PASSENGER | FOR STRING QUARTET

by

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ABSTRACT

Passenger is a multi-version musical composition of approximately 40 minutes in length scored for string quartet. The formal design of the piece involves reconfiguring its large-scale form each time it is performed. During any given performance the piece is an uninterrupted and continuous flow of music, but its distinct seven-segment structure allows a reordering of the music’s segments in a chosen sequence where each segment is played once, and only once, starting with a fixed opening segment. Once the order of the segments is selected each segment connects to the next through a series of overlapping transitions that present an unbroken listening experience. The total number of possible variations for Passenger is 720. Comparatively, each possible rendering of the piece offers a wide degree of change in order to demonstrate how impermanent large-scale form operates as a compositional technique. Its changing structure was created with the intention of promoting a variety of readings of the composition’s musical content by altering the chronological placement of large sections of music. Subsequent listening experiences will explore alternative pathways with which to cover familiar musical material and contribute to the music’s overall interpretation. The goal of this project is to rethink the role of form, and to use it as an agent of change capable of generating new and expressive methods of music making and listening.
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Introduction | ‘UN’-FIXING FORM

An impermanent form

The general concept of musical form may be described as the interpretation of a particular structure that contains musical material. This basic notion of form is mostly based on a pedagogical model of identifying the boundaries and limits of musical unity as they are outlined by cadences, periods, transitions, codas, repeats, and other types of formal devices. Identifying the different sections of music within a composition can then reveal a type of linear ‘view’ of the whole composition as it is occurs through time.¹ This apprehension of form is contingent on perceiving the presentation of music as it is permanently captured through a single path; i.e., the music has to follow a fixed order in which all formal devices reveal themselves sequentially so as to ascertain the permanent and underlying structure of a work. In a sense, whatever the form is in a given musical composition, its interpretation is largely based on the unchanging presentation of its musical content because all of the musical material is contained within an unchanging structure. Its reiteration through multiple listening experiences can serve to reinforce the form’s primary characteristics and unalterable qualities from one performance of the work to the next. But what if somehow form could be dislodged from this invariable state?

¹ Composer and musicologist Martin Boykan has written extensively on the use of metaphor when talking about music, and in particular about the pitfalls of what he calls the ‘visual fallacy’. I use the term ‘view’ as it applies to a graphical representation of musical form (e.g., ABA, ABCA‘B’) and as an abstraction that takes place outside of musical or performance time.
Could form be an active agent in the creation of a musical work instead of a passive musical medium? How would a composer create a work in which form is ‘unfixed’? With my string quartet, Passenger, I present my attempt to address these questions and apply what I call “impermanent large-scale form” to the overall organization of the music. I believe this piece shows that designing and composing music without a permanent structure is not only feasible but can also promote a variety of readings of musical content that is fixed in musical notation and yet exists freely in a formally fluid state.

The purpose in creating this work is not to undermine the use of fixed form in music composition. Instead, the project intends to find a meaningful application of impermanent large-scale form and reflect on how this device can contribute to the composition each time its form changes. The experience of hearing two or more different configurations of Passenger will result in experiences of varying degrees. The possible interpretations of the music may be more profound from one version to the next, and perhaps the effectiveness of one version over another may be contingent on how the organization of the music informs the content. Each version of the piece is intended to draw out the ‘pre’-ontological form outside of the context of its realization. Because the piece exists in multiple versions, all of its varying performances can highlight the music’s underlying commonalities from one version to another, and serve to gauge the varying effects of an impermanent formal structure. The ‘real’ composition, or perhaps its soul and core, will be made up of the entire collection of possible orderings and the traceable components present in each of its renderings. As the listener’s exposure to the different variations develops, the effects of the unfixed form will become more and more apparent.

**An organic form**

Identifying large-scale form has been a basic long-time tenet of music education. The multiple interpretations and definitions that have been attributed to musical form are the focus of numerous treaties, essays, and many other types of academic discourse. My composition training within a Western art musical context reinforced a number of these ideas, and explained form as “an organizing principle [...] at the heart of any
compositional enterprise,” regardless of how elaborate or basic this may be.\(^2\) I first took this definition to mean that form or musical structure simply described the type of organizational scheme or fixed structure that was in place to support the intelligibility of music. In pedagogical practice this is certainly true, as most often identifying form aids in parsing large and small sections of music regardless of the melodic, rhythmic, or harmonic characteristics of the content. Composing within these forms also allows a student to develop a better understanding of form and also focuses on providing content to fill out the prescribed sections of music, as in a theme and variations, binary, or ternary form. Approaching form in this way also helps to categorize numerous types of music into specific genres and styles such as da capo aria, sonata, rondo, arch form, and palindrome, to name a few. These latter styles of form reflect a deeper interaction between the musical content and the structure, but do not necessarily reflect all the possible interactions that may be perceived. The form in these cases can create an expectation on the organization of the piece based on the functions and attributes expected to be present.

In Schoenberg’s *Fundamentals of Musical Composition*, form “means that a piece is organized; i.e. that it consists of elements functioning like those of a living organism.”\(^3\) The inclusion of the word “organic” and his assertion that any comprehensible form must follow “logic” and “coherence” is viewing form from a relational perspective that introduces an important concept implicit in most discussions about form: perception.\(^4\) I believe Schoenberg’s views are essential to the application of impermanent large-scale form. Their significance rests on acknowledging the importance of interconnectivity between sections of music through a perceptual logic that can take place during the course of a piece.


\(^3\) This statement is concerned with an aesthetic interpretation of form that reinforces the importance of relationship to the presentation and development of the musical idea, and is not a philosophical definition of form. Schoenberg, Arnold, *Fundamentals of Musical Composition*, Ed. by Gerald Strang & Leonard Stein, (London: Faber & Faber 1967), p.1.

\(^4\) Schoenberg does hint at the perceptual capacities of the listener when he says that “one can comprehend only what one can keep in mind.” But his views on form are more concerned with expressing aesthetic generalizations that would leave music unintelligible without the use of an organizing scheme. In other words, his notions do not incorporate an individual listener’s interpretation of what might be ‘logic’ or ‘coherent.’ *Fundamentals of Musical Composition*, p.1.
Personal responses to form and previous work

In my experience, identifying or listening for a specific form elicits a strictly intellectual kind of attention of which I have to be conscious; however, listening to the continuous moment-to-moment musical surface of successive sounds does not demand the same type of effort. For instance, if I listen to a composition that is explained as an ABCAB form, or perhaps an ABCBA arch form, this often builds an expectation that is construed rather than actually perceived. In reality, my perception of form is more influenced by simultaneous events that make up the surface elements of instrumentation, texture, dynamics, and in some cases harmony. Some of these aspects of music demarcate structures that exist in overlapping temporal dimensions and defy what is prescribed as the music’s formal structure. For example, cadential accents may indicate one type of form while metric accents indicate another, and a thinning in the instrumental section may create a more coherent shape than that of the harmony. This means that despite of what the formal description may be, my perception may disengage from listening to music as development or as transition, and experience the particular musical material within the context of what came immediately before or for what happens immediately after.

The recollection of form outside of musical time, or outside of actual performance, is an imaginative effort based on what was apprehended as coherent or as unified. However, during the perceptual act, I contend that the consequential logic of the music from one instance to the next is enough to create a form that is actively developing rather than one that is imposed later as an intellectual afterthought. An active apprehension of form involves thinking of the listening experience as a type of window of time that captures the music on a horizontal timeline as the music progresses. Each successive note connects to the subsequent note leaving a trail of connections that is constantly developing from previously heard material. This creates a form made up of overlapping miniature structures that are revealed in the moment, and although they are subject to a large-scale cumulative effect, as the philosopher Jerrold Levinson argues, this is “not due to experience of the whole as such.” Instead, it is due to the perception of the local

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5 Levinson argues that there is only true cogency or “formedness” within and between bits of successively apprehended material. Connections between larger sections of music belong to a second order type of perception that is based on the aforementioned imaginative effort of intellectualizing or subjecting the musical
connections and small-scale coherence in which a listener is truly “absorbed in the music’s developing present.”  

Levinson’s argument is important because it makes a case for differentiating between the understanding of a piece on a “primary and experiential level, and understanding a piece’s formal structure on a secondary and intellectual level[.]”  

This argument is perhaps one of the main reasons why I began to conceive of Passenger as a multi-version composition with a reconfiguring large-scale form. Without the spatial and structural constant provided by a fixed form, the impermanent form will change and incorporate the listener’s perception to play a significant role of the music’s compositional design.

In works before Passenger, I was not able to explicitly utilize an impermanent large-scale form, but certain aspects of these works still suggested a move in this direction. In composing these previous works, I often experienced difficulties projecting musical material onto a planned structure. Pre-compositional decisions dealing with form were rarely followed through and I began to notice a tendency in describing the overall form of my compositions in generalized and reductive ways, as in AB, AA’, or ABA. These large-scale structures were almost always binary, or could always be simplified to a presentation/conclusion type of framework. Eventually, composing also became an activity less and less concerned with the creation of large-scale structures. Instead, my writing became focused on creating small-length musical environments or ‘contexts’ in which the large-scale form of the work and the music’s development were not a priority. Rather than focusing on the overarching structure I focused more and more on controlling successive chains of events. The idea for Passenger evolved from some of these issues but only after I was able to appreciate some of the implicit characteristics of what I conceived as impermanent large-scale form. One particular work in which I became aware of what impermanent large-scale form could contribute to the overall compositional design was my work for violin and cello entitled Eleven Dialogues for Violin and Cello. In this piece the large-scale form was more the byproduct of composing a series of miniatures rather than part of the pre-compositional plan.


6 Ibid, p. 25.

7 Ibid, p. 58.
Eleven Dialogues for Violin and Cello is made up of eleven 2 to 3 minute musical episodes performed in the same order they were composed. In other words, Dialogue 1 is both the beginning of the composition and the first one written for purposes of creating this work. Each of these eleven dialogues has a definite beginning and a definite end. In performance, their execution requires the performers to stop after each one and continue on to the next.

**FIGURE 1**

![Dialogue II](image)

![Dialogue VII](image)

In Dialogue II, the three utterances on the violin starting at measures 1, 3, and 5 can be interpreted as three different gestures that create a type of AA′A″ form. A case can also be made for an AA′ form considering that the cello changes the “pizz” pattern at measure 4. Ultimately, the formal arrangement that best makes sense to me for this particular dialogue would be AB since the change comes at measure 7 with both the violin and cello doing pizz and changing all previously heard patterns. In this instance, form is delineated by change, but formally, an argument could be made for the AA′A″ form that is defined by repetition.

Even though the piece contains 11 small pieces, the total number of ‘dialogues’ was not planned, and the resulting piece could have been 4, 7, or even 15 fragments in length. The difference in number was not essential to me and I purposely neglected to focus on this aspect of the composition in order to avoid thinking of large-scale form and still have a piece of substantial length. The result of this fragmentation was that during subsequent hearings of the recording, the music suggested a possible reordering of the dialogues to create alternate versions of the same musical content. The possible
reconfigurations of Eleven Dialogues contributed the initial and essential thrust to create a new work focusing on the effects of impermanent large-scale form and its effects on musical narrative. Overall, if Dialogue VII were to follow Dialogue II one could argue that the first perfect fifth interval in the first violin is derived from the last dyad played in Dialogue II also on the violin. If their presentation order were reversed, the seventh measure of Dialogue II could be heard as an echo of the opening interval of Dialogue VII.

All the different possibilities that I began to think about seemed like attractive notions for perceiving the piece time and time again, and composing within this context seemed like an excellent opportunity to explore how different arrangements could inform the content of the work. Soon after experimenting with rearranging the Dialogues, I began to plan the basic framework in which I could compose Passenger.
Chapter 1 | DESCRIPTION OF PROJECT AND OBJECTIVES

1.1 | General description of the work

Passenger is a composition for string quartet that is constructed out of seven segments of music, each of which is approximately 4 to 6 minutes in duration. Six of these segments are sequentially reordered each time the piece is performed to create a new arrangement for the entire composition. The first segment is always fixed as the opening segment of the piece and serves as the entry point for the remaining six segments. Each possible rendering, or ‘version’ of Passenger has a different combination of possible orders, and in total, there are a possible 720 different versions in which every segment is played once and only once. Superficially, the music proceeds seamlessly from one segment to the next through overlapping transitions that are designed to have two roles: 1) to connect, and 2) to conclude the piece, depending on their placement within the piece. Once all the seven segments are performed the piece is finished.

8 Further discussion about fixing this first segment to the opening position can be found under “3.2.3.1 Overlapping of transitions.”
1.1.1 | Possible outcomes and permutations

In order to calculate the possible outcomes that constitute Passenger, I have used a branch of pure mathematics called enumerative combinatorics. The possible permutations restrict the outcome to an order that matters, which is to say that each of the segments can be heard only once. The formula is:

\[ n^r = n!/(n-r)! \]

*where n is the number of segments (6), and r is the number to be chosen*

When making reference to a particular segment in the composition I will use the integer series \([1,2,3,4,5,6,7]\) as designated by the global tonal plan. A list of the total possible permutations can be found in Appendix A.

1.1.2 | Performance practice

In order to realize this multi-pathway composition the performers will select the arrangement of the music’s finite components, i.e. the fully notated segments of music. In addition to selecting the order for 6 of these segments, the performers will also manipulate transitional material in order to travel from one movement to the next without an audible break. In contrast to other multi-movement compositions where performers can select the order of large sections of music, Passenger offers a regenerative formal design that affects each possible version in a unique and original way. The partitioning of Passenger was conceptually thought of as a natural division of ‘segments’ that were equally important to the music as a whole. Labeling each of these segments of music as ‘fragments’ or ‘sections’ would imply that these segments are mutually exclusive or that they are somehow broken up from their original formation. In this case, the word ‘segment’ seemed to me appropriate as in some contexts it refers to the natural division of the whole where

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9 In Chapter 3 under section “3.2 Manipulation of the content” I elaborate further on the designation of tonal centres or ‘segmental pcs’ as part of the compositional process.

10 Section “3.3.2 Segmentation” discusses in detail the thought-process behind creating these segments.
the transitional material that connects the segments also forms an essential part of the whole.\textsuperscript{11}

### 1.1.3 | Title for Passenger

The word “passenger” is a descriptive idea that can be interpreted as a type of miniature program note for the listener. The word itself could be thought to describe the role of the audience as the individual traveler or explorer of each of the music’s possible versions. The intention is for it to reflect the type of attitude with which to approach multiple listening experiences of the same piece; not so much as a spectator but as a unique traveler through the music’s reconfiguring journey. Each performance presents a new way of covering the same musical territory and builds upon familiarity, anticipation, and cognition as tools to evaluate the music. Because no two versions are alike, the listener is the analog of a passenger on a familiar path advancing through an unknown route.\textsuperscript{12}

### 1.2 | Objectives and conjectures

*Passenger* was composed to explore the possibilities of impermanent large-scale form. By reconfiguring the chronology of *Passenger* I intend to demonstrate a practical approach for stimulating new ways of interpreting and perceiving the music’s large-scale form. The set of 720 versions will account for the ‘whole’ piece of music, and yet each rendering of the piece can also be considered a finite object. Within each segment there are also elements of gesture, dynamics, instrumentation, and rhythm that act as points of reference to either the past or the future, depending on the version and the exposure of the listener. This notion alludes to my interpretation of Stockhausen’s description of “moment form”:

\textsuperscript{11} Section 3.3.2.2 elaborates on the differences between movements as opposed to segments, and how this applies to the compositional design of *Passenger*.

\textsuperscript{12} Although the term *Passenger* could also imply that the listener is passive, or perhaps inactive during a performance, I welcome this interpretation despite its negative connotation. This notion aptly suggests that an audience will never have the ability to control the music’s ultimate destination, and in this regard, the listener’s inactivity is echoed by the title of the piece. Any connection between the multiple versions of *Passenger* is open and available for the listener to make.
"...a vertical slice dominating over any horizontal conception of time and reaching into timelessness [...] an eternity which does not begin at the end of time, but is attainable at every moment."

1.3 | Final concept and philosophy

French sociologist Pierre Bourdieu states that the work of art as symbolic good only exists as such for the person who has the means to decipher it.\(^{14}\) I interpret this idea to mean a person can appropriate or perhaps commodify the artistic object by identifying and recognizing its essential characteristics. In the case of music, having a specialized language to recognize the structural profile of a composition—or its form, as in the case of this discussion—does facilitate its labeling and categorization. But perhaps this may have more to do with the necessity to articulate what form ‘is’ in words and does not necessarily mean that it provides an accurate description of what happens experientially.

Perhaps the awareness of form, or knowledge of the organizational structure of a work, is superfluous to music appreciation. Levinson’s argument is convincing when he states that music “consists of a series of successive events which cannot be apprehended simultaneously in a single perceptual act [...]” and so any knowledge gathered prior to the listening experience is not a vital component of a listener’s interpretation of the music.\(^{15}\) If the perception of the audience is enough to promote appreciation, Passenger would offer different ways to encourage these readings in which the knowledge base is one’s own experience.

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Chapter 2 | **BACKGROUND**

2.1 | Compositional research

The impetus for creating a string quartet featuring an impermanent large-scale form is largely based on the notion that form can be used as a compositional device that can enhance the experience of listening to a developing structure; rather than using form primarily as a structural organization of musical material. The difference in this approach is that it uses form not only as a structural organization but also as an agent of change from one rendering of the piece to the next. As mentioned earlier, Levinson’s ideas were critical in shaping my concept of *Passenger*, as well as the ideas of many music scholars in the fields of aesthetics, perception, and cognition. In addition to this diverse research, there are also a few remarkable compositions from the twentieth century that have motivated me to treat form as a non-linear element capable of producing multiple readings of a single same musical work.

*Passenger* is not intended to be an indeterminate composition, and yet its inspiration is very much indebted to a philosophy that holds ambiguity and the notion of the unknown to be an integral part of the creative process. Cage’s quote above symbolizes this spirit of curiosity towards listening in creative and meaningful ways, and in

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the case of *Passenger*, perhaps suggests that that “something” may come from the ability to revisit a musical work through alternate paths.

### 2.1.1 | Seminal works

A period of music during which alternate methods of creating form become poignantly expressed is that of the music of European and North American composers in the years before and after World War II; in particular, the works of Cowell, Boulez, Cage, Stockhausen, and Brown. The use of new chronologies and non-linear approaches to form in some of their works made an impression to me insofar as to appreciate form as an active element of composition rather than as a static and permanent overarching presence. Although these composers’ approach to impermanent large-scale form may be an extension of statistical calculations and in other times a result of chance operations, their use of reconfiguring the order of music presented me with a view of what could be accomplished.

Even though it is beyond the scope of this document to provide a critical analysis of all of the works that have influenced my views, there are a few examples that stand out for the way in which *Passenger* relates to their practical application of multiple orderings of large-scale form.

### 2.1.1.1 | Cowell’s Mosaic and elastic forms

Henry Cowell’s landmark *String Quartet No. 3 ‘Mosaic’* (1936) is a five-movement work that utilized a new formal principle at that time. The program note in Cowell’s score states that, “the Five movements of the Mosaic quartet may be played in any desired order. One suggested way of performance is to alternate the movements as follows: I–II–I–III–IV–III–V–IV–V–I–II–III–IV–V, but any other succession is equally valid. Each movement must be understood as being a unit within the total Mosaic pattern of the form.”

### 2.1.1.2 | Stockhausen & Cage

One of the most interesting aspects of variable or changing form in the works of Stockhausen and Cage is the way they incorporate the performer’s interpretation into the creation or execution of the shifting form. For example, in both Cage’s *Variations II*
(1961) and Stockhausen’s *Klavierstücke XI* (1956), the performer’s contribution to the music affects the music’s entire arrangement and order. Whether the music is fully composed or also ‘interpreted’ by the performer, as in the case of Cage’s *Variations II*, the inclusion of the performer as the decider of the music’s presentation signals an important withdrawal of control in how the music is presented to the listener. Although Cowell’s *String Quartet No. 3* (1935) had already experimented with the rearrangement of movements, in Cage’s *Variations II* the performer uses eleven pieces of transparent plastic containing a type of dot and line notation, and arranges them in any way he or she chooses. To play the piece, the performer must interpret the distance from points to lines, as these apply to different musical parameters, similarly to previous Cage works such as *Variations I* (1958) and *Solo for Piano* (1958).

In both Stockhausen’s *Klavierstücke XI* and Cage’s *Variations II*, the structural ambiguity—a byproduct of the performer’s interpretation of the music’s form—prompted me to think about the intelligibility of form when in these particular cases it is infinitely variable. These two examples come from extremely different aesthetic and philosophical attitudes in their approach to formal indeterminacy, yet they both employ impermanent large-scale form as a way to deliver the musical content within a changing structure.

In the case of Cage’s *Variations II* all aspects of the music including rhythm, pitch, volume, and articulation are also impermanent, making the effects of a flexible form arise from Cage’s compositional techniques. In contrast, the only indeterminate variable in Stockhausen’s *Klavierstücke XI* is its form. Stockhausen’s piece comprises 19 fragments of music that are composed in full and performed in whatever order these fragments are perceived by the pianist. According to Stockhausen’s indications, the pianist must look at random to any of the fragments in such a way that “the performer will never link up expressly-chosen groups or intentionally leave out others.” After the third repetition of any of the musical fragments the piece will end.

The use of impermanent large-scale form in this case seems to be completely independent from all other aspects of rhythm, pitch, and dynamic. The music’s form, as the performer chooses it to be, is distinctly different from the detailed characteristics that define each of the fragments. The fragments’ similarity of tempo, texture, and complex tonal language makes their reordering seem unclear. I find that during the actual listening
experience of listening to *Klavierstücke XI* it is impossible to detect when one of the fragments begins and when the next one ends. Unless I am closely following with the score the fragments come and go without me being able to notice how they change. In my view, this indistinctiveness between the music’s fragments does not support the perception of the music’s impermanent structure from one version to the next. This Stockhausen piece is significant to the creation of *Passenger* as I value the perceptual differences in my composition to be necessary in order to convey an impermanent large-scale form. Without these differences the cumulative effect of comparing many versions of the piece is less difficult than in the Stockhausen example.

### 2.2 | Marvin and Brinkman – Handel *Sarabande*

Levinson’s ideas are illustrated in Marvin and Brinkman’s research on tonal closure. One of their main experiments dealing with music perception was based on segmenting and re-arranging four different versions of Handel’s *Sarabande* from the E minor Suite. The overall design of Handel’s *Sarabande* is commonly known as binary dance form. It begins and ends with the tonic key but contains momentary excursions to other key areas in the middle section. Figure 2 shows the original composition in column A and column B shows the modified variation. The experiment used a sample of musicians and non-musicians and placed them in a controlled environment where some of the subjects would hear Handel’s piece in its original form, and others would hear a ‘composed’ variation of it. Both groups of non-musicians and “expert” musician listeners would then be tested to perceive the effects of each of the versions, and where asked questions that pertained to musical elements such as meter, style, imitation, and rhythm. In addition to questioning subjects on these musical aspects, the authors also asked questions pertaining to the “rightness” of the music within the music’s stylistic context.

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18 Some of Marvin and Brinkman’s questions relate back to Nicholas Cook’s earlier 1987 experiments in which he found no link between theoretical knowledge of music and aesthetic responses. He further warns that theories of musical structure need not be theories of musical perception, and that although psychologists may not find a generalized theory for this phenomenon perhaps music theorists might. See: Cook, Nicholas, “The perception of large-scale tonal closure,” *Music Perception*, Vol. 5, No. 2, Winter 1987, pp. 197-205.
The results of the experiment showed that listeners did not challenge alternative versions of the piece, regardless of their level of musical expertise. In fact, the experiment was designed to measure the perception of tonal closure by expert listeners and many of them did not notice a difference from the opening to the closing key. Despite the presence of functional tonality in Handel’s Sarabande, the reconfiguration of sections does not disrupt the cogency and flow of the music. This seems to have been possible because the musical progression from section to section was manipulated so the transitions would be seamless.

FIGURE 2

A

B

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Marvin and Brinkman’s research on tonal closure not only reinforced the idea of composing Passenger but also provided an interesting device for accomplishing the task of composing an impermanent large-scale form. Although their experiment’s goal was to measure the perception of tonal closure by expert and non-expert listeners, their reconfiguration of Handel’s Sarabande provided a practical model as to how one could manipulate transitions and cadential endings to link phrases of music that were otherwise undisturbed. By dividing the piece into four interchangeable segments of music and then manipulating the endings of these segments to provide closure or transition to the next section of music, the authors were able to prove that there were nominal differences between the perception of expert listeners and non-expert listeners when determining tonal closure. Their experiment only dealt with three versions of twenty-four possible ones, but in each of those four versions the idea was to create a continuous music with cogency from beginning to end. This fundamental characteristic of continuity—which rendered each version of the Sarabande as convincing as the next—was the first parameter that helped define the pre-compositional process of Passenger.
Chapter 3 | METHODOLOGY

3.1 | Content + Form

Once I had envisioned the foundational objectives about impermanent large-scale form—as outlined by “Chapter 1”—the creation of Passenger became focused on the development of these ideas into the writing stage of the project. The following section will describe further parameters that I imposed on the content in order to create music that would fit inside a shifting form.

3.2 | Manipulation of the content

One of the most important aspects of composing Passenger using an impermanent large-scale form was the formulation of the content within the seven segments. In order for the form of the piece to come across effectively through multiple listening experiences of the same content I felt it was important that each of the segments maintain distinctive characteristics from one another. I decided that each segment would convey seven uniquely different treatments of pitch content, texture, tempo, instrumentation, and overall shape and contour. The best way in which I could make this possible was to restrict the harmonic and pitch content of each segment in order to articulate individual sound profiles between them.
3.2.1 | Segmental pitch classes

During the pre-compositional plan, I designated a focal pitch class (pc) to be a tonal centre for each of the seven segments. Describing the segmental pc in these terms is not entirely correct as ‘key’ or ‘tonic’ imply functional harmony or formulaic chord progressions that tonicize whatever the segmental pc is. Instead, each segment uses its pc as a tonal axis, and features it as a type of harmonic presence during the course of that particular segment. This segmental pc is sometimes established by reiteration, or sometimes determined through cadential arrival and departure points. In other segments the segmental pc is established due to the high degree of recurrence within the segment.

During the process of selecting the seven pitch classes to assign to each segment I was befittingly inspired by scales. In a scale, each scale degree has an individual sound profile, and yet as a set, all the scale degrees work to create a single harmonic gesture. Given the instrumentation and array of pitches of the instrument’s open strings I decided to chose a dorian scale starting on pc D. After I designated the pitch classes each segment was easily identified by its own integer: Segment 1 (S1) would highlight pitch class “D,” while segment 2 (S2) would highlight pitch class “E,” and so on.

3.2.2 | Instrumental designation

Once the segmental pcs where assigned, I further divided the segments amongst the ensemble in an effort to provide more contrast from one segment to the next. I decided that each segment would feature an individual player during four of the segments, and three segments would feature the entire ensemble as a quartet.²⁰

<table>
<thead>
<tr>
<th>Segment</th>
<th>PC</th>
<th>Instrumentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D</td>
<td>Quartet</td>
</tr>
<tr>
<td>2</td>
<td>E</td>
<td>Violin 2</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>Cello</td>
</tr>
<tr>
<td>4</td>
<td>G</td>
<td>Viola</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>Quartet</td>
</tr>
<tr>
<td>6</td>
<td>B</td>
<td>Violin 1</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
<td>Quartet</td>
</tr>
</tbody>
</table>

²⁰ Further description of the instrumental designations can be found in “Chapter 4.”
²¹ The numbering of the segments does not imply a hierarchy between segments. The integers used on this list are labels with which to identify the segments in ascending order along with their respective pc.
3.2.3 | Predicting outcomes before composing

The designation of pcs and instrumentation helped me plan the writing of each segment as well as to envision the possible outcomes based on the reordering of their placement within the large-scale form. Segments 1, 5, and 7 were particularly significant considering that they would be using the quartet as a whole. I began composing these segments first knowing that S1 was going to be fixed, and that S5 and S7 could potentially be adjacent to one another.\(^{22}\) Considering that a possible ordering for the piece could be S1-S5-S7 I realized that these 3 segments had to be considerably different so as to not construe them as a single segment.\(^{23}\) Similarly, S2 and S6 would feature the Violin 2 and 1 respectively, and if their placement were to be adjacent to one another, a significant amount of contrast had to be a part of the compositional design in order to avoid a perceptual merger of segments.

3.3 | Manipulation of the form

The different techniques and parameters necessary to create Passenger, were arrived at intuitively throughout the writing process. The issues surrounding continuity, segmentation, reconfiguration, content, and transitions where the five most important concepts to consider in designing how the compositional plan was going to be carried out.

3.3.1 | Continuity

In order to fully achieve the realization of impermanent large-scale form throughout multiple versions of the piece, the hearing experience of Passenger would also have to be similar throughout multiple performances. In the aforementioned experiment conducted by Marvin and Brinkman, the intention was to ‘fool’ or deceive the listener by creating a number of plausible versions of Handel’s Sarabande. In contrast, Passenger, in any and all of its renderings, will always be the original version. If the piece were to have any interruptions or breaks during performance it could lead assumptions on the formal

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\(^{22}\) The decision to fix S1 is as much part of the instrumental designation as well as part of the development of the transitional material connecting the segments. See “3.1.3.1 – Overlapping of transitions” for details.

\(^{23}\) Further description of possible outcomes and segments can be found in Chapter 4
aspects of the piece. For instance, if there was a clear break or interruption in between any section of the piece, regardless of where it is heard (close to the beginning or closer to the end), that audible gap of music information could potentially create closure where a type of large-scale AB form could be implied. Instead, one continuous stream of music would ensure the creation of a single entry point to the musical content and a definite end to it. The overall structure would then be derived from the experience of what comes in between these two clearly demarcated points of departure and ultimate arrival.

Having assimilated some of Levinson’s ideas regarding “concatenationism” and the “vivid apprehension” of successive musical events, the goal of composing of an unbroken composition that exists in multiple versions was central to the formulation of the design.24 Each possible version of Passenger is meant to be a continuous and consecutive musical moment that is informed by the proximity of each section of music and by virtue of its temporal placement. The continual flow of music throughout all versions presents an uninterrupted stream of music, but through different narratives. Each rendering is one that presents the music in a way that was always intended to sound.

### 3.3.2 | Segmentation

After establishing that Passenger was going to retain a continuous and uninterrupted flow of music from one section to the next, it was necessary to determine how its structure would be built so that it could then be reordered in subsequent performances. Segments of music would vary their ordering sequence each time the piece was performed, and so deciding on the parameters of dividing the work and its possible rearrangements was a significant component of the pre-compositional process.

### 3.3.2.1 | Dividing in full, or composing within divisions?

Early in the stages of sketching material for Passenger, the question of where and when to divide the music became a critical turning point. Composing the whole piece in full and then divide it at a later point seemed arbitrary and contradictory to creating equally effective versions of the composition. Instead, composing ‘movements’ or ‘sections’ of music with the idea that continuity between these would be sought after seemed more

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appropriate so long as the connections could be seamless and follow a successive path. These segments of music could then be composed independently if they could be bound together through transitional material. The continuity and flow of the piece in this instance would not be broken, and the progression between segments would comply with the notion of having a single stream of music from beginning to end.

3.3.2.2 | ‘Segments’ Vs. ‘Movements’

Reordering movements and allowing them to be presented in any order can affect the listeners’ perception of the entire work. In the case of Cowell’s quartet —where the order of the movements can be altered at the will of the performers— the music in each section is conceived in full, including the presence of a beginning and an end for each section. Each movement presents its own independent narrative that relates to the other movements thematically or conceptually, but yet one movement does not ‘beget’ or ‘produce’ the next. In the case of Cowell’s quartet, the listener can make global connections between the tempo, motives, textures, or dynamics from one section to the next, but these relations have more to do with the identification or recognition of similar elements present throughout the whole composition. This type of connection does not necessarily focus on the generative potential of localized connections that are achieved in a continuous stream of music. In Passenger, it is not the segments per se that create the musical shape. It is their alterable placement within the structure that will make one segment flow out of the next and be the basis for the subsequent material. In other words, each of these segments is not discreet, it is composed without a preconceived notion of its final placement in the composition, and it is therefore left for the performer to freely experiment with the musical material.

3.3.3 | Transitions

The sections of music in Passenger that connect one segment to the next are referred to as ‘transitions.’ It was noted earlier that in the Handel example of Marvin and Brinkman’s experiment the transitions were manipulated in order to get a continuous flow of music. This was possible because the arrangement of the musical phrases was predetermined, so that each transition had to connect specific sections of musical material.
In *Passenger* this was not an option, and the transitions were approached similar to those in Stockhausen’s *Klavierstücke XI*. However, the material connected by these transitions was not going to be fragmentary, it would be larger 5 to 6-minute segments of fully composed music. The objective was for the music to be uninterrupted, and so the transitions were planned as shorter sections of music that would ‘link’ to the beginning of the next segment by simultaneously overlapping musical material.

During the initial stages of planning, I had originally contemplated using a recurring transition to connect all the segments. This would facilitate performance and construction of the score, but this would also have created a recurring event in the large-scale structure and undermined the cogency between segments. Ultimately, the transitions were designed to be essential parts of the overall composition of *Passenger*. Each of the possible transitions would affect the ensuing music and was created with the intention of absorbing the attention of the listener locally to what was occurring within a particular transition.

### 3.3.3.1 | Overlapping of transitions

Upon completing the initial sketches for two possible segments, the notation of the score suggested possibilities on how to overlap the sections of music. Placing the score for each of these segments side-by-side made me think of the rich possibilities for simultaneity between the closing and opening material. The designation of segmental pcs that I had selected also allowed me to leave these transitions of music to overlap freely without being too concerned with tonal or harmonic disparity.²⁵

The resulting music in the transitions was to a large extent left to chance, but these transitions are controlled by parameters of dynamics, repetition, and length, to connect from-and-into each of the adjacent segments. The transitions could be thought of as the unknown bits of music that will make each version of *Passenger* unique and different from all the other versions. The myriad of variable details within each of these overlapping transitions could be thought of as the unknown bits of music that will make each version of *Passenger* unique and different from all the other versions. The myriad of variable details within each of these overlapping transitions could be thought of as the unknown bits of music that will make each version of *Passenger* unique and different from all the other versions.

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²⁵ Since each of the segments had been designated a segmental pc, the transitions would overlap tonal centres to produce an intervallic stacking. For example, in the chance of S5 (pc A) and S2 (pc E) ever being placed adjacent to each other, the tonic-dominant relationship would govern the harmonic profile of that particular transition. Other possibilities can include an intervallic stacking of 3rds or 2nds, adding to the overall congruity of the transitions, but there would never be a highly dissonant or clashing transition where tonal centres would seem arbitrarily stacked.
transitions will also present challenges for the performers and present opportunities to improvisise within a short and controlled span of musical context.

Once I decided to use overlapping transitions as the connective material between segments, composing the content became somewhat cyclical. Each segment would have to begin using transitioning material from the previous segment, and each segment would end by initiating a transition. This would allow for the reconfiguration of the segments to take place without any problems but for the issue of ‘beginning’ the cycle. In order to use overlapping transitions it was necessary to fix one of the segments to the opening segment for every version of the piece.

3.3.3.2 | Sample case of transition S5 to S3

FIGURE 3 shows an example of a transition between segment 5 (S5) and segment 3 (S3). In this particular case, S5 ends the segment with only 2 measures. These two measures are repeated once before proceeding to S3. As indicated by the opening of S3, the quartet is instructed to play a third repetition of the last two bars of S5. In this third repetition the cello is instructed to begin S3 independently from the rest of the quartet, while the upper strings continue to repeat the last two bars of S5 indefinitely. While the cello continues to play the opening of S3, the upper strings go through a series of repetitions that are shaped dynamically as indicated on the score. The repetition in the upper strings is interrupted by “spatially” placed rests under fermatas. Depending on the cello’s performance the repetition in the upper strings will finish when the cello plays the end of its gesture on the third measure of the “Con brio e pesante” section.
The quality of this transition is unique in that the gesture that cadences on the third bar of the “Con brio e pesante” concludes S5 effectively for two reasons. One reason is that the gesture naturally cadences due to the decelerating tempo of the cello’s oscillating line in combination of the dynamic diminuendo in the upper strings. The other is the instrumental combination of this particular transition. The two repeating bars of S5 contain a cello solo while S3 also begins with a cello solo. By the third bar of the “Con brio e pesante” section it could be said that S5 finally concludes and that this transition, in effect, was merely an elaboration or a type of “codetta” to S5 rather than an introduction of S3.

This example shows that the system of overlapping transitions is a major contributor to the concept of impermanent large-scale form. A detailed description of all 720 possible transitions is beyond the scope of this document, and it is also not the goal of this project to be able to ‘predict’ or ‘anticipate’ how a particular version of Passenger will sound. However, through many of the mock sample cases of possible variations I have been able to see the virtue in not being fully aware of how a particular rendition of Passenger will sound. This is perhaps the aspect that I am most interested in experiencing as the result of applying an impermanent large-scale form in the compositional design.

3.3.4 | Repetition

The use of repetition during transitional sections and within main sections of the segments was a decision based on a practical approach to composing and performability. In order for the musicians performing Passenger to reorder the sequence of segments and ‘compose’ the transitions (as in the example above) in a practical manner, repetition of material became an essential component and characteristic of the entire piece. Using repetitions during the transitions also allowed a way to control the amount of overlap between segments. The reiteration of musical material based on short motivic gestures during the overlapping segments meant that I could enforce a higher degree of control when it came to deciding when to stop or stretch preceding material over the beginning of the next segment. Even if the material being repeated were made up of long portions of music that repeated instead of short gestures, the segments would interact with one another in a manifold of ways.
Chapter 4 | SEGMENTS

4.1 | Segment 1

The first segment of Passenger is the fixed entry point to the composition and presents material that can be found throughout the other segments. Because this segment is designated as a ‘quartet’ segment the opening measures include the entire quartet playing in parallel motion using identical bowing, dynamic, articulation, and tempo. The first four measures shown in FIGURE 4 introduce the gesture of parallel 6ths and parallel 5ths in the lower strings while Violin 1 is oscillating in 3rds.

FIGURE 4
The opening phrase, considered here to last from the first measure to rehearsal letter “B,” can be analyzed harmonically as having a D minor/major/dorian quality.\textsuperscript{26} The first four measures only include pitches from the natural minor scale, while the subsequent two measures introduce F-sharp in the lower strings. Three measures before rehearsal letter “A”, vln. 1 also shifts from the natural minor scale to the harmonic minor scale including B-flat and C-sharp.\textsuperscript{27} Although the segmental pc “D” is not explicitly emphasized by way of accent or rhythm, it is presented here as the segment’s tonal centre via harmonic prominence. There is much to interpret harmonically from this opening gesture considering that the tonal centres throughout Passenger are based on a dorian scale and that the segmental pc “D” is highlighted through functional and modal harmony. The way in which pc “D” is presented as a harmonic centre and as a segmental pc anticipates how harmony and vertical sonorities will play an important role in subsequent segments as they emphasize and highlight their respective segmental pcs. The combination of the three modes (minor, major, and modal) can also be found in S1 throughout rehearsal letter “F” through the end of the segment.

The 3-bar cadence that occurs six measures before rehearsal letter “B” is a crucial point in the opening gesture as it emphasizes D by an upper and lower melodic approach.

\textbf{FIGURE 5}

\textsuperscript{26} Please refer to “APPENDIX B” for a full score of Passenger.  
\textsuperscript{27} The score shows a D-flat instead of C-sharp.
The music shown in FIGURE 5 is a particularly interesting harmonic point as it serves a dual role in the opening of the composition: harmonic contrast and cadence. By arriving to the minor 3rd triad (C, E-flat), the harmony shift is a sharp contrast to the prevalent D minor-major/dorian sonority of the previous 25 bars of music. But rather than cadencing the entire opening gesture on C-minor, this harmonic shift is resolved via a glissando to a unison D. The glissando is an effective melodic gesture as it presents the music’s first cadence using modal harmony (from C to D) and functional harmony (C-sharp to D, and E-flat to D). Although this emphasizes the C to D motion slightly, it is effective in highlighting D as the segmental pc and final cadential point for the opening gesture.

Another significant harmonic moment in S1 takes place from rehearsal letter “B” to rehearsal letter “C”. These short motivic gestures are chords that are centered on D and recall the vertical sonorities of the opening material. These chords are also cadential extensions to the segmental pc. For instance, the chord found two measures after “B” emphasizes a dominant-tonic relationship, and later at five measures before “C” the chord emphasizes the whole pitch collection of the dorian scale minus D. When D finally appears (see FIGURE 6) with its dominant A two measures before rehearsal letter “C” it gives the impression of the music coming to an end having gone through a cadential extension.28

FIGURE 6

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28 The music is meant to ‘sound’ like it is coming to an end. See “4.1.1 | The beginning is the end” for a discussion detailing this structural/narrative choice.
The rhythm and texture of S1, and in particular that of the opening phrase, is an introduction to rhythmic motives found throughout the entire composition. This rhythm is continuous and uniform through a quarter-note pulse and is similar to the music found at the end of S1. It is also used heavily in the final measures of S4 and in variation at the end of S3 and S7. In segments that emphasize a single player (S2, S3, S4, and S6) this rhythmic texture is also essential in providing a type of background or accompanimental texture to the instrumental soloist. An allusion to the different sections of music in which this happens in Passenger can be found in S1 six measures before rehearsal letter “F”. In this final section of S1, the cello has a short solo that plays over the steady quarter-note pulse of the upper strings. Although the register and dynamic do not make the cello ‘sound’ as a soloist, it foreshadows large sections of music in other segments in which entire solo passages are performed over textures of constant rhythmic activity. In this way, the rhythmic texture of S1 is a motive that introduces the listener to key textural characteristics that are common in other segments of Passenger.

The formal structure of S1 can be roughly described as ABA or arch form. Once the music comes to a rest one measure before rehearsal “C” it may be said that A is over, and that the music starting with the “senza misura” section begins the B section. During this middle B section the use of aleatoric rhythmic material contrasts the rigid pulse and notation of the A section. From rehearsal “C” to rehearsal “E”, most of the music is notated using a combination of spatial notation, open score, and traditional notation. Section B is also contrasting its adjacent portions of music in the way it uses instrumental combinations. A division between upper and lower strings characterizes section B by providing each of these two groups with a short eighth-note figuration, first in the lower strings ten measures before rehearsal “D”, and then in the upper strings two measures after “D”. The material at rehearsal letter “E” is transitional material that slowly shifts back to the return of A signaled by the tempo change of quarter-note equals 120.

Section B of S1 was not composed as development of either of its neighbouring sections. Instead, it was composed as introductory material for the motivic characteristics found throughout other segments of Passenger. The aforementioned eighth-note figurations that appear in the lower and upper strings are meant to present a distinct oscillating motive found in S3, S4, and S6. This motive also highlights parallel motion in 3rds
between instruments (which is also a feature of both A sections in S1), and establishes a traditional harmonic context that emphasizes the segmental pc. This contrapuntal figuration is a major motivic component in Passenger as it appears throughout its segments in different contexts. As shown in FIGURE 7, it is evident that the recontextualization of this motive is an important feature of the composition considering its ubiquity throughout the segments and the way it is used. At times it is used as transitional material, solo material, or as a harmonic background for a solo.

FIGURE 7
4.1.1 | The beginning is the end

The music of S1 was conceived as a type of closing gesture that expresses the conclusion of a large work. From the opening bars, the music is meant to invoke a ‘jump-start’ opening that has no clear beginning. The dense texture, increased attack density through the bowed tremolos, and the continuous decelerating tempo resembles what a listener might expect to be the final measures of a composition. During these first moments of *Passenger* the musical gesture is to be one of conclusion with a strong drive to cadence, as if the listener started hearing the end of the composition rather than its introduction. The use of repetition, articulation, and rhythmic contour is intended to create an opening that resembles a type of *codetta* with a cadential gesture. From the first measure through to rehearsal “B”, the effect is intended to be one of conclusion and resolution. The gesture in this opening phrase is to convey both a culmination and concluding musical moment. In effect, all musical material after B can be considered a cadential extension.

Starting the composition with what may be considered to be a ‘stereotypical’ musical ending promotes an attention to narrative and form. The listener’s expectations are challenged by restricting the amount of musical material, gesture, and development that occurs during the composition’s initial moments. In this way, the opening segment for *Passenger* sounds as if it were approaching a final resolution which never arrives. Considering that the end of the piece could be any of the remaining six segments of music, S1 is a fitting start to the composition in how it can lead to any other segment without having been a strong introductory musical moment. It is true that the segment showcases motives, gestures, textures, and a harmonic language used throughout the rest of the work, but it does not present itself strongly as an opening segment as there is no clear subject on which to build an entire composition. There is no specific melodic content or rhythmic motive, nor any development of material that points to a clear musical theme or subject, and it is in this ambiguous musical environment where impermanent large-scale can begin to reinterpret the opening segment depending on what follows after it.

The final section of S1 concludes with a return to the contrapuntal texture that characterized the beginning. Starting nine measures after rehearsal “E” the music begins to increase in register and dynamic range. The music leading up to two measures before the final bar in this segment could cycle back to the first measure and begin the entire
segment again. Although in quartet continues to repeat the final 12 bars of music as transitional material to continue on to the next segment, I wanted to incorporate a possible connective transition back into itself in order to parallel the impermanent large-scale design of the remaining segments.

4.2 | Segment 2

In S2, the featured performer is vln. 2 and the segmental pc is “E”. One consistent feature of all segments that feature individual players is that the transitions are to be instigated by the respective instrument. In the case of S2, while the Viola, Cello, and Violin 1 continue repeating the preceding segment, violin 2 fades out of the repetition and begins the segment on its own.

The form of S2 can be considered through-composed and includes cadenza-like phrasing in the second violin’s material throughout the segment. The uniformity of texture starting with rehearsal letter “E” can create a larger division of the segment into an AB form. Starting in rehearsal “E” the non-soloist strings (Violin 1, Viola, and Cello) are limited to playing a background texture of high attack density repetitions of short and asynchronous rhythmic gestures using very soft dynamics with occasional increase in volume to signal the beginning of a new gesture. This melody and accompaniment texture contrasts the segment’s first section, which is made up of a series of short episodic gestures that are colourfully varied through orchestration, dynamic, and playing technique. From rehearsal letter “A” to “E”, the first section of S2 features Violin 2 as a melodic line for which the other instruments provide occasional harmonic support.

If one excludes all musical material except for the second violin’s music, it is evident that the entire segment revolves around the segmental pc as it is used as a tonal axis. In FIGURE 8 it is possible to see how the entire melodic line of the second violin emphasizes E from the beginning of the segment through rehearsal letter “B”. Three measures before “C” the second violin ceases to feature E and is centered on A-flat. This change is derived from the E-major tonality that is prevalent through the first section of S2. The pitch material starting two measures before “C” is limited in pitch content to the first five pitches of the A-flat minor scale. This limit is followed from this point until the end of the segment, where E makes a return as the last pitch of the segment. The dual role of E,
as a tonic in E-major and as a sixth scale degree in A-flat minor, is a way that I decided to feature the segmental pc in S2.

FIGURE 8

The harmonic motion from E to A-flat in each respective section of S2 is also mirrored in the remaining instruments. In FIGURE 9 the first introduction to the remaining strings shows a strong motion by 3rds from C-sharp to E, and then downwards from G-sharp to E.
Another instance where 3rds are highlighted in the accompanimental group is in the music at rehearsal letter “E”. The pitch material here is limited to the span of a 3rd [E, F#, G], which is the first instance of E-minor in the segment and is heard simultaneously against the second violin’s A-flat minor tonality.

The colour combinations of timbre in S2 are of particular importance as they highlight the overall segment’s sound and project the harmonic environment at different moments in the score. The accompanimental strings are for the most part sharing playing technique as a way of unifying their sound as well as musical gesture. Three measures
after “A” they have indications of “molto vib.” and “poco vib.” with the use of natural and artificial harmonics just two bars after. At rehearsal letter “B” the first violin and viola play with the use of practice mutes and without vibrato in order to produce a “consort-like” sound against the second violin’s line. Three measures before “C” the cellist joins the rest of the accompanimental strings with a practice mute as they now begin to emphasize the segmental pc while the second violin emphasizes A-flat. The melodic material shared in the first violin, viola and cello throughout this section is similar to that of the opening solo of the second violin. This material sounds contrasting to that of the opening due to the timbral quality afforded by the mutes and by the different role that the music plays as solo material and then as a background texture.

The instrumental designations are consistent throughout S2 in the way that the soloist is heard throughout the segment, and that the entrances of the remaining instruments are almost always simultaneous to one another. The motivic gestures of S2 are also similar to those of S1 in the way they are limited in development and consistent throughout the segment. In the opening measures of S2 the second violin plays an ascending 3-note motive which is echoed in the accompanimental strings three measures before “C”. The melody of the second violin is used as musical material throughout this section but is now serving as background to the A-flat melodic line of the soloist.

Rehearsal letter “E” is of particular significance to S2 because it sets up the ensuing transition from early on in the segment. The last repetition of S2 after rehearsal “G” is similar to “E”, and so the transition from S2 to the next segment is blurred considerably given the continuous texture, use of repetition, and similarity in dynamics and attack density.

4.3 | Segment 3

The most salient feature of S3 is the use of the cello as a solo instrument for almost the entire duration of the segment. The segmental pc F is the tonal centre for S3, and the cadenza-like and improvisatory quality of the music constitutes some of the most prominent features of this segment. The pc F is emphasized by being the implied tonic of the first gestures in the cello through the oscillating motive between A and C, and between G-sharp and C. Similar to S2, where the chromatic mediant is used to emphasize the
segmental pc, in S3 the there is a harmonic excursion into D-major which emphasizes F-sharp as a harmonic variation to the segmental pc F.

**FIGURE 11**

Another motion by 3rd can be found in **FIGURE 12** where F-major moves to its relative A-minor by lowering the root.

**FIGURE 12**

Although there are a lot of other examples of F-major and F-minor in S3 through the flattening of the third scale degree, the segmental pc is also emphasized as a tonal axis as shown in **FIGURE 13**.

**FIGURE 13**

It is also possible to reduce all of S3 to a single motivic idea of oscillating dyads considering that the cello is constantly playing gestures that go back and forth between two notes. The entire segment is based on this motive as it has been shown in the previous figures, and recalls some of the gestures found in the B section of S1 and also in the viola solo in S4.

The harmonic weight towards A in S4 is also significant considering that a lot of the oscillating dyads presented could be resolved by moving to an A-minor triad. Even
though the segmental pc F is the focal point of this segment, the last two systems of the score—where the upper strings initiate the transitioning material out of S3—are essential in emphasizing this harmonic duality by way of presenting the relationship between F and A in a similar oscillating pattern in the viola. Once again, just as in S2, the reappearance of the rest of the quartet is done in a block texture where the three remaining instruments act as a backup group rather than independent voices. The timbral quality as well as the texture include the use of practice mutes and homophonic textures that accompany the melodic cello line. In composing S3, the connections between other segments became more and more apparent, and it seemed like the possible orderings of each segment could change the perception and interpretation of the musical material. In the case of S3, the final gesture could be presenting the introduction of the practice mute, or it could be reinforcing its use. This feature became more prominent as the composition of segments became more and more influenced by what came before.

In thinking of the potential orderings of all the segments of Passenger and the placement of S3 in particular, I thought it was important to incorporate the possibility of ending the entire composition with a segment that featured a solo instrument. The odds of S3 concluding Passenger are 1 in 6, and the notion of ending a composition for string quartet with a cello solo seemed rich in its potential interpretations.

4.4 | Segment 4

The main characteristics of S4 involve the use of motivic development, tempo stretches, and a strong connection to other segments’ textures and motives. It is unique from other segments in how much material is derived from other segments, and how it is presented here in a through-composed segment that is continually developing material while also recapitulating material, or presenting it for the first time based on the ordering of the segments. The emphasis of G as a segmental pc and the viola solo also are key elements characterizing S4.

Formally, this segment can be divided into three sections. The first section includes the entire solo for viola that begins the segment and transitions out of the previous segment through to the first appearance of the cello and two violins. In the quarter-note equals 95 measure half way through in the 4th system the rest of the strings signal the beginning of a
second section of music that continues through to the third section of S4 beginning with the measure labeled as “legatissimo e marcato” in the 3rd system of the segment’s second page. The final section of music continues through to the end of the segment and includes all of the music in the third page of the score.

Although formally this is an ABC formal structure, each of these sections does not present entirely new material. Similarly to S2 the subordinate or accompanying group, made up of the two violins and the cello, are limited to providing harmonic and textural support. This type of contrapuntal background is similar to that of S1 and is also similar to many sections of S2. However, it differs from these other segments not just in pitch content and register, but also in dynamic and timbre. This is an important difference because even though the accompaniment group may provide similar textural and harmonic environments on which to highlight the segment’s featured instrument, in S4 this background is a more ‘present’ musical gesture considering that it is performed without the use of mutes. The sound produced in this section is of completely different colour and dynamic than in other segments in which this contrapuntal parallel motion is also present.

The solo viola also plays material that is motivically similar to S3. In FIGURE 14 it is possible to compare two different passages of music, one from the first section of S4 containing the viola solo, and a recurring motive from the cello solo originating in S3. Each of these phrases is built on a sixteenth-note major 3rd motive that stresses the segmental pc of their respective tonal centres. In the case of S3 it is F, and in S4 it is G. Each of these motives starts out by oscillating this major 3rd interval and proceeds to move to the relative minor key (iii) via a semitone decent from the root of the chord. In each of these two examples the subsequent material differs harmonically but the continuous sixteenth-note motive continues.

FIGURE 14
Another connection to rhythmic motives and textures of other segments during S4 takes place during the opening gestures of the viola solo. The short sixteenth-note bursts shown in FIGURE 15 are similar to those of S5. These motives return, or appear for the first time depending on the way that the segments are ordered, through a distinct difference in tempo. In S5 these figures are notated in strict tempo and notation, and they are also performed by the entire quartet. This motive is performed only by the viola in S4 and it is characterized by a fluctuating tempo that intensifies the three-note gesture as it expands intervals during the course of its presentation.

**FIGURE 15**

### 4.4.1 | A segment as transition

The constant development of material, tempo, and texture that takes place throughout S4 was designed to provide contrast to the pacing and overall shape of the composition. Considering that transitions are repetitive portions of music that appear to be ‘going somewhere’ and are the connective fabric between two segments, I wanted to make sure that at least one segment emulated this sense of direction and forward motion by providing it with the most amount of development and shift from beginning to subsequent transition or end. In S4, the gradual shifting of texture that begins in its second section is meant to create an unstable environment that is continually transitioning into the next section and eventually into the next segment. At the quarter-note equals 95 measure of the 4th system, the musical texture changes to a steady harmonic unison characterized by even tempo, parallel rhythm, bowing, phrasing, and dynamic. A shift in this texture develops only two bars later through the change of meter and the ‘rit.’ indication, while each of the strings gradually become asynchronous and continue to play without regard to one another. The absence of meter and barlines aids in this rhythmic disintegration and
settles as a random texture of ascending and descending motives that are no longer parallel to one another. The musical material in the boxes, as shown in FIGURE 16, illustrate yet another shift. In this section there is an increase in harmonic tension by adding notes to the repeating chord played by the two violins and the cello.

![4-notes in repeated boxed figures](image)

**FIGURE 16**

The first set of boxes only include a four pitch collection [F, G, B-flat, C], and in the second set of boxes, which appear gradually in each instrument, the collection is increased to seven pitches [F, G, B-flat, C, F-sharp, D, A]. Including the E-flat found throughout the viola solo heard during this section, this whole series makes up the harmonic and natural G-minor modes. This is yet another example of material that connects with previously heard bimodal content, as in the opening of S1, and also illustrates a gradual increase in harmonic tension that contributes to the ongoing shift in texture and sound.

Once the collection is increased to include both the natural and harmonic minor modes of the segmental pc, the harmonic environment and the texture continue to develop significantly. The boxed musical material increases phrase length in the two violins while the cello introduces A-flat in an oscillating minor 2nd figure to G. In the indications the instructions ask that the two violins “Gradually begin synchronizing with [the] cello” in order to arrive at the next section of music of S4. The increase in dynamic throughout this section as well as the accelerando that consolidates the texture of both the
accompaniment group and the soloist provide a sense of motion in the music that is finally resolved in the “legatissimo e marcato” measure.

**FIGURE 17**

Although the music seems to convey a sense of arrival through rhythmic stability and even tempo, the dynamics and the articulation of this section continue to change to provide contrast in the meter and texture. The different accents played throughout this section in each string part create a steady quarter-note pulse with a seeming absence of downbeat and ambiguous phrase length. The texture by the end of S4 is made up of three elements that include the locked pulsating pattern between Violin 2 and the Cello, the drone of the first violin, and the melodic material on the viola characterized by its rhythmic freedom and modal harmony. **FIGURE 18** shows how this texture is notated as transitional material for S4. In this transition, just as in the other segments’ transitions, it is necessary for one of the players to ‘drop out’ and initiate the next segment. For this transition, dropping any of the three elements that constitute the texture would not alter the overall quality of the music because the quarter-note pulse with varying accents would still be the underlying base even if the second violin or the cello were to proceed to the next segment.

**FIGURE 18**
The harmonic tension between G-minor and B-flat minor that characterizes the final moments of S4 relates to the same harmonic profile found in portions of S2 and S3 where the chromatic mediant (a major or minor 3rd apart) is emphasizing the different roles of the segmental pc. Although this motion from G-minor to B-flat minor creates a sense of instability punctuated by the uneven placement of accents, there is also a sense of arrival in the music given that there is no musical element that is developing. By the time that the cello and second violin begin their pattern shown in FIGURE 19 there is no longer an element of change present in the texture, articulation, or motivic material. In the case of S4 being chosen to conclude Passenger, the harmonic alternation between G and B-flat can be interpreted as a type of coda in which V-I are continually emphasized, except that in S4 it is the chromatic mediant (i · iii) instead of the dominant which alternates between the tonic.

FIGURE 19

Each segment of Passenger is unique to its construction and is composed as a unified expression of music in order to make each segment characteristically individual. S4 uses constant development of texture and rhythm to achieve this unity and consistent integrity within itself, as if development and variation were the unchanging factors that identify the entire segment.

4.5 | Segment 5

The harmony of S5 revolves around segmental pc A. It can be described formally as including three large sections of music that can be interpreted as ABB’. All of the sections of S5 reinforce pc A as the primary tonal centre and do so without any modal inflection or tonicization; i.e., the reiteration of pc A is the most prevalent way that the segmental pc is established. In the first section of S5, the music is characterized by the use of spatial notation, indefinite pitch gestures (glissandi and ‘growl’ bowings), and an
overall lack of tempo, barlines, and meter. The texture and overall quality of this opening is not a clearly defined environment in terms of melody, rhythm, or colour. Depending on the preceding segment, the beginning of S5 could be perceived as an emergence that is still part of the music that came immediately before. In this way, S5 begins not by introducing new material but by extending the ambiguity of the transition that takes place during the first moments of S5. In effect, S5 could be considered to start once its B section begins at the quarter-note equals 160 “con brio” section.

The rhythmic intensity and even sixteenth-note pulse in the latter sections of S5 (B and B’) are a sharp contrast to this opening, and yet they flow out of the first section through an intensification of attack density and increase in volume. The B’ section of S5 was designed to absorb some of the high attack density that is in the foreground of the musical texture of the middle section and gradually return it to lower dynamics, and an overall less frenetic and active state. Similar to how the opening section extends the transition material into a larger portion of music, the B’ section also includes a gradual development ‘out’ of S5 and into the subsequent segment. The last five pitches of the cello solo during the final moments of S5 are centred on pc A but also allude to the segmental pc of S3. In this cello solo there is an implied F-major harmony that recalls the tonal centre of S3, and suggests a connection to that segment by way of the cello being the soloist in S3 and in these final moments of S5. FIGURE 20 shows the final measures of S5 and the F-major harmony implied in the cello line.

FIGURE 20

![Figure 20](image.png)

- PPPP

(continue repeating as indicated on the next segment)

The entire pitch collection of S5 only includes [A,B-flat,B,C,D,E,F]. These pitches are not introduced in their entirety until the B section of S5, and during the opening
material most of the pitch content is restricted to [A,B,C,D,E]. Once the B’ section begins with the quarter-note equals 60 measure, the pitch content is still restricted to the collection [A,B,C,D,E], and it is only at rehearsal “C” that we first hear F as an added pc to the collection. The chord one measure after “C” shows how the tritone interval B-F is emphasized on the two violins.

![FIGURE 21](image)

Although the chord on the third beat of the bar after rehearsal letter “C” is not the first instance of F, it is more prominent in this moment than in the previous bar considering the higher register and the larger span. Register in this B section of S5 was perhaps one of the most important agents of change that I was able to manipulate in order to provide contrast and change throughout the continuous and thick rhythmic texture. The opening bar of the B section, at the “160 con brio,” is a thick chordal texture with a very limited registral span. Slight increases and decreases in this span occur from the beginning of B through to rehearsal letter “D”. The introduction of B-flat is relevant in that it removes the segmental pc from the bass and creates a new harmonic context in which there is an expanded span in register. In fact, only four measures out of the entire second and third sections of S5 go below middle A or A3.
The figure above shows how the occurrence of B-flat in both instances signals a brief increase of span in register that goes below A3. All activity in the remainder of S5 takes place above A3 and is usually placed in closed position, leaving the least amount of intervallic space between vertical sonorities. The change in register and dynamic variation from rehearsal “C” to three measures after “G” are the main factors contributing to the drive of the segment. Culminating in the largest register span three measures after rehearsal “G” the segment begins to decelerate and conform to more even and quieter dynamics throughout the quartet.

The rhythmic homogeny of all the material three measures after “G” is contrasting to the interlocking rhythms and heterophonic texture of the previous section. However, this new section of music after “G” still shows no clear presence of a clear downbeat or meter.
Instead of using rhythmic dissonance the new material is made up of identical rhythmic gestures that switch between 3 to 4 sixteenth-note motives. The quarter-note pulse is still the underlying base on which these short bursts of repeated notes appear, but there is no sense of meter or phrase length that can be construed to form an evident pattern. Only when the upper strings at rehearsal letter “J” settle into the 3 sixteenth-note pattern is there a sense of uniformity or evenness of tempo. Once the motives are equal in length the cello introduces a melodic solo that continues to obfuscate the meter of the music and signals the beginning of the transition into the next segment.

4.5.1 | The number “7” in S5

The motives of S5 are symbols or representations of the number 7, which denote the number of segments that constitute Passenger. In FIGURE 23 the opening motive for the second section of S5 shows a 7-note rhythm with two pairs of eighth-note triplets and one quarter-note. The other motive comes from the third section of S5 where the continuous pattern of 4 sixteenth-notes followed by 3 sixteenth-notes creates a total of 7-note bursts that are repeated throughout this final section.

\[ \text{\underline{\text{\textbf{FIGURE 23}}}} \]

\[ \text{\underline{\text{\textbf{FIGURE 23}}}} \]

In addition to including “7” as the main number of the most prominent motives, S5 also alludes to the number “7” by limiting its pitch material to only 7 notes: A,B-flat,B,C,D,E,F. The last cello solo in S5 includes these 7 notes while the upper strings are mostly emphasizing A and C. The final chord in the upper strings includes A3,C4, and A4, which return to the more pervasive triadic language of the harmony in other segments.
4.6 | Segment 6

The use of flexible tempo and interval oscillation that characterizes the first violin’s part in S6 is reminiscent to rhythmic and motivic elements of S3 and S2. This was designed as a solo piece for the first violin with overlapping ‘interruptions’ or ‘commentary’ similar in nature to how the transitions connect one segment to another. The remaining three players, second violin, viola and cello, are used to produce these musical interjections but never feature more prominently than the first violin.

Harmony, and the way that it is manipulated in S6, plays an important role in developing the form as well as how it emphasizes B as the segmental pc. The harmonic consistency and its elaboration through different sections of this segment can be seen to delineate the shape of the segment while also maintaining motivic and stylistic unity. The opening material transitioning from the previous segment has a function of establishing pc B by oscillating between the lower and upper neighbour tones A and C respectively. In FIGURE 24 there is a reduction of the first violin’s harmony present in the entire opening of the segment.

**FIGURE 24**

![Image of musical notation showing harmony and tempo markings]

The black noteheads show notes of lesser importance in the harmony, so that the motion from B to A/F-sharp to C/D is the overriding melodic and harmonic presence of this opening. There is also a moment of emphasis in which A and C are highlighted without the lower F-sharp and D as shown in FIGURE 25.

**FIGURE 25**

![Image of musical notation showing emphasis and dynamic markings]
These chords shown in FIGURE 24 also show alternating harmonies as they revolve around B to create a parallel gesture between the motive and the harmony. As the background harmony ascends and descends to B, the eighth-note motive also oscillates to and from B. The tempo also mimics this alternation by fluctuating from slow to fast as indicated by the use of dashed lines above the first violin. Another instance of alternation also occurs in the metric subdivision of the bowing and beaming of the motive. In this case it is 3 quarter-note beats alternating to 2 quarter-note beats. In FIGURE 25, two measures before rehearsal “A”, it is also evident that there is a break in the continuous metric subdivision, and this is also paralleled by the alternating motivic gesture where each measure emphasizes A and C to finally conclude back at the segmental pc B. At this point in the music, the first interjection by another instrument is heard for the first time in this segment.

The pitch content of the cello and viola at rehearsal “A” through the “preludio” section on the first page of S1 is based on the neighbour tones A and C. The bass line in this section is made up of these two pitches and only when the viola and cello switch to a higher register and abandon these bass notes does the first violin proceed to the next section of S6. In this particular case the interjection or the background interruption instigates change in the leading violin solo.

The music of the “preludio” section continues to belong to the first violin and it is the first instance of triadic harmony in S6. A chordal analysis of this section can be found in FIGURE 26 to show the harmonic progression directing the development and change of this middle section of S6. This section is characterized by a strong presence of D-major that suddenly moves towards B-flat and finally returns to B.

**FIGURE 26**

The return of an alternating harmony comes back in the form of a deceptive cadence between the V<sup>6/5</sup> chord in B-flat major and its vi chord after the music modulates
to B-flat major. This modulation takes place just before the viola and cello begin their second interruption in the form of three short pizzicato gestures. The harmonic collection in the lower strings is a stark contrast to the B-flat major harmony in the first violin and it is juxtaposed here in the same manner that transitions operate throughout the entire piece.\(^29\)

When the segmental pc finally returns at rehearsal letter “C” it is first heard in the rest of the ensemble using very soft dynamics and a practice mute. The return of B also instigates a change in the solo violin as it begins to reiterate B once again as a tonal centre before proceeding to the next section of S6. At rehearsal “D” the first violin changes the harmonic context as it did during the “preludio” section, and in this instance the harmony treats the segmental pc as the dominant of E-minor. This change initiates the final harmonic progression back to B-minor by using E as the initial harmony in a progression consisting of iv - vii\(^o\) - i. In FIGURE 27 this section of music shows the first time in the segment where both the solo violin as well as the rest of the strings share harmonic goals towards the final cadence of B-minor before the transition material starts repeating. The first violin descends from its oscillating octaves down to B through the harmonic minor mode.

FIGURE 27

\(^{29}\) Most transitions follow this formula but considering that the repeated patterns of each segment are almost always reinforcing the segmental pc through reiteration, the movement from one segment to the next is harmonically consonant rather than dissonant as in the case of this particular moment of S6. See section “3.3.3.2 | Sample case of transition S5 to S3”.
The quick shifts in harmony coupled with the alternating motivic gestures characterize the essential features of S6. Its own transition from neighbouring tones to functional harmonic progressions are thematically connected to the way in which S3 and S1 establish their respective segmental pc, and it is unique within the context of Passenger for its stylistic use of baroque-like figures that reflect on the juxtaposition of styles with which to reinforce a tonal centre.

4.7 | Segment 7

One of the most distinct characteristics about the segments featuring the string quartet as a whole ensemble is the unification of musical goals as they are defined by the different musical elements of texture, rhythm, volume, and colour. Both in S1 and S5 the quartet moves in single musical gestures that do not combine multiple musical ideas, instead, these segments are defined by the way in which the entire quartet works to develop a distinctly unified and overall sound. In writing S7 it was my goal to set it apart from the other two segments featuring the ensemble by using the quartet as a whole and also having a strong connection to segments where individual players with solos were featured. The idea of having a segment in unison provided S7 with a unique monophonic texture where the quartet would be the ‘solo instrument’ and also strive to convey a specifically collective musical goal.

Starting with its own unique transition, S7 is the only segment that begins using the entire quartet rather than using a single player. The use of silence in this transition was favoured over the use of overlapping music as in the rest of the transitions of Passenger. In the transition to this segment the entire quartet interrupts the preceding segment’s repeating measures and performs a single gesture. After this short musical burst, the quartet initiates the repetition of the previous segment once again using the dynamics indicated in S7. The top system of S7 represents the entire transition for this segment and in FIGURE 28 it is possible to see how the direction of dynamics between the repetitions of the previous segments and the gestures of S7 are inverted. In effect, the repetition becomes more and more prominent by the fourth reiteration due to the increase in volume, while the interrupting gestures become less and less prominent as they begin to introduce the opening of S7.
In this segment the quartet moves as a single instrumental force in both transition and segment, and the overriding principle guiding the composition of this particular segment was melody and colour. The timbral profile of the ensemble includes the tension of the cello playing in uncomfortably high registers while the violins play well within their instrumental range. Indications such as *sul tasto*, *sul pont.* and the use of different vibrato rates and mutes also help to shape the melodic line beyond its contour and pitch content. The rests and silences within the short melodic fragments are essential components to the experience of the piece, and are notated in the score through the use of open style notation (See appendix B and FIGURE 29). The silence in these gaps has an indication that states *“silenzio assoluto in questi spazi”*, which is Italian for, *“absolute silence in these spaces”*.  

FIGURE 29
Similarly to other segments in which alternating back and forth between motives, harmonies, or rhythms was important, in S7, silences and musical gestures alternate with one another to build up the dramatic tension and promote an interpretative response from the listener. Although there is no explicit programmatic content intended for S7, or any other segment in Passenger, I felt that the tension of the musical fragments in combination with these silences was an intuitive response to composing a single melodic line. Much like a stepwise melody that is sung using text, this segment’s melodic line stops at the end of a sentence before continuing on to the next portion of the melody. These gaps are breathing points and important rests in how they can provide a space in which to contemplate and reflect what was just heard.
Chapter 5 | CONCLUSION

5.1 | Music perception

Passenger exists in 720 different arrangements of its 7-segment sequence. Each of these arrangements has the objective of being a unified whole that can be ‘reassembled’ for performance via overlapping transitions. Regardless of the order chosen for performance, all of the possible versions of the composition have a particularly different narrational profile based on the individual characteristics of the 7 segments. Despite obvious similarities between some possible versions (e.g. 1,2,3,4,5,6,7 and 1,2,3,4,5,7,6, or 1,5,6,7,4,3,2 and 1,5,6,7,4,2,3), the goal of this endeavour was not to create 720 different experiences, but 720 different experiences of the same content. The nuances between these experiences are of varying degrees and each of them contributes to the intelligibility of the material by way of altering the chronological arrangement and presentation of the music. If different arrangements of Passenger’s segments are distributed proportionally, it is possible for certain versions to be apprehended differently. One possible version could potentially arrange all solo segments at the end of the piece (e.g. 1,5,7,4,2,6,3), while another arrangement could have all of the solo segments in the middle of the work (e.g. 1,3,2,6,4,7,5).

It is also difficult at this point to anticipate or predict how specific listening scenarios could affect the overall appreciation of the work. For example, listening to three different versions of the work consecutively, or listening to only two versions could have a
different effect on the appreciation of each of the versions. Consecutive exposure to two versions of *Passenger* could promote familiarity to the content, and in this case the second listening experience could help establish more meaningful connections between the listener and the music that could lead audiences to ‘prefer’ the second version. But if three versions were to be performed consecutively there could be a potential for confusion and memory issues could arise between each of the three versions of the music. Ultimately, it is not central to the objectives of this work to determine the best possible environment or situation in which to perceive impermanent large-scale form. It is only the creation of a mechanism based on transitions that allows the possibility of rearranging fixed musical content. The potential comparison between versions and the possible conclusions that can be drawn from these experiences is a result of being able to convincingly reconfigure the large-scale form of *Passenger* into 720 contiguous versions. Issues involving music perception, influence, and music cognition are at the core of my own listening practice and constantly guide my compositional intuition, and so I value the unique chance that listeners may have to draw conclusions between different versions of this composition. Promoting self-made connections in listeners is one my hopes as a composer, and with *Passenger* it is evident that impermanent large-scale form can be an effective compositional device with which to promote this type of engagement.

Nicholas Cook argues that music is an interaction between a sound and a listener. His idea is rooted in the different ways a listener perceives or apprehends a musical work and the degree of interpretation that takes place during this exchange. After composing *Passenger* the question of how each segment would ‘interact’ with the perception of the listener became more and more important as I began to draw conclusions on what the effects of certain arrangements for the segments could produce for listeners. Each possible configuration of *Passenger* offers a chance to reconsider a previous interaction with the musical content, and therefore reevaluates the musical narrative of the composition as a regenerating factor of the particular listening experience rather than one that is only a re-apprehension of the work.

As discussed above, different versions of the piece will also result in different experiences at a superficial level—as in the literal perception of the work—while at the

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same time affecting a deeper perceptual level involving the imagination and perceptual connections made by the listener. The differentiation here is one made by Roger Scruton between a factual apprehension of the surface details and one that is based on the imaginative perception of the listener based on a voluntary interpretation of the object.\textsuperscript{31} I take his argument to be an accurate description of what is often referred to as ‘passive’ and ‘active’ listening. Active listening occurs when audiences are aurally engaged with the music beyond the surface characteristics of its composition, i.e. the factual information of musical elements. This mindfulness or practice of being ‘present’ in the listening experience also takes place when listeners are able to make interpretative responses based on the relationships and processes at work during the piece. Passenger’s impermanent large-scale form creates interconnectivity between segments and can promote active listening to take place by virtue of comparing two or more versions of the piece to one another.

The transitions between segments are of particular significance as they are not a constant between multiple versions of the piece. The emergence of new musical content within these transitions, provided by the overlapping of adjacent segments, can articulate the newness of each listening experience as these new musical capsules colour and are coloured by what precedes and follows them. The exposure to any given version of Passenger is perhaps more rich than the previous one, and I believe this is so because it demands of the listener to be more connected to his or her imagination as it influences the specific musical moment.

BIBLIOGRAPHY

Anonymous, ...Or Not To Be. A Collection of Suicide Notes, ed. by Mark Etkind. Riverheadbooks, The Berkley Publishing Group, 1997.


Dahlhaus, Carl. Schoenberg and the new music: Essays by Carl Dahlhaus. Cambridge University Press. 1987


Appendix B | PASSENGER - FULL SCORE

The score of Passenger exists in two different sized formats: 11x17 (landscape) and 13x19 (portrait). Each of these scores includes the seven segments of music in an unbound set to facilitate their reconfiguration according to the sequence chosen by the performers. The score in the present document is derived from the 11x17 inch score and has been reduced in size considerably to adhere to the formatting guidelines of this document. In this score the segments are arranged sequentially [1,2,3,4,5,6,7] and include page numbers that apply to individual segments and do not reflect an overall pagination scheme.

A full set of parts for individual players also exists where each segment is a full 13x19 single page or a full 26x38 inch spread. The oversized parts were necessary to avoid unnecessary page turns and to allow the reordering of the segments according to each of the 720 versions that are possible.
PASSENGER | FOR STRING QUARTET
Passenger is a multi-version composition in which the formal structure of the music can be reconfigured each time it is performed. The piece is heard as an uninterrupted and continuous flow of music, but its distinct 7-segment design allows the performers to decide on the chronology of the music’s structure by reordering the placement of these segments where each one of them is played once, and only once, starting with a fixed opening segment. All versions of Passenger are listed in the score so that performers have access to the different possibilities of arranging the segments prior to commencing rehearsals. Once the order of the segments is selected each segment connects to the next through a series of overlapping transitions that present a cogent listening experience without a break. The total number of possible versions for Passenger is 720, and comparatively, each of these renderings offers a wide degree of change that demonstrates how the music’s order influences each experience. Multiple listening experiences to any of the various versions of Passenger can represent for the listener alternative pathways with which to cover familiar musical material and articulate the compositional device that the composer describes as ‘impermanent large-scale form.’ The use of a reconfiguring structure in Passenger shows how form can be an agent of change capable of generating new and expressive methods of music making and listening.
Each of the segments in Passenger revolves around a tonal centre based on one of the following pitch classes: D, E, F, G, A, B, C.

The following score arranges the segments sequentially using the integers [1,2,3,4,5,6,7] as they apply to the corresponding degree of the scale described above. (e.g., Segment 1 “D”, Segment 2 “E”, etc…)

Page numbers on the score apply only to the segment on that page and do not reflect a global pagination system.

Measure numbers throughout the score are omitted as there is no permanent order for the segments. In each segment measure numbers would also be inconsistent considering the inclusion of spatial notation and ubiquitous absence of barlines for portions of the ensemble.

All accidentals last for the entire measure and are cancelled in the next bar.

Transitions are the material that is repeated at the end of each segment and continues to repeat as indicated in the subsequent segment. Any mutes, bowing positions, vibrato indications, or any special instructions on vibrato or articulation are cancelled at the end of each transition.

Whenever possible, Passenger should be performed twice in the same program. The list of possible versions is listed here to facilitate selection and to keep track of which versions have been performed.
SEGMENT 3

\[ \frac{d}{4} = 105 \text{ Con brio e pesante} \]

\[ \frac{d}{4} \approx 85 - 100 \text{ quasi "cadenza"} \]

\[ \frac{d}{4} = 72 \]

\[ \frac{d}{4} \approx 100 \text{ without mute} \]

\[ \frac{d}{4} \approx 82 \]

*Noteheads under all feathered beamings and tremolo durations are an approximation only. Additional notes may be used at the performer's discretion.

**Bowed tremolos should always be introduced gradually and should always transform seamlessly back to bowed tremolos.
SEGMENT 5

* Noteheads under all feathered beamings are an approximation to the actual number of notes played. Additional notes are suggested at the performer's discretion.
* This dynamic may not be sufficiently loud depending on the preceding segment; adjust dynamic and playing style to match the surrounding texture.

** Pluck only the first note that falls under the slur while trilling to the upper note. Re-pluck as indicated and add or subtract notes as necessary in order to produce a gesture of the indicated length.
“над пустынным ландшафтом замерзшей земли,
где хранители божия звенят колокола,
я оставлю это место навсегда – снег заметет мои следы.”

* The following dynamic markings are “performed” rather than heard due to the practice mute. In this case, the actual dynamic may be closer to PPPP.