bass line from many a pop song provides clarity and power. Compare the lines in examples 19 & 20.

Although this is the second iteration of this theme, it appears in the third movement too. The theme is developed in a few ways throughout the work (look at the full score to find more examples)

The Escape

Example 21. Movement 1, bars 138 – 144, oboe.

Shown in the oboe part, this unison theme is quirky and strong in sharp contrast to the lullaby. The staccato in the opening bars 138 – 139 gives a ‘tippy-toe’ feel. The descending legato line at bar 140 in contrast, gives a slippery feel. I imagined the ducks waking from their slumber and being a little awkward in the movements as they gained confidence in their surroundings. Taking a look at the gestural aspect of the theme, the first thing is the tempo. At crotchet = 140, it is fast moving material. Try playing the theme at a much slower tempo and it feels like it is underwater! The quick tempo allows the articulation to speak. The staccato, the slurring and the accents are pulled together and form the gesture. I sometimes think of gestures as an outfit ensemble. Hat, boots, jeans, jacket, scarf. Okay individually, but put the right objects together and voile, you have a good outfit. Mix the wrong ones and the outfit goes down as a fashion-fail.

The descending Eb, C and A start the slippery gestures (marked with red arrows) and are a diminished chord. Using the diminished chord in this way was not a conscious choice. It is only in retrospect that I have noticed this. Diminished chords can give a feeling of unsettledness and this unsettledness is almost a theme throughout the symphony in itself. Even the lullaby has a dark, unsettled side to it.

The gesture was composed quickly and organically whilst on a walk; thinking about the programmatic element. As an aside, I also remember feeling frustrated that day about things unrelated to the piece, and it is interesting for me to note and acknowledge that even though this was written at least 18 months ago, I remember the feeling associated with the composition. The psychology of music and the mind is a fascinating area!

When looking at the score, you will notice small differences when the theme is repeated. Customising musical shapes is a crucial part of composition and even the smallest tweak can sometimes make a difference to how the shape is aurally perceived.

The ducks escape the ship in an ascending chromatic line – much longer than the descending slippery gestures. The ducks launch from the ship, high into the air...

Glisten

The theme was derived as a resultant melody from the following phrase:

Example 22. Movement 2: bars 83 – 86. Harp. Accompaniment to the theme



Example 23. Movement 2: bars 83 – 86. Horn (in concert), Glisten theme

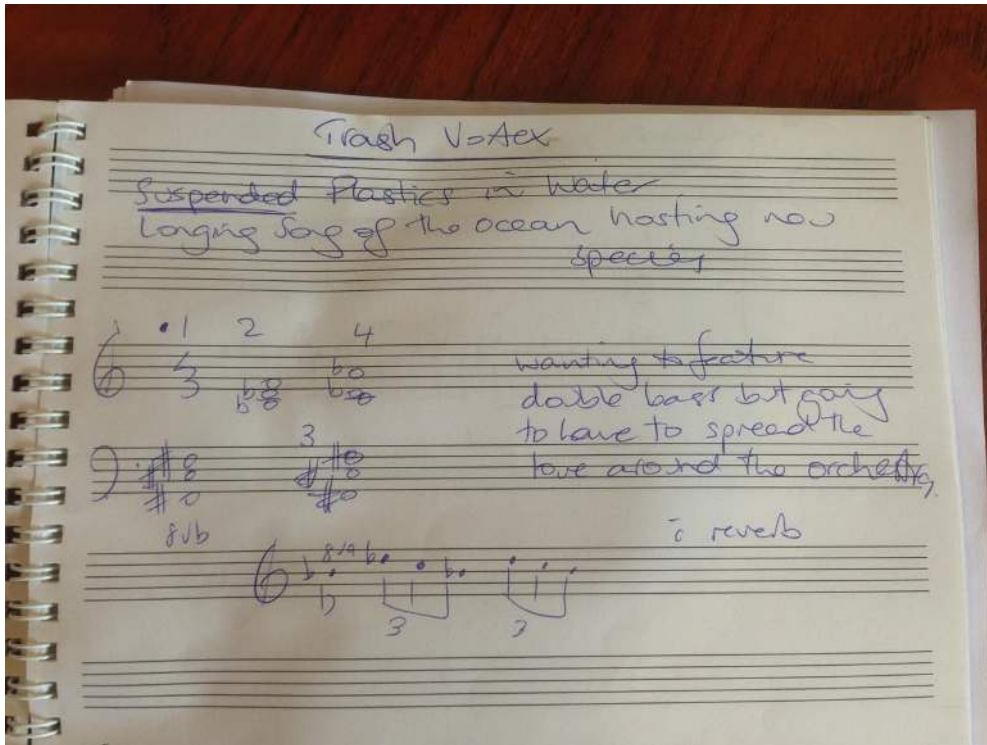


Compare the horn and harp parts. The horn line uses only some of the notes in the harp line. The *glisten* theme is therefore part of the accompaniment part, yet because of the rhythmic syncopation, accents, and slurring, it stands apart also.

This theme development comes together in a simple way. The running semi-quaver patterns are repeated and although contain the theme, act more as an accompaniment to my mind. The glisten theme is overlaid. The development came in the orchestration rather than the short score. Beginning with a sparse texture (in this case only a few instruments), the texture thickens and the registral range increases as the number of instruments playing also increases until the whole orchestra plays the theme or accompaniment. The only variations on this are some of the internal voicings such as percussion accentuating important rhythms and changing textures (triangle, cymbal, vibraphone), the inclusion of the siren theme interweaved into the thickened texture (at letter K until the end of the movement).

Trash Vortex

Example 24. Photo of initial scribble in thinking of the chemical soup



This theme does not have pitch material as its defining feature but rather the gestures are textural. The trash vortex is characterised by an extremely low in register, guttural texture. When heard, the pitch (normally D) is heard at the extreme end of the instrument. The texture changes as the instructions for the long note are given.

For example, on the first page of the third movement, the strings are instructed to change textures on their long-note D. See example 25. The double bass is playing a low D (the MSO double bass player, Andrew Moon, tunes his instrument down a tone from low E which makes this D possible). The double bass is a transposing instrument, so this D is heard an octave lower than written here. Often the trash vortex theme requires extremes. This means not necessarily within a comfortable tessitura. The words *scratch* and *poco sul ponticello* are written in bar 1 for all strings. A scratch sound is made by bowing very hard against the string. It produces a disturbing scratch sound. *Sul ponticello* means the instrument is not bowed in the ordinary position (between the bridge and the fingerboard) but rather, close to the bridge. Again, it's a particular timbre that is produced; sometimes described as metallic.

Example 25. Movement 3: bars 1 – 3. Harp and strings. Crotchet = 70.

The texture also oscillates between this horrible *scratch* texture to a more *ordinario* texture. The gesture is defined by low sustained pitch, gritty texture, and dynamic swells reminiscent of the ocean swell.

The textural element of this theme relies on the instruments being played at the bottom of their tessitura. You can see in the example below the bass clarinet and baritone saxophone are playing down in their lowest register. Therefore, the use of an uncomfortable range is used and a note at the front of the score specifically acknowledges the requirement for tenor, not bass trombone.

It's a little like choosing to use a female voice in a low register when it would be possible to use a higher male voice to achieve the same note. You will get the correct pitch either way, but the timbre and texture will be quite different.

For interest, the harp notation is called 'thunder,' and the harp player will play the lower strings with his/her palm of hand to produce a 'thunder' effect.

Example 26. Movement 3: bars 1 – 3. Bass clarinet and baritone saxophone. Surging, dirge crotchet = 70

The textural changes in example 24, also occur through articulation such as the oscillation of *ordinario* and *fluttersong* (flz) and dynamics change. The wide trill in the bass clarinet at bar 2 is simply a texture change. The pitch is almost irrelevant given the range.

Albatross Theme

As mentioned earlier, the final pages of the piece were the most difficult upon which to settle. Once decided however, I wondered why it had been so painful as the albatross idea seems logical and encompasses all I desired in the ending. Here is the theme firstly in violin and then in double bass. I was trying to capture the stillness and haunting beauty of distance that I once felt worked well in an earlier work, *The Empty Quarter* (2008).

Example 27. Movement 3, bars 87 – 98. Violin solo. Crotchet = 70.

Example 28. Movement 3, bars 99 – 111. Double Bass solo. Crotchet = 70.

In comparing the two iterations, it is clear the theme is not identical. The intent is very similar, but the notes and time are manoeuvred; the orchestral accompaniment for both solos is different in both pitch and texture. Have a look at the difference in the score and see how these affected the solo line. These lines were created by 'playing'/improvisation and spending time with the material. I sang the lines and lived with them for a while. Once an idea seemed to reoccur as I hummed it (over a period of days), I wrote it down.

The most striking implication within the double bass version of the theme is the 8va marking. The violin is in a more comfortable register. This requires the double bass to play high in its range. I could simply have given the phrase to the cello or even viola, but it is this particular timbre that is required at that point. When the double bass plays *sul tasto* on the top string, to me it is a very beautiful strained distant timbre. If played in a comfortable tessitura on the cello, it would have less haunting sound.

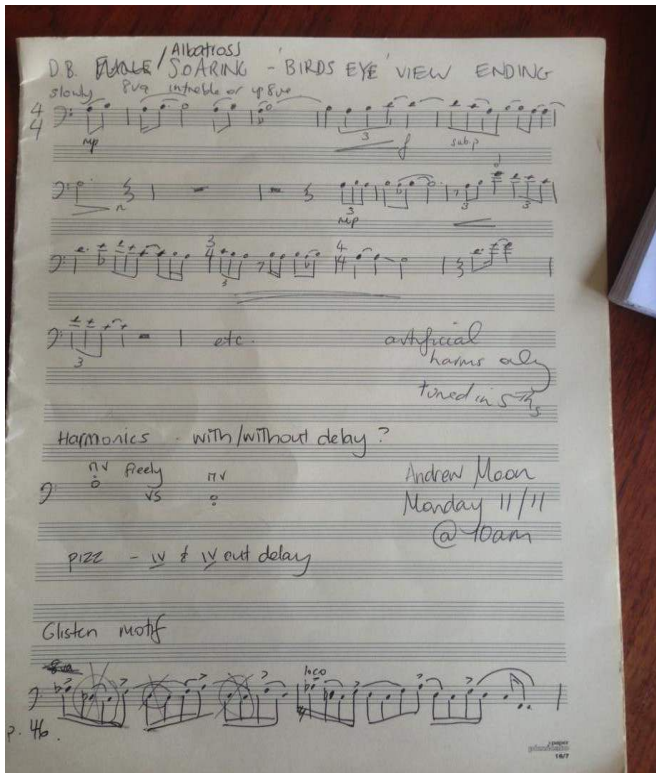
Notice also the 'freely' marking which then morphs in the 'strictly' marking. How will this change the phrase?

Up until the final two bars in the example, the double bass is acting as a soloist but at the crotchet = 36 marking, the texture becomes tutti once again.

Below is a photo of the initial sketches of the last idea for the ending. I am always surprised at the level of detail a composer knows before writing the pitch onto the page. I advise student composers to sit quietly and or sing or play their music; to become aware of the musical attributes they have given the pitches they notate. As mentioned earlier, there is always more detail inside the brain than on the page and should be notated to best communicate the composer's intention.

The sketch includes dynamics, phrasing, and some ideas for textural change such as 'with or without delay,' pizz. and ideas about harmonics. I can see also that I realised I needed to speak to Andrew Moon (principal double bass) about the octave placement and a meeting time is listed on the page as well!

Example 29.



viii) Analysis: Trouble Shooting

Decision Making

Decision-making is a large part of composition and according to my family I used to be the worst decision maker in the world. Choosing from a menu, whether to take the bus or train... Now I am a very good decision maker, and the composition process has helped me enormously to improve in this area. If you want to write music, you have to be able to choose from a number of options. Instrumentation? Duration? Intention? How to End? How to Begin? Orchestration – don't even get me started here; the options are endless. So, how does one begin to make decisions? It is not about the first idea you come across, nor is it about having endless options and having to choose the best.

Most often, a commission presents some already built-in boundaries. Usually they are duration, occasion, instrumentation, level of ability of performers and due date. Limitations and constraints are a composer's friend. I strongly believe (and I am not alone on this one) the more limitations one has around oneself, the more creative you have to be to dream up something good.

If the boundaries are not there, the first task is to build them. The real danger of having no constraints around the composition is composing a waffly, directionless piece.

The compositional process is in part a series of decisions and once I am past the basic nuts-and-bolts decisions mentioned above, here are some other questions that usually arise:

- Does this musical material capture engage me, and can I imagine it in context? Do I like it?
- Does the music capture my intent? What is my intent?
- Which instrument or group of instruments can best represent my intention? Which part of the range, tessitura, allows a balanced approach?

Rationalising and Reducing Parts

During the editing process it was important to rationalise some of the percussion parts and also the instruments that were required to play the plastic bags. As mentioned, the work is designed to be taken on tour and so I took out a few instruments and rationalised their parts.

I also needed to rationalise the vibraphone and glockenspiel parts. There were a few instances where I felt there was not quite enough time for the percussionist to change from vibes to glock. I decided to change the instrumentation to allow the player more time to think about interpretation of the musical line rather than be thinking about if he (in this case) was going to make the change in time.

Composing the Ending

The ending as mentioned seemed difficult to settle upon and so my solution was articulate to myself out aloud what I wanted. I realised I was torn between a large, loud tutti gesture and a quiet, simple ending. I wanted the first, but finally realised the second was best for the piece. After that, the ending was easy to write. I ended up playing the piano and singing an improvisation into Garage Band and then notating the recording. See example 29 (above).

Movement 3 Problems and Solutions

At one point I did get particularly stuck trying to compose the third movement. I really liked the material and the ideas. Also, because it was also a busy time in my life, I needed to put the piece down for a few months and work on other things; musical and personal. But in the back of my mind, I had an underlying uneasiness about how the *Trash Vortex* movement was developing. In the end it was an easy fix! The difficulty for me had been that I was unable to define what I was trying to achieve. One day I sat down with the orchestral draft in front of me and asked myself a series of questions. Although I felt very silly talking to myself out aloud alone in the studio, I nevertheless was able to answer my own questions that I had previously been unable to do with months of worry and thinking. Once I knew what the problem was, the solution was easy enough to devise

The problem was that I didn't feel the third movement was 'trash vortex-y' enough. The initial pages were pithy and the section at L was too pretty. Pretty did not belong in the North Pacific Garbage Patch! It needed to feel 'unsettling' and ugly.

The section at letter L on the next page in example 30 shows the solution. Instead of changing anything, a layer was added – an ‘opaque chemical-sludge-like’ chord over the existing material. This chord is really just a cluster but written (or voiced) very widely. High and soft or low and soft on the instruments. Therefore, the chord mostly surrounds the other music.

The effectiveness of this gesture on the resultant mood of the piece was startling and I am looking forward to hearing this in rehearsal. The widely voiced chord cluster then became a recurring idea in the third movement, and I suppose also relates to the loud tutti chord cluster already in existence in both Movement 1 and 3. I suspect some adjustments will need to account for balance and stability, but my lesson learnt (again) is that it is important to know my own intention, or I cannot write something meaningful.

Useful links/resources related to this document:

More information about Katy Abbott's *Introduced Species* including an animation: <https://katyabbott.com/portfolio-items/featured-introduced-species/>

[Albert H Maggs Award](http://australianmusiccentre.com.au/award/albert-h-maggs-composition-award): australianmusiccentre.com.au/award/albert-h-maggs-composition-award

[Katy Abbott website](http://katyabbott.com): katyabbott.com

[Matthew Quick website](http://matthewquick.com.au): matthewquick.com.au

Pacific Garbage Patch: there are many short YouTube clips available showing video footage and giving various facts (not always consistent). Some are more emotive than others in presentation yet a come from a wide range of sources (high-school students to scientists). Search 'Pacific Garbage Patch'

[The Secret Life of Things](http://www.secretlifeofthings.com) is a Melbourne-born website including short YouTube clips with interviews from Melbourne eco designers such as jewellers, fashion designers, furniture makers as well as including a great animation showing the secret life of a mobile phone *Life Pscycle* (2010). The site also includes downloads for educators and students. www.secretlifeofthings.com

Music mentioned in this document:

Aspects of Dreaming (2006) for SATB choir. [YouTube performance](#) by Voyces Inc. Score available from Australian Music Centre click [here](#).

The Empty Quarter (2008) for percussion duo and cello: score available from AMC at this [page](#) and the recording through AMC and [Move Records](#).

Glisten (2013) for solo piano: score available from Australian Music Centre at this [page](#) and the recording is available on *Inspirations* disc through [Tall Poppies here](#) and for digital download on the [iTunes store](#) @ <https://itunes.apple.com/au/album/audio-cd/id805450279>

Midnight Songs (2013). Score and recording available through Australian Music Centre later in 2014.

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*Note: This article contains images that were collected during the writing of *Introduced Species*. I have made all attempts to acknowledge and credit the creator of the image where possible. Some photographs do not have a credit as I was unable to find it. Any suggestions of potential leads would be appreciated.*

C: Student analysis and composition projects

Based on the work *Introduced Species: Symphony No. 2 (2014)*

Score Reading:

1. Look through the score of *Introduced Species* for evidence of the 'siren' theme. In some parts, the label (siren) is written above the part when it is obvious, but it is also hidden and interwoven through the texture of the orchestra. It may appear as repeated intervals of thirds or fourths or maybe the pitch changes, but the rhythmic element of the theme (the steady crotchet/quarter note) is evident. How many times can you find evidence of the siren theme? There is no exact answer.
2. Flick through the score and choose a musical phrase or gesture for one of the instruments. Analyse and write down three to five things you notice about the phrase/gesture. You might include details about dynamics, register, specific idiomatic articulations for that instrument or you may notice how the line is shaped.
3. Repeat this exercise above, but this time, look at the whole orchestra for the bars you have chosen. Include some notes on how the instruments are integrated (or not!).

Composition Projects:

1. **Aural Awareness.** Think of a melody you know well. Play it through in your head (not aloud). What instrument is playing the line? Now, imagine the tune played on piccolo, then on harp, then double bass (opt. with delay), then muted trumpet. How does your experience of the music change? Are some timbres more effective/likeable? Does register affect your ability to hear it internally? Do the dynamics and articulation change according to the instrument to which you are 'listening'?

2. **Musical Self-Awareness.**

Compose a short line, gesture, phrase, or melody. Notate it.

Play or sing the music. Maybe record it on a program such as Garage Band.

Spend time analysing what you have sung or played by becoming aware of the following:

- Dynamics and dynamic change (for example, are you incorporating a crescendo on a long note for example).
- Articulation (for example, are there staccato or short or long endings to notes) Slurs? Bowings?
- Notice Register. Have you notated your music in the correct octave? Is this where you want it?
- Tempo. Have you notated the tempo? Does it change?

Write this line idiomatically for 2 or 3 'contrasting' instruments. For example, write the music for voice, vibraphone, and bassoon.

Listen through to your arrangements in your head. Analyse your feelings about each one. I bet you prefer one to another. Why? Did anything surprise you?

3. Individual Composition

a) Choose a solo instrument for which to write (preferably not piano).

Write a list of 10 – 15 things that an instrument can do. (Refer to example 10 in the analysis).

Write down a series of contrasting ‘gestures.’ These can be unrelated pieces of 1 – 4 bars in duration. Include tempo, dynamic, phrasing and articulation markings, as necessary. (Suggestion: give yourself a time limit to compose each gesture (I’d suggest 10 – 30 minutes depending upon experience. Time pressure can help sometimes!)

Analyse your intention for the music. How can the items on your list help you to exaggerate your intention further? What is the essence of each piece, and do you feel that you have captured it? If possible, have someone play through your small pieces, even if very slowly.

b) Choose your favourite gesture from above and develop it further by using two of the following ideas (or your own) to double the length of the little piece.

- Modulation/Sequence
- Change register as appropriate
- Dynamic change either sudden or gradual
- Add a sharp, natural, or flat to one or two notes. Play it through. Do you want to keep this?
- Substitute notes for rests
- Add a piano part and insert a bi-tonal quality to the variation/development
- Keep the pitch but change the rhythm.
- Other suggestions may come from your teacher or crop up in class discussion

c) Write a diary entry about your process. What worked? What didn’t work? Is there any hidden thought that flitted through your brain whilst working on this piece that might lend itself to the next musical idea?

4. Group Composition – capturing intention.

Use imagery as for a launching point for a composition using traditional and introduced ‘instruments’:

1) Find a set of related images, photographs, or paintings. For example, google ‘Antarctica’ or ‘black Saturday images’ (if appropriate) or use pictures from an old calendar.

2) Split the class into 3 or 4 groups and each group should choose one image.

3) Devise a group composition using existing and found instruments and introduce your own species*. All the while trying to capture the ‘essence’ of the image in your structure. Try to avoid literal sounds or sound FX. (The essence is usually discovered easily when each person in the group suggests 1 or 2 words that encapsulates meaning from the image).

*Find and introduce your own 'instruments.' Perhaps you could take the idea of 'natural' materials such as crunchy leaves, sticks, gumnuts for example, or rubbish from your recycling bin at home. It could be as simple as adding an unexpected element to an already existing instrument (such as prepared piano or violin) or just creating music with a new timbre. The species may even relate to the subject of the images chosen.

4) Perform and possibly record each composition as part of a suite or set of compositions (along the lines of Mussorgsky's *Pictures At An Exhibition*; all different but related musical vignettes).

What were the successful musical elements within each composition? Was it the structure, the chosen instruments, the musical material, use of space/silence that helped capture the essence of the image? Discuss. Write a diary entry.

(Variations on this composition project could include finding a musical link to thread/weave in and out of the various compositions. The link might be as simple as the siren theme, or the use of silence or one common instrument).

Prepared for the Melbourne Symphony Orchestra Up Close and Music Program 2014.

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