STRUCTURAL TENSION IN JONATHAN HARVEY’S *STRING TRIO AND SLATE REPRESENTATIVE*, AN ORIGINAL COMPOSITION FOR AMPLIFIED QUINTET

by

Ramteen Sazegari

B.A. in Music Composition and English Literature, University of California, Davis, 2007
M.M. in Music Composition, Illinois State University, 2010

Submitted to the Graduate Faculty of the
Dietrich School of Arts and Sciences in partial fulfillment
of the requirements for the degree of
PhD in Composition and Theory

University of Pittsburgh

2017
UNIVERSITY OF PITTSBURGH
DIETRICH SCHOOL OF ARTS AND SCIENCES

This dissertation was presented

by

Ramteen Sazegari

It was defended on
April 18, 2017
and approved by
Amy Williams, PhD, Associate Professor
Eric Moe, PhD, Andrew W. Mellon Professor
Mathew Rosenblum, PhD, Professor
Nancy Glazener, PhD, Associate Professor

Dissertation Advisor: Amy Williams, PhD, Associate Professor
With this study, I uncover specific techniques and structural components that are used to clarify the musical discourse in Jonathan Harvey’s *String Trio* (2004). The *String Trio* is an important work, as it distills his diverse interests (including electronic music and philosophy gleaned from Buddhism) and concentrates them into an entirely acoustic medium. Among the most integral components of the piece are the two styles of temporal unfolding that influence and contextualize time and structural elements differently. In addition to this, there are two musical characters, which Harvey describes as rustic and sacred, that inform the musical discourse. Lastly, coordinated vertical harmonies contextualize the formal partitions in the work.

The conceptual and philosophical aspects of Harvey’s music were often closely linked to his religious beliefs. As a devout Tibetan Buddhist, the concept of “emptiness” was influential to him creatively. Harvey believed that a piece of music was “empty” if its structural parameters and components were planned, but also mysterious and changeable. Given Harvey’s fluency in classical and experimental concert music, the *String Trio* yields a uniquely variegated formal plan. With this dissertation, I show how the aforementioned integral structural components of the *String Trio* define the structure of the work, and how they promote tension within it.

In my original composition *Slate Representative* for amplified quintet (flute, clarinet and string trio), I aimed to create a work that balanced a fluency in the utilization of classical and experimental approaches, not unlike Jonathan Harvey’s approach in the *String Trio*. The piece is scored for five instruments, yet the instruments do not have an equal role in terms of sonic
distribution. All voices are equally vital to the fabric of the music, but since the goal of this work was to create a specific tapestry of sound, an uneven compartmentalization of instrumental forces proved to be necessary.
TABLE OF CONTENTS

PREFACE........................................................................................................................................... VIII

1.0 INTRODUCTION................................................................................................................................. 1

2.0 BASIC FORMAL DELINEATIONS AND STYLES OF TEMPORAL UNFOLDING ....................................................... 8

3.0 SMALLER-SCALE FORMAL IMPLICATIONS AND OVERARCHING STRUCTURAL TENSION ..................................................... 17

4.0 SECTION I - CORE HARMONIC MATERIALS AND OPPOSING CHARACTERS.......................................................................... 21

5.0 SECTION II - TECHNIQUE COMBINATION, COVERT TENSION AND THE SPECTRAL INFLUENCE ON THE STYLE OF TEMPORAL UNFOLDING .................................................. 27

6.0 SECTION III - RETURN TO RUSTICITY AND GLOBAL HARMONIC STRUCTURE ........................................................................... 33

7.0 CONCLUSION....................................................................................................................................... 40

BIBLIOGRAPHY .......................................................................................................................................... 42

8.0 SLATE REPRESENTATIVE FOR AMPLIFIED QUINTET ......................................................................................... 44
LIST OF FIGURES

Figure 1. Gérard Grisey’s “Scale of Predictability” .............................................................. 10
Figure 2. Instances of the identifiable melodic theme at the outset of each section ............... 15
Figure 3. Formal parameters of the String Trio ........................................................................ 20
Figure 4. Example showing the emphasis of the [0,2,7] at the beginning of the work .......... 21
Figure 5. Example showcasing fundamental harmonic content unfurling horizontally .......... 22
Figure 6. Example of the [0,2,5] gesture/motif ..................................................................... 23
Figure 7. Example of [0,2,5] emphasized vertically ................................................................. 24
Figure 8. Example of the harmonic amalgamation at the end of Section I ............................. 25
Figure 9. The opening measures of Section II ......................................................................... 28
Figure 10. Example of gestural/rhythmic development in Section II .................................... 28
Figure 11. Example of timbral development in Section II ....................................................... 29
Figure 12. Disruptive activity at Rehearsal K ......................................................................... 30
Figure 13. Example of the opening passage of Section III ...................................................... 34
Figure 14. Example of vertically emphasized harmonies in Rehearsal O ............................... 35
Figure 15. Intervallic correspondence and harmonic amalgamation in Rehearsal U ............ 37
Figure 16. Important vertical harmonic emphases in the String Trio ...................................... 38
Figure 17. Arrival at the pure rustic state in Rehearsal V ....................................................... 38
I would like to especially thank my dissertation advisor Amy Williams for her support and guidance. I would also like to thank the rest of my dissertation committee — Nancy Glazener, Eric Moe, and Mathew Rosenblum — for their insight and support.
The *String Trio* (2004) is an important work by Jonathan Harvey, a rare example that displays the mature culmination of the British composer’s distinctive artistic vision. It is a seamless integration of timbral manipulation processes and spiritual philosophy, as well as both conventional and experimental compositional techniques. A striking feature of this purely acoustic work is that the techniques used for timbral transformation and gestural manipulation are reminiscent of those in Harvey’s electronic music. Other techniques that Harvey refined throughout his career — including his subtly discursive approach to form — are also present in this work and reveal a resoundingly strong philosophical resonance with his spiritual beliefs.

Harvey’s later works are characterized by a fusion of techniques that were amassed over the entire span of his career. He employed serial procedures along with canons, variations, aleatory and, most prevalently, the manipulation of timbre. During Harvey’s early active years, a focus on experimentation permeated the realm of art music. One key difference between Harvey’s compositional approach and that of many of his contemporaries is that he was not only able to balance conventional modes of musical technique with experimental ones, but his unique musical voice was formed in doing so.

Harvey's spiritual interests led him to continually shape outlets for his explorations; the conceptual and philosophical aspects of his music were — at least in good part — linked to his
religious beliefs. As a devout Tibetan Buddhist, the concept of “emptiness” became integral to his late work. He explained:

[…] what we love in music is what we call emptiness. It is a kind of reality that is being shown us in as clear as possible way in this serious art of music. Not in bad music, but in music that we call good. We call it good, because it is empty. That is really my thesis. If it is banal or chaotic, then it doesn’t have emptiness. If it is somewhere in between there and it has something ambiguous, subtle, teasing, mysterious, or all the other magical things we want in music then it is because it is empty (Jenkins & Harvey 2006: 223).

The most interesting component of Harvey's understanding of emptiness is not how he defined it, but how he justified a representation of it through his work. Harvey saw emptiness, in this context, as the presence of constructed illusions based in reality. Instead of simply insisting on these constructed illusions, or the pre-existing conditions affixed to reality, he felt as though he should create an illusion to exist alongside reality — aiming to represent and interpret reality by proxy, through metaphor. A work had to uphold and propagate “subtle, teasing, mysterious” qualities but, in order for them to project, the foundational structure had to maintain a cogency, an inner logic. Indeed, such a creation could be synonymous philosophically with the illusion of reality. He explained:

The buddhist view of reality as lacking inherent existence from its own side is one of the most important insights into the ‘reality’ of music that I know. With a deepened understanding of this view comes a sense of impermanence, flux, insubstantiality, spaciousness and indeed tranquility. I have been very interested therefore in allowing the instability, the changeability, of music to be brought to the fore (Cross, Harvey, Klein, Lachenmann, & Wellmer 2004: 43-44).

For Harvey, the literal, or even the metaphorical application of a Buddhist philosophy to sound clearly influenced the nature of how he approached the transmission of sound, as well as the space in which the instruments transmitted both physical and sonic gestures within organized parameters. In his words:
The projection of the quartet into six or eight loudspeakers arranged around the hall meant that very tiny sounds could be amplified and used as musical substance [...] when such indeterminate noise is treated with various pitch multiplications the effect is of musical shadows — of shadows being structuralised. Often the sounds are so soft it is almost as if silence itself is moving. And a continuous sound on the rib of the instrument is fodder for the spatialisation to construct a “metaphysical” rhythm, even a rhythmic thematicism. In Buddhist terms this struck me like the action of karma in one's life. All one's actions have consequences and they follow “like the shadow of a body”, inseparably and invariably...karma is thought of as, ultimately, an illusion; so I thought of these shadowing sounds [...] as having a strong illusory quality to them [...] (Cross et al. 2004: 44-45).

This excerpt is a reflection of the work he did with the Arditti Quartet at IRCAM with respect to creating his *String Quartet no.4*, a large work with the use of extensive electronics, written one year before the trio. While some previous (as well as subsequent) works do not make use of electronics, the psychological approach to creation was the same. Harvey often understood the elements and textures of his music through metaphor; he used poetic terms to define the sonic identities that interacted with the technical processes present in the work.

As the description of the processes in his fourth string quartet might imply, Harvey was unrelentingly broad-minded in regard to the compositional developments of the twentieth century. He was opposed to dogma with respect to stylistic differences, and he drew resources from many contemporary styles. Due to the powerful “illusory” effects that could be achieved, Harvey was prone to the use of timbre manipulation, and as such, spectralism was of great interest. As Harvey stated:

[...] I find those composers working today who are completely untouched by spectralism are at least less interesting. History seems grand, for once; spectralism is a moment of fundamental shift after which thinking about music can never quite be the same again. Spectral music is allied to electronic music: together they have achieved a re-birth of perception [...] spectralism in its simplest form as color-thinking, is a spiritual breakthrough (Harvey 2001: 11).
Harvey’s description of spectralism as “color-thinking” was filtered through his subjective terms, and the influence on his music — most imperatively on the *String Trio* — is quite clear. In fact, after reviewing his sentiments on how he organized his fourth quartet, it is plain that he used techniques directly influenced by spectral tenets in the *String Trio*. Through these techniques, he was able to summon an effect similar to that of the “illusory” sounds born from the synthetic avenues of electronic music, as well as engage the music from different temporal viewpoints. While the different approaches to temporality add complexity to the work (most especially within the formal structure), the spectrally influenced techniques are seamlessly integrated with more traditional compositional approaches.

Unsurprisingly, stylistic integration is fundamental to the framework of the *String Trio*, and is approached in such a way that promotes equanimity amongst its structural elements. By blurring the respective stylistic identities of these elements, the “ambiguous, subtle, teasing, mysterious” traits of the music are brought to the fore. Disparate gestures and pitch constructions exist in various combinations to create the work’s architecture on both a micro and macro level.

Harvey wrote about the experience of writing his *String Trio* after having composed all four of his string quartets. After creating these large, sonorous works, he felt that composing a trio would be exposing. He came to realize that this was, at least in part, a limitation to be embraced rather than rejected. He stated:

> There is even less possibility of ‘ensemble texture’ than in a quartet, every note and sound is an individual assertion, strongly expressive almost in a way that a solo is. On the other hand, that can be quite a liberating situation: it is no longer so necessary to think vertically. The three players can pull apart and meet up at certain places (Harvey 2004: iii).

Harvey’s description is immediately aurally discernible. Indeed, much of the harmonic material and gestures in the work are organized horizontally. While the trio does coalesce in
important places, essential periods of high activity are focused on differentiated soloistic
textures. This highlights an essential mystery of the piece — while instruments are often
individualized, the work ultimately reflects a tenuous, ensemble-based texture. Harvey gives a
few more key notes that help to discern the materials of the trio:

    [...] there are two main (and contrasting) types of music — the rustic and the
    sacred. The rustic is folkloristic, and the sacred is derived from my liturgical
drama “Passion and Resurrection” - the music associated with the discovery of the
empty tomb on Easter Sunday.

    The collision of these two moods is the energising spark of this fifteen-minute
work [...] (Harvey 2004: iii).

These contrasting identities manifest throughout the work; their interactions serve to
anchor and propel the musical discourse. Before progressing, it is essential to further elucidate
how the “rustic” and “sacred” characters are to be identified throughout the analysis. Since there
is little danger in conflating or confusing the representative aesthetic or gestural identity of the
“folkloristic” and “liturgical” characters, it is safe to assume that sprightly, raw, mercurial, and
joyful musical characters are rustic. In following, musical characteristics that relate to stasis and
reflection fall under the category of the sacred. The working relationship between these
characters is analogous to Harvey’s understanding of emptiness — that successful artworks
avoid pure banality, and conversely, pure chaos. The ebb and flow of tension brought about by
these seemingly opposed identities is immediately discernible, and the rate and proportion of the
interchange heightens the intensity and character of the tension throughout the work.

    Just as the terms “rustic” and “sacred” require definition, it is likewise imperative to
define how the term “tension” will be used throughout the analysis. In discussing the approach to
creating emptiness in a work, Harvey stated that “things change into each other and set up
seemingly strong ideas and dissolve them” (Jenkins & Harvey 2006: 224). This description
adequately explains how tension functions as a dissolution or redirection of expectation in the *String Trio*. For example, tension is created when a sense of directionality or identifiable musical features are subverted or obscured. In following, tension is born from the creation and maintenance of anticipation within the formal construct. In essence, tension arises when strain is born from unresolved negotiations between the components that make up the work. While it might be tempting to identify Harvey’s music and philosophy as exclusively propelled by inward, subjective, and spiritual means, it would be a mistake to do so. Clearly, he incorporated more into his art than simply that which was propagated by his own beliefs. Harvey’s respected position in the canon of contemporary art music is defined by his unique synthesis of both objective (culturally edified and substantiated) parameters and the intensity of his subjective vision. His mastery of the processes tied to these reconciliations resulted in subtly crafted “illusions” — those integral to his art.

With this study, I intend to uncover specific techniques — as well as harmonic and gestural qualities — that are used to develop the musical discourse. There are two styles of temporal unfolding in which the work operates. First, there is a style of temporal unfolding where gestural ideas and cells of activity cycle through to others in an expedient and directionally linear fashion. Second, there is a spectrally influenced style of temporal unfolding concerned with nuanced sound production, which is directionally ambiguous. In addition, I will analyze how the two characters — rustic and sacred — interact.

---

1 A term used by Jeffery J. Hennessy to explain the perception of how music unfolds in time (Hennessey 2009: 38). The full quotation and contextual explanation are presented in Chapter 2.

2 The initial style of temporal unfolding, where cells of activity cycle through to others in an expedient, and directionally linear fashion is not dependent on a specific process. An aural connection between cells is perceptively sought after in this situation, the sense of directionality shaped by the character of the musical cells, as well as the relationship they have to each other.
The ultimate goal is to show how these formal elements coalesce to create an overarching structure that aligns itself philosophically with the core principles of emptiness as Harvey understood them — specifically, how these elements simultaneously define the structure of the work, and how they promote tension within it.
A definitive characteristic of spectralism has to do with the approach to audio production by acoustic instruments. Often through spectralist means, a focus is placed on the nuanced variation of pitch material and timbral morphology of sound. In the 20th century, there were a number of composers linked to this practice, and naturally, they approached it differently. As theorist Robert Hasagawa states:

Each of these composers defines ‘spectral music’ differently [...] as a generalisation we could say that the essential characteristic of spectralism is the dissection of sounds into collections or overtones as a major compositional and conceptual device. Spectral composers use the acoustical fingerprints of sounds — their spectra — as basic musical material (Hasagawa 2009: 349).

Certainly, this description suffices to explain the fundamental criteria of those involved with spectralism. With a spectral approach to audio production, a dynamic range of timbre and pitch emanating from a single instrumental source becomes possible. For example, an instrument produces a sound, the evolution of which can be “analysed into a set of partials of varying frequencies and amplitudes [...]” (Hasagawa 2009: 350). It follows that, from a compositional standpoint, formal parameters would be constructed with drastically different considerations than works not spectrally inclined.

What is radically different in spectral music is the attitude of the composer faced with the cluster of forces and faced with the time needed for their emergence. From its beginnings, this music has been characterized by the hypnotic power of
slowness and by a virtual obsession with continuity, thresholds, transience and
dynamic forms. It is in radical opposition to all sorts of formalism which refuse to
include time and entropy as the actual foundation of all musical dimensions.
Strengthened by an ecology of sounds, spectral music no longer integrates time as
an external element imposed upon a sonic material considered as being ‘outside
time,’ but instead treats it as a constituent element of sound itself. The music
forces itself to make time palpable in the ‘impersonable’ form of durations;
apparently far removed from spoken language, but doubtlessly close to other
biological rhythms which we have yet to discover (Hennessey 2009: 37).

The preceding quote was stated by French composer Gérard Grisey (1946 - 1998), a
leading dignitary of the spectralist approach to composition. Grisey gave an important lecture
describing his views on temporal organization and time in music. He referred to the core concept
of perceived time — as it relates to literal duration — as the “Skeleton of Time.” Theorist Jeffery
J. Hennessey described Grisey’s viewpoint:

Grisey maintained that the temporal divisions of the skeleton are not immediately
discernible. In other words, the crude arbitrary measurement of musical events in
terms of seconds is of no real consequence to the listener. However, the temporal
unfolding of musical events does, in Grisey’s view, affect the degree of
predictability of musical units. This, in turn, plays with a sense of expectation,
which ultimately alters the underlying sense of rhythm (Hennessey 2009: 38).

It was through this concept that Grisey’s “scale of predictability” came to fruition. This
scale is a useful lens to see Harvey’s String Trio through, and it serves to clarify specific choices
made in the String Trio that otherwise might seem confusing.
As the above chart indicates, Grisey qualified predictability with respect to repetition of musical cells and dynamic control; there are links that connect “Maximum Predictability” with “Order,” and “Zero Predictability” with “Disorder.” In an effort to embody emptiness (by creating tension within the parameters of a formal construct), much of Harvey’s String Trio functions somewhere in between these states. In addition to the “Skeleton of Time,” Grisey also qualified the more subjective experiences of time. The “Flesh of Time” is representative of “the more qualitative, phenomenological, and psychological aspects of musical time” (Hennessey 2009: 38). This concept is directly linked to the predictability of sound (as well as audibility and pre-audibility), rather than the predictability of musical units. As Grisey thought, according to Hennessey:
Grisey believed that composers have control over this qualitative time by considering the differences perceived between sounds and the degree of “preaudibility” of a future sound. Sounds that become predictable (or preaudible) allow for an expansion of time and a greater focus on the internal dynamics of the sounds themselves. Unexpected sonic jolts cause time to contract, eliminating preaudibility, forcing the listener to confront a future time point. (Hennessey 2009: 38)

It is clear that specific portions of the work — notably the second large-scale section — could be understood as sharing a good deal of similarity with Grisey’s “Flesh of Time” concept.

The formal organization of the String Trio implies different structural skeletons with respect to the macro and micro scales of the work. In the broadest sense, the work can be partitioned into three large sections. These sections are fairly balanced in terms of real time:

- **Section I**: opening of the piece to the end of Rehearsal E (~ 4’ in duration)
- **Section II**: Rehearsal F to the end of Rehearsal K (~ 4’ in duration)
- **Section III**: Rehearsal L to the end (~ 5’ in duration) (Arditti Quartet 2009)

The first section cycles through radically contrasting and clearly delineated cells of activity, promoting the illusion that the entire work evolves in a developmentally linear fashion (where gestural ideas and cells of activity — or ‘temporal unfolding of musical events’ as Grisey would put it — cycle through to others expeditiously). In this first section, the rustic and sacred identities are largely presented in a segregated way, establishing disparate, clearly demarcated materials. Section II draws from gestural materials established in Section I, but subverts the style of temporal unfolding used in Section I by maintaining a disquieting static identity for an extended period. In Section II, elements evolve and fold onto themselves — in contrast to the block-like structures of the first section — and the ensemble is heard as a variegated but singular entity. This initially results in creating an instrumentally indistinguishable polyphony amongst the ensemble, which eventually transforms into a blended sonority by the end of Section II. The
texture is emboldened by the predominantly sacred character of the section, only transitioning to the rustic character near the end of Rehearsal K. The transition is ultimately stymied; Section III slowly emerges out of the distilled sacred state established by Section II, transitioning anxiously towards rusticity. The reemergence into the rustic character unfolds gradually and deliberately, culminating in a dramatic conclusion.

The overarching form of the *String Trio* is detectable after a few close listenings. In Rehearsal F, the polyphonic texture of the ensemble emerges, simultaneously trading the more linear form of temporal unfolding (in Section I) for a more ambiguous one (in Section II). The shift in focus at Rehearsal F is a clear indication of sectional transition. Not only is the established pacing of the block-like cells dissolved almost immediately, but the mood is — almost confusingly — completely reset. While Section I comprises somewhat of a balance between the sacred and rustic demeanors, the second section poses a more continuous insistence on the sacred.

Analyzed through the filter of Grisey’s “scale of predictability,” the rate of development in Section I — in terms of how radically gestural cells are cycled through — hovers around an average/slight predictability, inhabiting the realm of a “fuzzy periodicity.” Since this level of periodicity is established and maintained over the course of the first section, it is safe to infer that the predictability escalates as it reaches the concluding measures of Section I.

The opening of the second section engages a sharply contrasting style of temporality; as such, “zero predictability” is approached, where longer durations of musical cells — in relation to those active within the style of temporal unfolding that precedes them — are unpredictable. Indeed, the continuous texture of Section II is only unpredictable in relation to the radical shifts

---

3 See chart of detailed formal delineations and predictability in Chapter 3.
of textures and materials of Section I. Given that Section II maintains a level of periodicity over the vast majority of the second section, the predictability quotient escalates just as it did in Section I.

Section II showcases a clear spectral influence — notions of audibility, timbral identity, and the composed interaction between the two are not only at the forefront of the sonic experience, but at the root of how the discourse unfolds. Grisey’s interest in the psychological aspects of listening can be attained through a specialized form of time management, one that focuses on transitioning states of sound. Hennessy’s description of Grisey’s “Flesh of Time” concept argues that when sounds become predictable, time dilates, and the subtleties of the sounds themselves are revealed. This description is strikingly applicable with respect to large portions of the String Trio — most especially Section II. The spectral influence on the section is brought about in a number of ways. Firstly, while the second section develops — in terms of temporal unfolding — differently than the first section, it also functions as a kind of traditional development section of the work. As such, arpeggios, tremolos, and other gestural figures from Section I are repeated exactly. Additionally, they are manipulated and extended in Section II. Secondly, Section II maintains a generally soft dynamic level and crescendos/decrescendos often bring the music out of or into near silence. These two aspects allow the ensemble to become an organism of complex gestures; the quiet dynamics not only focus the organism into a tightly knit polyphonic network, but also inspire a close listening of the ensemble’s processes (not unlike the act of tracing the evolution of sound in spectral music). Lastly, in concert with other techniques employed towards the end of timbral development\(^4\) much of the music in Section II makes use of harmonics. Where louder, gritty, disjunct lines are associated with the rustic character, quiet lines

\(^4\) These are discussed further, and with graphic examples in Chapter 5.
with consistent use of harmonics are more sacred in character. The ethereal quality of the string harmonics — along with the aforementioned approaches — align to aesthetically and formally define the majority of Section II. Indeed, these compositional choices reflect an organic version of the “strong illusory” qualities Harvey described with respect to his fourth quartet.

As previously stated, Section II maintains a sense of stasis for an extended period. In fact, the duration of the second section nearly matches that of the first, which is initially quite jarring. Given the shift in style of the temporal unfolding between Sections I and II, the musical discourse feels as though it has been hindered.\(^5\)

Through the combination of the aforementioned techniques, Section II alludes to core tenets of the spectral approach. As discussed, when instruments make use of their spectra as fundamental material, they produce a wide range of timbre and pitch. When the ensemble interacts polyphonically, its identity is akin to that of a singular, but variegated force. Spectral music calls for an alternative approach to time management; the music of Section II follows suit. As such, Section II also makes use of time in a substantially different way than in Section I; Section III, on the other hand, draws from both styles of temporal unfolding used by the sections that precede it.

Unquestionably, the style of temporal unfolding is integral to the definition of each section’s identity and purpose within the overarching framework. Additionally, a repeated, identifiable melodic theme demarcates the onset of each section, serving as a notice that a new stage in the work is reached. With each restatement of this sectionally related theme, attention is reset from the preceding activity, making way for the respective shift in type of temporal unfolding.

\(^5\) In fact, although Sections I and II are similar in terms of duration in real time, Section II feels longer with respect to perceived time. This generates tension with respect to the overarching formal plan as the expected onset of Section III feels delayed.
Each iteration of this theme is varied, but its diatonicism (with microtonal inflection) and contour are immediately recognizable.

Comprised of major seconds and minor thirds, the theme is initially presented in the viola at the beginning of the work. In Section I, it is not as clearly identifiable, since it is dispensed quickly and obscured by a raucous pseudo-canon with the violin. In Rehearsal F, the theme appears in the violin. This time, it is presented more clearly and patiently, aligning with the sacred character that begins Section II. As the last identifier of large scale sectional transition (between Section II and III), Rehearsal L finds the viola restating the theme. This time, however, the function of the theme is decidedly different than when it is used similarly from Section I to II. In Section II, disorder and unpredictability are triggered by the theme. In this sense, the theme functions as an example of an inwardly posed “sonic jolt,” propagating the recontextualized temporal behavior that defines the upcoming section. In Section III, the theme also aligns with a shift in temporality, but a far less abrupt transition ensues (relative to that between Section I and II). Section III cycles through clearly defined gestural cells, but only after gradually evolving out of the largely blended sonority formed by the end of Section II. Thus, the transition between Sections II and III, when analyzed through the filter of Grisey’s “Scale of 6⁶

Comprised of major seconds and minor thirds, the theme is initially presented in the viola at the beginning of the work. In Section I, it is not as clearly identifiable, since it is dispensed quickly and obscured by a raucous pseudo-canon with the violin. In Rehearsal F, the theme appears in the violin. This time, it is presented more clearly and patiently, aligning with the sacred character that begins Section II. As the last identifier of large scale sectional transition (between Section II and III), Rehearsal L finds the viola restating the theme.
Predictability,” is more subtle than that of Sections I and II. By the end of this transition — and throughout the final section — the trio rediscovers the rustic identity after having enveloped and projected the sacred one for an extended period of time.

When the entire form of Harvey’s trio is viewed through Grisey’s framework of predictability, the trio navigates through areas of “order” and “disorder”, and it often does so by stages — creating an air of slight predictability. This contributes to the burgeoning mystery that pervades the work. A push and pull between characters and temporal styles is established, with neither identity insisted upon. It should be noted that the transition between Sections I and II presents the most seismic elision. Elsewhere, only gradual shifts are apparent. All of this contributes to the mystery of the piece, the ebb and flow between the rustic and sacred in the String Trio embodies the application of Harvey’s philosophy of emptiness. The intensity of the transitions between the two styles of temporal unfolding is unevenly imposed when the structure of the entire piece is considered, and this corroborates the illusion that flux occurs erratically, even when structurally contained.
3.0 SMALLER-SCALE FORMAL IMPLICATIONS AND OVERARCHING STRUCTURAL TENSION

As suggested earlier, there are various ways to perceive the formal skeleton of the work, depending on how broad or narrow the analytical focus is. The broader (core) partitions of the work have been outlined, but equally interesting — and essential for the purposes of the work’s construction — are the junctions between these partitions. An inspection of the synapses that join these large-scale partitions not only give way to alternate interpretations of the formal structure, but reveal the underlying tissue that binds components of the work. This is, in part, a testament to the complexity and richness of the work’s structural blueprint.

Embedded within the transition between Sections I and II lies a prime example. In the first section — spanning from the introduction to the end of Rehearsal E — the constant contrast of materials makes clear the subsections within the core section. As such, there is a smaller-scale partition that delineates the two halves of Section I (Introduction - A, B - E). Rehearsal B plays a peculiar role in the first section — the near stillness of the music suggests a strong movement away from the energetic music of the introduction. Furthermore, the tranquility of Rehearsal B seemingly foreshadows the burgeoning motives of Rehearsal F, serving to trigger the start of the second section. The connection between Rehearsal B and F links adjacently situated core sections; therefore, Rehearsal B could be said to overlap into the beginning of Section II.
The notion of constituent subsections that serve to comprise core sections of a work is not wholly original, but having these structures bleed into adjacent sections is certainly a more subtle approach. Section I can be divided into two subsections — A and A’. However, as discussed, it becomes evident that these partitions serve a greater purpose than simply diversifying the content of the section. A’ serves as an alternate starting point for Section II. This technique permeates the entire piece, creating an underlying, alternative formal plan that runs parallel to the more broadly defined formal structure.

Section II is unquestionably the most mysterious of the work. As discussed, the spectral influence on the section promotes a sense of stasis relative to the style of temporal unfolding with which Section I operates. As such, its smaller-scale partitions are more difficult to detect. However, there are conspicuous indications of separation in the score. The character of the music in Rehearsal F and G is consistent, save for two solo viola tremolos that smoothly transition into Rehearsals H and J, respectively. Rehearsal J is the most notable shift in tone — a subtle one. Thus, Section II contains two partitions (F - I, J - K), which can be labeled B and B’. Although Rehearsal K carries a spare, cadenza-like identity, it prepares for and predicts the intensity of Section III through its raucous, folkloristic character. For this reason, the music of Rehearsal K can be seen as overlapping into Section III.

The third section focuses on both the rustic and sacred characters as well as the contrasting approaches to temporal unfolding from Sections I and II. This final core section is subdivided into three smaller sections (L - O, P - U, V - Z). The first subsection, C, spans from the opening of Rehearsal L to the beginning of Rehearsal P. Here, the most extended, crystalline iteration of sacred music since Section I is presented. For the most part, the subsection poses two contrasting textures against each other. The reemergence of the glissando-smears (debuting in
Rehearsal C) in both the violin and cello contrasts with the viola, which iterates the sectional theme. Subsection C then cycles through many of the various gestural identities that have been associated with the viola throughout the work, slowly becoming more active.

Because this subsection projects the sacred identity in such a clear way, with themes that have been significantly developed, there is an air of finality. As such, it is reasonable to interpret this as an alternative ending to Section II, or more precisely, that the second core section overlaps into and throughout the first subsection of Section III.

The music at Rehearsal P represents a divergence from the sacred, signifying the second subsection, C'. The quicker tempo, individualization and partitioning of the trio into distinct layers, and use of extended techniques blur the pre-existing focus on the sacred. The second subsection largely functions as a transition from subsection C to C", slowly becoming more raucous as it unfolds. It is within this second subsection that the style of temporal unfolding from Section I becomes more and more incorporated. While there are no sharp demarcations between cells, a sense of directionality is increasingly restored. Starting at Rehearsal Q, the focus becomes clarified; the ensemble inches towards a homophonic rhythmic texture, and the pulse becomes more clear. The erratic, independent character of the ensemble (before Rehearsal Q) begins to coalesce at Rehearsal Q, empowering the transition from the sacred to the rustic identity. The inherent anxiety born from the unanchored state enhances the transparent directionality (as well as the predictability) of the music. Logically, the transition from sacred to rustic is linked with a return to the work’s initial style of temporal unfolding.

The intensity at Rehearsal U, strategically fashioned to erupt into the third subsection, unifies the rhythmic and pitch components of the trio. Rehearsal V initiates the final subsection of Section III. C" is defined by the grand arrival of the purely rustic character. After various
subversions of expectation with respect to directionality and interaction between rustic and sacred characters throughout the work, this final subsection leaves nothing to ambiguity. A destination is unquestionably reached, and as such, more tension is released at the onset of Rehearsal V than in any other measure in the piece.

Figure 3. Formal parameters of the String Trio

The formal properties of the String Trio are clearly vital to the philosophy of the work. Other components of the work are — in part — designed to uphold the framework of the form. The harmonic materials aid in shaping melodic and gestural content (as most harmonic materials do universally). Secondly, and more importantly, they serve as an underlying structural glue that provides ultimate unity within the piece. Various compositional techniques — canonic and gestural elasticity, pitch set manipulation, and combinations of gestural figures — embolden the aesthetic of the rustic and sacred identities, as well as aid in defining the given style of temporal unfolding active at any point in the work.
4.0 SECTION I - CORE HARMONIC MATERIALS AND OPPOSING CHARACTERS

The introduction of the String Trio — the material before Rehearsal A\(^7\) — has a strong profile. The high energy pastoral flair of the opening summons a feeling of improvisation, due in part to the audible tuning, which the violin and viola are instructed to do “roughly,” stopping their highest string a quarter-tone sharp. Although brief, the stacked fifths project the set \([0, 2, 7]\)^8, a harmonic unit that proves to be foundational by the end of the section.

![Figure 4. Example showing the emphasis of the [0,2,7] at the beginning of the work (Harvey 2004: 1)](image)

---

\(^7\) Often, rehearsal markings correspond with the different musical cells that comprise the work. Sometimes they are clearly defined, but not always. The institution of rehearsal marking E is particularly ambiguous, not only as the musical activity is identical to that in Rehearsal D, but also because it falls in the middle of a measure. I refer to rehearsal markings for ease of score-following and do not suggest that all rehearsal markings are structural.

\(^8\) When discussing the intervallic content in pitch sets, the microtonal inflections fluctuate, and are not always integral to the function of harmony as I discuss it. As such, microtones are not accounted for in set qualifications. However, it is important to understand the contribution that microtonal inflections make to the work. Microtonal inflections embolden the diatonicism of the rustic character.
The viola sets out with a wavering, diatonic figure (the initial iteration of the theme that begins Sections II and III), the violin following suit in a pseudo-canon. Not only is the initial pitch material transposed, but now, the activity is dispensed in triplet figuration. In addition to this, bundled grace notes are imposed into each line — in both the violin and viola — to disrupt and obscure the sense of pulse. The elastic approach to the canonic behavior alters figures with respect to rhythmic profile, confusing the direct canonic nature of the music. The cello is instructed to operate in an “independent, but rhythmic” way, tapping on the strings and the body, adding a free sense of pulse to the manic melodic contours of the violin and viola. Through this, the sets \([0, 2, 4, 7]\) and \([0, 2, 5, 7]\) are emphasized linearly. Especially highlighted, however, is the subset that proves to be a vital harmonic resource for the entire work — \([0, 2, 5]\). Due to the excitable nature of the section, the sets are not focused on explicitly, but are embedded within flowing ascending and descending diatonic lines. This of course is by design, as the introduction is a prelude — intent on presenting a frenzied whirlwind of material before the music at the following rehearsal letter clears attention from the opening theatrics. Naturally, the material is foundational to the identifiable sectional theme, as expressed in the opening of the work.

![Figure 5](image)

**Figure 5.** Example showcasing fundamental harmonic content unfurling horizontally (Harvey 2004: 1)

In sharp contrast to the bombastic, fiddle-like music from the introduction, the music at Rehearsal A dwells on pensive tremolos and fragmented arpeggios. Here, the sacred character is
premiered. Quiet dynamics (in stark contrast to the loud ones of the introduction) and instrumental independence create a spare, but active body of music. Key harmonic material for the work is displayed plainly: the \([0, 2, 5]\) set. An unraveling arpeggiation — ascending and descending — forms a definitive gesture/motif in the work, the first appearance of which is presented here.

![Figure 6. Example of the \([0, 2, 5]\) gesture/motif (Harvey 2004: 3)](image)

Already presented in various permutations, the figure is especially emphasized at the start of Rehearsal A. The “mysterious, fleeting” aura of Rehearsal A transitions comfortably into the near stillness of Rehearsal B, which serves as a bookend for the distillation of the sacred music of Rehearsal A. If the introduction establishes the rustic character and Rehearsal A defines the sacred, Rehearsal C represents the integration of — and tension between — both characters (as well as the gestures linked with them). The viola breaks the stasis with a short, frenetic run before relegating itself to the disjunct, fragmented material that aligns with the music of the violin and cello. During this short outburst, key harmonic materials are exhibited. This includes an emphasized reemergence of \([0, 2, 5]\), which is especially highlighted through coordinated vertical representation.

Granted, other harmonic content is implied by the unfolding linear discourse, but, as the pointed chordal glissandos active in the first and second systems of Rehearsal C suggest, the \([0, 2, 5]\) set is the central harmonic paradigm. At this stage, these chordal figures are the most purposely emphasized iteration of vertical harmonic content since the opening of the work.
The trio coordinates in order to recapture the rustic state. The attempt is short-lived; the endeavor is subverted. A startling interruption to the directional flow of the music occurs at Rehearsal D. As an unforeseeable contrast to Rehearsal C, dry block chords playfully unfold. Their primary purpose is to redirect the course implied by Rehearsal C, creating unanticipated tension within the transpiring formal structure. In addition to this, the coordinated vertical harmonic content also fulfills a secondary purpose — harmonic proliferation. It is clear that the harmonic content has expanded. At the very start of the work, the [0, 2, 7] set is exhibited in a cursory, but pointed light. Now this, along with [0, 2, 5], is embedded in a prominently featured new set — [0, 2, 4, 7, 9]. The chords [D, F#, A, E, B quarter-sharp] and [F, A, C, G, D quarter-sharp] are cycled through vertically, in various inversions throughout the course of Rehearsals D
and E. While the pre-existing core set’s involvement in the new amalgamation doubtlessly allows a new harmony to project, the involvement of previous harmonic materials disguises important formal implications. Structurally, the set consists of a major triad with an additional 5th (augmented by a quarter-tone) appended above the top note of the triad. Not only has the harmonic material expanded, but yet another direct allusion to the opening of the work — the tuning of the violin and viola — is presented.

![Figure 8](image-url)  
**Figure 8.** Example of the harmonic amalgamation at the end of Section I (*Harvey* 2004: 7)

This allusion, in concert with the percussive nature of the music, strongly suggests a return to the rustic character. As aforementioned, the music of Rehearsal C embodies the sense of strain between the rustic and sacred characters. Near the end of the rehearsal, the music gains some clarity by briefly embodying a rustic character. Here, at the conclusion of the first section, a similar fleeting clarity is found. The music projects a folkloristic demeanor, yet despite the enhanced harmonic materials present in Rehearsals D and E, the gestural identities lack the vitality present in the introduction. Furthermore, timbral manipulations of the chordal content augment the chords in such a way that project an affect that lacks visceral substance.

The first section of the work delineates all of the main thematic and gestural content, which is developed throughout Sections II and III in order to generate tension throughout the rest
of the work. Moreover, the first section suggests that the tense dialogue between the rustic and sacred characters is an overt theme of the work.

Furthermore, the deliberate vertical harmonic implications work as a binding agent for the structural integrity of the section. Since Section I is not defined through the process of managing gestural or developmental tension (as Sections II and III are), harmonic content plays a more transparent, integral role. Although the presence of \([0, 2, 7]\) is not equal to that of the \([0, 2, 5]\) throughout Section I, the arrival of Rehearsals D and E reveal their similar structural value. The \([0, 2, 4, 7, 9]\) amalgamation provides the awaited validation for all of the preceding harmonic content. Additionally, it helps to signal the close of Section I. As aforementioned, the lack of propulsive energy in these passages attenuates the sense of arrival at a vital structural boundary, yet the harmonic content serves to reassure the conclusive intentions with subtlety. The disparity between the gravity of the harmonic amalgamation’s arrival and the muted energy through which it speaks contributes to the tension and sense of mystery throughout the section.
5.0 SECTION II - TECHNIQUE COMBINATION, COVERT TENSION AND THE SPECTRAL INFLUENCE ON THE STYLE OF TEMPORAL UNFOLDING

As discussed earlier, Section II develops in a different way than Section I does. Whereas Section I is ultimately concerned with establishing core harmonic materials and the rustic and sacred characters (along with the associated gestures), Section II largely fixates on how they intersect and develop. Along with the various techniques discussed earlier, the slow tempo encourages the formation of a variegated polyphonic soundscape. Motifs cycle through repeatedly, arguing for a deeper inspection of the core materials. Specific gestures/techniques combine with others, so that new, more complex hybrid gestures are born. In addition to this, gestural elasticity is used to augment already stated thematic and rhythmic content. All of this illustrates the spectral influence on the style of temporal unfolding in the section, allowing for a deeper focus on the audibility of timbres.

Section II (Rehearsal F) begins with a transposed, elastically augmented iteration of the opening measure of the work (after the tuning). Initially in the viola, it presents itself clearly as a theme in the violin. The theme unfurls and expands as the viola and cello join into the texture with independent materials.
The arpeggio figuration that defined the opening gesture of Rehearsal A reappears as a central motive. Here, the rhythm is augmented elastically, often appearing in various tuplet forms. The cello reiterates its percussive, playful music from the introduction, now exploring extended techniques in a more complex way. While the introduction found the cello relying on simple rhythmic vocabulary, it now abounds with nested tuplets, glitching and twisting along. Two specific combinations of hybrid gestural content are deliberately present. Firstly, the reincarnated [0, 2, 5] figuration returns with a faster rhythmic profile, combining its gestural identity with that of the glissando technique that premiered in Rehearsal C.

Secondly, the cello explores far greater timbral range than it did in the introduction. Instead of just percussive slaps on the body and strings, the range of sonic expression is expanded to include col legno, pizzicato, arco bowing and use of harmonics.
These new gestures iterate themselves repeatedly, as if stuck. Again, the fundamental process in this section is the reiteration, combination and development of pre-existing content.

As aforementioned, Section II begins with the ensemble creating a polyphonic texture comprised of independent agendas. This is maintained superficially, but covertly, the ensemble works together towards a common objective. From Rehearsal F to J, the span of registral space tightens in the ensemble, enclosing subtly to focus on the shared middle register. Beginning in Rehearsal H, there is an increasing focus around G4 and Ab4 until, by the end of J, the prevalent polyphonic texture has been forfeited for a blended sonority formed by tremolos on those two essential pitches. Since the ensemble has been compressing its register since Rehearsal H, there is an implication that it will continue to do so until a perfect unison — on G4 — is achieved. The anticipation of this perfect unison — along with the fact that it is never realized — serves to generate palpable tension before a furtive arrival point at the beginning of Rehearsal K. The activity at Rehearsal K shocks the paradigm of Section II irrevocably.

As a byproduct of Section II’s machinations, newly emphasized vertical harmonic implications have been mitigated up until this point. Gestures linked to the rustic and sacred demeanors work side by side, but the dominant affect is that of the sacred. The first measure of Rehearsal K poses the greatest opposition to Section II’s initial constitution. Rehearsal K begins with clear, quick, and anxious activity. The fleeting first measure of Rehearsal K marks a definitive turning point in the work. The violin ascends, vehemently iterating the well-
established set [0, 2, 5], alternating between prime forms and inversions for its content. At the points where the sets conjoin, the major second, minor third, and major second intervals — respectively — bind the sets together. The cello descends, conspicuously mirroring the behavior of the violin, while maintaining the intervallic syntax that conjoins the pitch sets in both instruments. The viola encases itself between the violin and cello, moving both chromatically and diatonically in ascending and descending order.

![Musical notation](image)

**Figure 12.** Disruptive activity at Rehearsal K (Harvey 2004: 13)

After a period of time where emphasized vertical harmonic implications have moved away from being a primary concern, they return to the forefront of the discourse. In congruence with this resurfacing component comes the disintegration of the static soundscape that reigns so prominently until this point in Section II. As a testament to the spectral influence present in the section, this striking harmonic interjection functions in a way that is synonymous with Grisey’s
description of how such music — that which is spectrally influenced — can operate. This is especially pertinent with consideration to the more “psychological aspects” of listening.

To recapitulate, Grisey’s “Flesh of Time” concept addresses issues with regard to the predictability of sounds. When sounds become predictable through repetition, time dilates, and the listener is drawn to the nuances of sound’s existence; the production and decay of sound is incorporated with the temporal aspects of form. In a sense, a sort of trance can be created, where the listener’s focus is re-directed from the outward, more superficially performative activity, to inward processes and the detailed aural account of sound production. That the stark, aggressive music at the onset of Rehearsal K has characteristics so dramatically in opposition to the music that preceded it is essential to the formal — and philosophical plan — of the work. The music at Rehearsal K serves as an outward “sonic jolt” that disrupts the affect and intentions of the music that preceded it, “eliminating preaudibility,” and recontextualizing the approach to temporal unfolding with which Section II operates.

For this reason, the music at Rehearsal K feels especially intense. From the residue of this “jolt,” a registra!lly disparate [0, 1, 4] results. The rare instance of a coordinated vertical harmony, especially one emphasizing a conspicuous harmonic focus, redirects attention from Rehearsal K’s initial interruptive function. The opening of Rehearsal K cycles through pitches quickly, and as such, the oppositional gesture that asserts the sustained [0, 1, 4] is presented as a new focus — a “future time point.” This harmonic emphasis revitalizes the importance of coordinated vertical harmonic content, as Section II is largely absent of this pointed feature. During a brief cadenza, the viola declaims a number of rustic, jagged figures. The intensity and anticipation created from the disjunct line heightens the tension in the otherwise spare space. The line becomes more conjunct and chromatic, the [0, 1, 4] is reiterated vertically, and then
culminates into stasis. The restatement of this harmony heightens tension, but also promotes the sense that the ensemble is constricted. Again, a climactic build is met with ambiguity. Harvey creates tension by subverting the burgeoning climax at a crucial structural point.

While the ambiguous climax aids in defining the transition from Section II to III, it also draws a link to the one that bridges Sections I and II. The viola presents the sectional theme at Rehearsal L. On its third iteration, it is easily identifiable as the indicator of the onset of a section. With each section — as seen in Sections I and II — the ensemble attempts, in different ways, to negotiate the tension between the rustic and sacred characters. In line with this, the sectional theme is presented in a clearer light with the start of each section, offering a subtle implication of progress towards the climax of the piece.

Section I is somewhat haphazard in dealing with its iterations of sacred and rustic identities, mostly presenting the extremes of their characters. Section II takes the time to search through elements of these characters to gain a deeper understanding of their identities, and the nature of their interaction. The third section combines approaches from both Sections I and II, instituting them to form a clearer, more direct pathway to the ultimate climax of the work.
To recapitulate, material from the introduction — including intervallic content from the recurring theme — is intermingled with the raucous line exhibited in the cadenza at Rehearsal K, trading the reflective sacred content for the more visceral, rustic character. However, the prospect of a fully realized climax at the end of Section II is subverted. The tension evaporates and distills into Rehearsal L, which begins Section III. The viola unfolds into a similar restatement of the theme from the outset of Sections I and II, this time displayed through a clearer texture. Pre-existing gestures are combined in Section II. Section III utilizes a similar approach, but cycles through a larger number of gestural cells, just as in the beginning of the work (this is achieved as the ensemble transitions to the style of temporal unfolding used in Section I). The [0, 2, 5] block chords in the violin and cello (which premiered in Rehearsal C) reappear at the beginning of Rehearsal L (with the iteration in the violin transposed). This time, the smeared glissandos do not evaporate quickly; rather, they occur over the duration of four systems, outlining the slowly morphing character of the viola, up to Rehearsal N.
In a certain way, the music at Rehearsal L is analogous to that at F. Both inherit the charge of beginning sections in a way that does not entirely release the tension created by preceding sections. The clear restatement of the thematic material allows for tension to culminate subtly. If Rehearsals L and M display the last signs of the sacred character in its most clarified form, then Rehearsal N is designed to transmit the struggle of attempting to free from this distilled point. Rehearsal N begins with the violin and cello quivering through widely spaced [0, 2, 5] sets. At this point, the smearing glissandos have ceased and the only harmonic fluctuations in the viola and cello are slight, but tense nevertheless. The “wide and synchronized” vibrato techniques contribute to the uneasiness within the ensemble, smearing the clarity of the harmonic properties in doing so. The music at Rehearsal N builds anticipation and serves as a prefatory launchpad for Rehearsal O, before the violin and cello eventually lead the ensemble back into an
instrumentally indistinguishable polyphonic interaction, where — unlike in Section II — the ensemble is now rustically inclined.

The unifying factor of Rehearsal O lies primarily in the pitch connections between the ensemble, as the gestures slowly begin to fall out of sync with each other. To initiate the new frenzied state, the violin presents newly emphasized vertical harmonies. Here, the violin activates the open g string, while maintaining the \([0, 2, 5]\) set in the other strings. Continuing throughout the next system, the harmonic augmentation persists. The violin iterates \([0, 1, 2, 5]\), \([0, 2, 4, 7]\), then a collection of chords that reflect the all-interval tetrachord \([0, 1, 4, 6]\).

![Figure 14. Example of vertically emphasized harmonies in Rehearsal O (Harvey 2004: 16)](image)

The new harmonic emphases evolve out of older, established sets, \([0, 1, 2, 5]\) and \([0, 1, 4, 6]\) expand from \([0, 2, 5]\) and \([0, 1, 4]\) respectively. This expansion not only aids in heightening tension, but serves to open and prepare the harmonic field for the most intense point in the work — Rehearsal U.

While the music following Rehearsal O draws from the harmonic field (through both vertical and horizontal representation), it is at Rehearsal U that all harmonic resources are put to use with a definitive, unrelenting agenda. The music at Rehearsal U harnesses the mania of the preceding discourse by instituting a clear intervallic correspondence between the instruments. At first, the violin and viola trade iterations of sevenths, then sixths. The intervallic space continues to decrease, only to unravel back into the initial, wider positions. This approach allows the trio to generate tension, as the two do not initially align with absolute rhythmic precision. In addition to
this, the intervallic correspondence foreshadows the upcoming harmonic expansion. As the instruments engage in such closely knit intervallic correspondence, rich and diverse vertical harmonic content is implied. By the end of Rehearsal U, the ensemble does align rhythmically, and delivers exactly what the preceding music suggests.

In Section I, Rehearsals D and E present an amalgamation of the harmonic materials that precede them. The concluding measures of Rehearsal U function similarly, but on a far grander scale. As aforementioned, the concluding measures of Section I create a \([0, 2, 4, 7, 9]\) set by combining pre-existing harmonic content. Section II, while less focused on the propagation of vertical harmonic material, presents a focused \([0, 1, 4]\) at the onset of the viola cadenza. Section III finds the prominently utilized sets expanded into a vertically emphasized \([0, 1, 2, 5]\) and all-interval \([0, 1, 4, 6]\). The final measures of Rehearsal U draw from all set conglomerations, much like Rehearsals D and E did in Section I. Unlike the conclusion of Section I, the pitch constructions in Section III are less predictable in terms of their pitch content. Instead of being comprised of mostly the same two chords, the final measures of Rehearsal U draw from the massive pitch conglomeration more freely, often pulling from the resources of important pitch sets simultaneously to present dense vertical sonorities. From most of these dense vertical sonorities, integral sets can be derived. For example, a \([0, 2, 5]\) and \([0, 2, 7]\), or a \([0, 2, 5]\) and a \([0, 1, 4]\).
Both Rehearsals D and K directly precede sectional transitions. In both instances, as discussed previously, the harmonic implications at these Rehearsals are instituted in congruence with the ensemble's attempt to be absolved of tension and gain a clear footing in a space where the rustic character is unimpeded. In this way, the music at Rehearsal U serves the same function (even though it does not directly precede a sectional transition). However, in addition to possessing the richest developments with respect to coordinated/emphasized vertical harmonic content, it also contains an energetic directional drive — an advantage that neither Rehearsals D or K had. As suggested earlier, Sections I and II conclude — purposefully — leaving something wanting and unfinished. Now, close to the end of the piece, the requisite perspective (and understanding) to arrive at the desired destination has been attained.

Again, vertical harmonic parameters in Section I often function as structural glue, providing validation by the end of the section. Here, it can be seen how the harmonic parameters operate similarly on a global scale. While the absence of significant developments in terms of emphasized vertical harmony in the second section creates a specific tension, the notable
developments in Section III make the release of the brewing tension throughout the work all the more satisfying.

Figure 16. Important vertical harmonic emphases in the *String Trio*

The great arrival point in the work at Rehearsal V projects the clearest, most unfettered iteration of the rustic character, and it does so by exploring a technique not explicitly exhibited until the final measures — the doubling and tripling of voices. The glissandi of the (double-stopped) diminished fifth to perfect fourth and perfect fourth to diminished fifth (in the violin and viola respectively) suggest a kinship with the roughly tuned fifths that help to evoke the rustic character from the outset. Unquestionably, this essence of rusticity — drawn from the beginning of the piece — is invoked. While this iteration is brief, it supplements the content of the pressing, streamlined discourse. The re-arrival of this content validates and exonerates the struggle born from both of these points in the work.

Figure 17. Arrival at the pure rustic state in Rehearsal V (*Harvey 2004*: 21)

The subsequent music — at Rehearsals W through Z — concentrates on vocal unity and brings the work to a sense of imminent finality. The instruments move in almost perfect unity,
drawing heavily on the harmonic materials linked with the horizontal diatonic outlines present throughout the work. The conclusion projects a response to the pastoral opening measures, the valiant nature expressed with more energy, clarity, and assertion than in any other passage of the work.
7.0 CONCLUSION

In retrospect, the function of pitch material clearly shapes melodic content and gestural materials throughout the piece. Harmonic materials — particularly when focused toward deliberate vertical presentation — serve as an underlying structural glue that argue for ultimate unity within the work. Emphasized vertical harmonic constructions not only promote the subversion of development in key areas, they enhance tension palpably. In turn, the absence of such developments for an extended period time has a similar effect. Harmony is important in the work, yet it does not operate overtly in the foreground. Rather, it focuses energy towards energizing gestural materials and illuminating the tension between the rustic and sacred temperaments. Canonic and gestural elasticity, pitch set manipulation, and technique combination allow and stifle development and help to generate tension. The strategy with which these approaches are deployed helps to form the structural identity of each section. Additionally, these approaches compose the two styles of temporal unfolding with which the work operates. The nature of their interaction creates tension and flux with respect to the overarching formal structure.

There is something special about Jonathan Harvey’s *String Trio*. Harvey was a spiritual man, and as such, there is a prophetic nature that shrouds this late work. In his later years, he claimed that ego was a self-concept that ultimately served as a blockage to the flow of creativity. Is there a reflection of this in the fact that the last small string ensemble work he wrote is the
only one reduced to three players? Almost as if a string quartet is reduced to its vital components? Nevertheless, this admittedly “naked” ensemble (stripped of its ego) — with respect to a set of string quartets he composed throughout his career — feels expansive.

Indeed, a sense of flux and tension permeates the work, from the overarching formal structure, down to local interactions and developments. It is clear how the concept of emptiness influenced structural choices made in the String Trio. Harvey combined his expertise as a composer with what he gleaned from his interests philosophically and spiritually. It is often said that masterful artworks are greater than the sum of their parts. The synergy of the seemingly disparate elements that comprise the String Trio coalesce to create a work that intrigues effortlessly, with outstanding resolve. The work is at once definitive and intent on ambiguity, all the while remarkably cohesive.
BIBLIOGRAPHY


Slate Representative {2015}
for amplified quintet: string trio, with flute and clarinet

RAMTEEN SAZEGARI
In this work, the Violin and Viola are to be prepared with alligator clips on two strings each - just before the bridge, but not touching it. The strings that are prepared will sound approximately (~) 50 cents sharp, and the strings that do not engage with the preparation should be tuned up approximately (~) 33 cents:

**VIOLIN:**

i & iii scordatura - 33 cents sharp  
ii & iv pinched with an alligator clip just before bridge

**VIOLA:**

i & iii scordatura - 33 cents sharp  
ii & iv pinched with an alligator clip just before bridge

**CELLO:**

iv scordatura - a flat directly below original c - 33 cents sharp

The bow placement for the Violin and Viola is generally set at poco sul ponticello - p.s.p. (with some exceptions in the Viola). This locked bow placement is intended to maintain the general pitch augmentation of (~) 50 cents sharp on prepared strings. On certain instruments, the pitch becomes increasingly sharp when the bow placement approaches the fingerboard. Players should find the exact space where the 50 cent augmentation resonates best and try to maintain it for all areas where the (p.s.p.) qualification is present.

All notation for Violin and Viola is prescriptive. Sounding pitches will be sharp either 33 or 50 cents (given the string[s] activated). Violin and Viola players should activate the written notes as if there were no preparation or augmentation involved.

**CELLO:** Maintains ordinary notation - Pitches should sound as written.
**STRINGS/ BOW PLACEMENT KEY**

molto sul tasto - m.s.t.  ordinario - ord.  molto sul ponticello - m.s.p.  
sul tasto - m.s.t.  poco sul ponticello - p.s.p.  
poco sul tasto - p.s.t.  sul ponticello - s.p.  

bow placement indications are not bracketed

**STRINGS/ BOW PRESSURE KEY**

The **THIN** rectangle indicates light bow pressure.  
The **THICK** rectangle indicates heavier than ordinary bow pressure. Not subharmonic pressure, but pressure that adds grit and distortion to the given pitch.  
The **ORDP** note indicates ordinary bow pressure.  
The **THROWN PRESSURE** note indicates a thrown bow ideology, but reflected through pressure. This implies that the player must have more control over the bow than when simply thrown. The feel should be steady, but imprecise - like a controlled skipping stone.  
The pressure indications are reduced to single letters in these instances, and are simply approximate goals. h - heavy, o - ord, l - light.  

In certain instances, other bow techniques are incorporated, and are noted into the given bracket.  

When bracket is closed, the bow pressure should be maintained until another pressure indication transpires. When an arrow is placed between pressure indications, the player should transfer pressure style during the given period.  

The **circular arrow symbol** represents circular bow position movement. Clearly, this indicates a shift in bow placement. Bow should revert back to original bow position (which in the Violin/Viola is usually around p.s.p).
**STRINGS/ BOW STYLE KEY**

There are two bow styles in this piece. Indicated and bracketed as such:

```
{ord bow} {cri e leg}
```

ordinary bowing - with hair  
cri e leg - with wood and hair  

Bow style should be maintained until a different bow style transpires.

**STRINGS/ OTHER TECHNIQUES**

Black diamond noteheads indicate half-harmonic finger pressure. When this notehead is tied to a regular notehead, the finger should subtly adjust to and from finger pressure states.

The ridged symbol above the notehead indicates a finger pressure tremolo. When notes are tied, there is a bracket that encompasses the duration of time in which the finger pressure tremolo is to be activated.

Tightly bound miniature cresc/decresc symbol[s] indicate a sliver or slivers of [a] slight and quick volume dip[s]. Somewhat like a digital skip or skips. Bowing does not stop, and as such notes are tied together.
Pitches with slashes are arbitrarily placed on the staff and do not have any assigned pitch content. They indicate a muted string, and should always be muted with two fingers.

**STRINGS/ MULTIPHONICS**

The cello multiphonics utilized in this piece were informed by the diagrams created by Jessie Marino - below is her key. As such, the multiphonic indications in this score assimilate to said parameters. The small noteheads in the score are the approximate sounding pitches.

**DIAGRAM:**

 SCORE REPRESENTATION:
In this piece, there are two techniques exclusive to the winds. Firstly, key clicks - which are indicated by the “x” shape noteheads. Secondly, sung pitches - which are indicated by the empty circular notehead with a dot in the center. Sung pitches should always be brought to fore in a subtle fashion. A simple “ooo” sound should be generated, and always made through the instruments mouthpiece. Often, this effect is called for in combination with another played note. Generally, the effect should simply resonate as a sound largely similar to a multiphonic, or a distorted version of the played note. If players have difficulty singing the note in the given register, they should simply try to utter the pitch briefly - even if it is a strained shriek or blip. In any event, the written register should be strived for. All key clicks in the clarinet should be accompanied by a pitchless breath.

Most of the pitches in the winds carry a microtonal accidental symbol. This is in effort to match the general pitch area of the altered string string section (Violin and Viola). In general, the microtones should be approximately 33 cents sharp, or attempting to match the dominant string’s accidental alteration.
**WINDS + STRINGS**

The entire ensemble observes the “fall” or “rise” doit or pseudo-gliss. This effect should be highly subtle. After the entire rhythmic duration has been observed, barely gliss up or down. Effect should be slight, and resonate more as a physical residue than anything else.

![Musical notation]

**ACCIDENTALS**

Microtonal accidentals should deviate roughly (~) 33 cents in the given direction, or (~) 50 cents if simultaneously activated (in the winds) alongside a prepared string. When the Violin and Viola have microtonal accidentals that point downward, the intention is to reflect the unaffected version of the pitch, which could be (~) 33 cents or (~) 50 cents depending on the string.

![Microtonal symbols]

Above are said microtonal symbols, neighboring conventional accidentals.

![Microtonal symbols]

The microtonal symbols above indicate a (~) 16 cent deviation.

**Accidentals apply to entire measure - only for given register.**
AMPLIFICATION

Amplification should be subtle, but apparent (such that a p sounds at mp, a f sounds at ff, and so on). The purpose of this amplification is aimed at highlighting the physical gestures of the instrumentalists. For this reason, a close-miking is essential.

duration approx. 10 - 11'
dedicated to the Empyrean Ensemble
'slate representative'

amplified quintet

[ string trio with flute + clarinet ]
\( \sum \) U (breaking out abruptly)
g.p.

sffp > mp (mild dip)

l (abrupt, compact treatise)

sffmp > U

\sum \sum \sum \sum
sffmf \{ ord. bow \}

\[ \text{ord. bow} \]

\sum \sum \sum

sffmf ≤ k

\text{ord. - ord. -}

k > l.m.s.t.

\text{cri e leg}

\text{ordp}

\sum \sum \sum

sffmf ≥ k

\text{ord. - ord. -}

k > 3

\sum

\sum

\sum

63

\text{ord. bow}
\( \sum \)

(rotating instrument, vaguely shifting embouchure)

\( \text{slow motion} \)

\( mp \)

\( g.p. \)

\( mf \)

\( g.p. \)