

**MULTI-LAYERED CONSTRUCTION OF ELLIOTT CARTER'S *VIOLIN CONCERTO*,
FIRST MOVEMENT, AND
IMMERSED IN AN ETHEREAL BLUE LIGHT FOR CHAMBER ENSEMBLE**

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Jonghee Kang, PhD

University of Pittsburgh, 2015

Most analytical studies of Elliott Carter's music focus on how Carter utilizes his system of harmony, pitch material, or polyrhythmic stratification. This study, however, explores the structure of Carter's *Violin Concerto* from a different analytic angle. *Violin Concerto* constitutes a new structural model for the traditional concerto genre based on its multi-layered construction. The background structure of *Violin Concerto* is derived from pre-compositional planning, utilizing tempo modulation and three-way stratification based on a long-range polyrhythm. The phrase structure of the concerto divides the first movement into seven sections, while the movement's rhythmic activity largely shows a four-part structure. Detailed phrase analysis of the first movement's violin solo part uses the notions of memory and montage to explain the solo part's construction. The solo part's temporally manipulated structure is framed in a ritornello form by the orchestra's behavior. In this late-period Carter work, both the violin solo and the orchestra make manifest constant circulations of particular musical ideas, which appear in various structural levels. This unique mapping of the concerto, especially of the violin solo, is best understood through concepts like montage, *events* and *event-properties*. As invented terms for this study, an event consists of event-properties, which are reoccurred and synthesized character-objects, particular musical ideas in terms of intervallic motion, rhythm pattern, and change of textural density. These concepts are applied for the phrase analysis, which involves the

following process: defining the characteristic properties of the events in sub-phrase and phrase levels; locating the events created with similar or identical event-properties; and then exploring how they are mapped to larger levels. Such examination shows a strong unifying characteristic of the concerto.

The composition, *Immersed in an Ethereal Blue Light* for chamber ensemble, musically explores the contrast and the phenomenal differences between the dark and deep blue sea and the bright ocean surface. While the second movement, *Open Water*, is saturated with a dark, monochromatic, and relatively empty character, the first movement, *Nearer the Coast...*, features brighter and more dynamic aural illustration.

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1.0 INTRODUCTION

1.1 ELLIOTT CARTER'S *VIOLIN CONCERTO*: BACKGROUND

Commissioned jointly by violinist Ole Böhn and the San Francisco Symphony, Elliott Carter completed his *Violin Concerto* in 1990. The concerto is about 30 minutes in duration and is divided into three large sections by tempo change indications. An article written in memory of Carter shortly after his death mentions that a poor performance at the world premiere by the San Francisco Symphony Orchestra and Ole Böhn made even the composer himself question the quality of the concerto, but it was later described as one of Carter's best works after receiving another performance by the London Sinfonietta, conducted by Oliver Knussen.¹

Violin Concerto was written in the early years of the last phase of Carter's compositional career. In this late period (from the 1980s to his death in 2012), the degree of complexity in Carter's music is significantly reduced in regards to rhythm and the density of his multi-layered textures. Robert Morgan notes that such change of style began with three chamber compositions that all include voice.² Jonathan Bernard describes this stylistic shift by saying that Carter's

¹ Stearns, David Patrick. "Elliott Carter: Maybe he wasn't radical?", *Arts Journal* November 13, 2012 (<http://www.artsjournal.com/condemned/2012/11/elliott-carter-maybe-he-wasnt-radical/>)

² Morgan, Robert P. *Twentieth-Century Music: A History of Musical Style in Modern Europe and America*. New York: Norton, 1991; p.402

“chamber music has become less herculean in its demands.”³ In regards to this stylistic change, John Link suggests that Carter’s change of musical style is “a response to the practical constraints of institutional change and advancing age.”⁴

A few scholars have attempted to classify Carter’s *Violin Concerto* within a certain aesthetic. Robert Morgan states that the above-mentioned change “leads some to see a return to the more neoclassical orientation of the composer’s youth.” David Schiff described the concerto’s style as “ironic classicism.”⁵ However, Arnold Whittall provides a more plausible explanation of Carter’s late music in a historical context. Whittall interprets Carter’s late music as a property of Late Modernism, which appeared after High Modernism in the earlier twentieth century.⁶

Before analyzing *Violin Concerto*, it is beneficial to take a look at Carter’s explanation of the composition. Carter provides the following as the program note of *Violin Concerto*:

³ Bernard, J. “The true significance of Carter’s Early Music”, from *Elliott Carter Studies*, p.43. (This title will be abbreviated as *ECS* in this text.) He further states that this change “led to more frequent performances” and “fuel the widespread popularity of Carter’s late music.”

⁴ In an interview done in 2001, Carter stated that he used his intuitions in composing then left the piece as it was. Link, John. “Elliott Carter’s Late Music,” *ECS*. P.44. Link referred to Meyer’s interview, “Elliott Carter in Conversation with Felix Meyer (p.28).”

⁵ Schiff, *The Music of Elliott Carter*, p.268. (This title will be abbreviated as *MEC* in this text.) Schiff’s classification is rather ambiguous due to the lack of explanation. He relates Carter’s financial and health issues around the time of writing *Violin Concerto* to the idea that Carter’s three-movement structure and chamber-music-like orchestration in *Violin Concerto* are from Richard Strauss’ Oboe Concerto, which Carter heard frequently along with the composer’s own Oboe Concerto. In addition, Schiff observes several features of the concerto: carrying “a single dramatic idea” through the entire piece, “remarkably lucid” texture, and the “enactment of states of alienation.” None of these descriptions essentially imply irony.

⁶ Arnold Whittall, “The search for order: Carter’s and late-modern thematicism,” originally from *ECS* (John Link and Marguerite Boland) p.57-64

In this violin concerto I have given the soloist an almost continuous, leading role—one that changes from mood to mood in the first (Impulsivo) section which is predominately lyrical and in the last (Scherzando) section which is more light-hearted. Meanwhile the orchestra comments in various ways on the solo part.

The middle section, however, consists of a dramatic recitative (Angosciato) played by the violin solo against slowly rising and falling waves of sound (Tranquillo) in the orchestra.⁷

1.2 ANALYZING *VIOLIN CONCERTO*

David Schiff's book on Carter's music provides a cursory outline of *Violin Concerto*. Other literary sources concerning the concerto are mostly newspaper articles written before and after performances of the piece, and a few books on Elliott Carter, which all briefly examine the concerto. To my knowledge, this study is the first extensive exploration of the concerto.

Carter was concerned about finding his own voice within the traditional genre of the violin concerto. As can be observed from his extended program note found in David Schiff's book, some of Carter's major concerns in composing the concerto were acoustic balance, the role of the violin solo, and degrees of expressiveness between the solo and the orchestra. Carter's own words show such concerns:

Such a work poses many acoustical and expressive problems, ones that worried me a great deal when I listen to many contemporary concerti, such as, how to use the highly routinized Paganini-like techniques that show off the soloist so well in a way that modified them so that they fitted into my musical style and became part of it,....⁸

Including *Violin Concerto*, Carter's late period music shows clear shifts from his mature middle-period in regards to form, musical texture, and rhythmic complexity. Carter's symphonic

⁷ Carter, *Violin Concerto*.

⁸ Quoted in *MEC*, p.266.

compositions in his late period, such as *Symphonia: Sym Fluxae Pretiam Spei* (1993-1996)⁹ and *Boston Concerto* (2002) share similar features to *Violin Concerto*.¹⁰ The large-scale formal designs of these works are straightforward. In the cases of *Symphonia* and *Violin Concerto*, Carter follows the traditional fast-slow-fast movement structure. In the cases of both *ASKO Concerto* (2000) and *Boston Concerto* (2002), Carter utilizes the traditional ritornello form as a structural layer.¹¹ Theisen points out a significant change in Carter's approach to polyrhythmic orchestration in his late-period compositions. For example, in *Symphonia*, Carter treats the orchestra as "a massive collective 'instrument' rather than a magnified chamber group."¹² In addition to these changes, Carter greatly reduced the degree of complexity in terms of tempo shifts and divisi writing.

In most Carter studies, the analytic approaches tend to focus heavily on how Carter utilizes his system of harmony, pitch material, or polyrhythmic and polymetric stratification. This study, however, explores Carter's music with a different analytic focus regarding the concerto's structure. In this late-period Carter work, both the violin solo and the orchestra materialize through constant circulations of particular musical ideas. Analyzing the concerto, the most striking feature is how Carter arranges musical *events*¹³ with combined perspectives from both the tradition of the Western music and the modern art of cinematography. To demonstrate my analytical perspective in the detailed phrase analysis of *Violin Concerto* and to categorize musical ideas from various domains--pitch, rhythm, and texture--I define and use the term *events*

⁹ Carter completed the three parts of the *Symphonia* at different years: one in 1993, another in 1994-5, and the last one in 1996.

¹⁰ Theisen, Alan. "A multifaceted Approach to Analyzing Form in Elliott Carter's *Boston Concerto*," Ph.D Dissertation, 2010; p.60

¹¹ For more detailed analysis, refer Marguerite Boland's analysis of both works in *ECS* (p.80-109). Boland explains that both compositions consist of multi-layered structural ideas.

¹² Theisen, p.60

¹³ Before providing an in-depth phrase analysis, I discuss the concept of the term and perspectives related to the idea.

in the analysis section. Although I was inspired by Carter's own usage of the word "event-patterns", I use *events* in this study from a different perspective than that of Carter. In my analysis of *Violin Concerto*, an *event* refers to a structural unit created by diverse yet controlled merging of musical properties.

As briefly stated above, certain musical properties are continually recalled in varied time-spans through transformational processes. While the orchestra plays more sparsely and remains as commentary, it utilizes a similar method in the composition of its events. The three movements in *Violin Concerto* differ greatly in character from one to the next. However, the movements share a common ground in terms of utilizing *event-properties*.¹⁴ All event-properties feature in the beginning of the first movement, and the movement demonstrates the concerto's constructional scheme based on the event-properties. By examining the first movement of the concerto in detail, this study presents the entire concerto's essential structural narrative. The phrase-level analysis in the main analysis chapter also unfolds the construction of the first movement, which features an overlap of two distinct formal concepts.

Defining the characteristics of an event requires an integrative examination of the activities of various musical elements, such as interval, rhythm, and texture. The main task of the phrase analysis involves the following process: defining the characteristic properties of the events at sub-phrase and phrase levels; locating the events created with similar or identical event-properties; and then exploring how they are mapped to larger levels. The most substantial chapter of this study focuses on the analysis of the violin solo's construction based on the concepts of montage and memory. The last part in this study takes a look at the construction of the orchestra part. Rather than focusing on the behavior of one musical property, such as pitch-

¹⁴ This is a term stemmed from the notion of "events," and is used later in the micro-level phrase analysis.

classes or certain rhythmic motions, this analysis entails a comprehensive assessment of the individual event with a unique mapping technique. Such examination leads to an effective view of the concerto by showing the incredibly unifying characteristic of the piece.

Violin Concerto constitutes a new structural model for the traditional concerto genre based on its multi-layered construction, which includes characteristic reoccurrences of specific event-properties and consequentially unique construction. The background structure of *Violin Concerto* is derived from pre-compositional planning, utilizing tempo modulation and three-way stratification based on long-range polyrhythm. The phrase structure of the concerto divides the first movement into seven sections, while the movement's rhythmic activity largely shows a four-part structure. Detailed phrase analysis of the first movement's violin solo part reveals how the event-properties are structurally utilized under the notions of memory and montage. The solo part's temporally manipulated structure is framed in a ritornello form by the orchestra's behavior with a specific, synthesized event-property.

2.0 ANALYSIS OF *VIOLIN CONCERTO*

2.1 INTRODUCTION

In this chapter, I first present the background structure of *Violin Concerto* based on tempo relationship and rhythmic stratification. Before moving on to the next subchapter, I explain the notions of montage and events. In the next subchapter, I concentrate on analyzing the violin solo part of the concerto's first movement. I first demonstrate the seven-section phrase structure and the four-part surface-rhythm structure of the first movement, and then provide a detailed analysis of the movement's sections 1, 2, 6, and 7 to illustrate the montage structure and other structural properties. The analysis of these individual sections shows that the first section functions as an exposition of the entire concerto, as the section displays all the event-properties and some of the events that reoccur throughout the concerto. The formation of the second section and its relationship to the first section exhibit the structural narrative of the entire concerto. The sixth section, the penultimate section of the first movement, is distinguished from the rest of the first movement by its unique design with a single event. Analysis of this section elucidates the event's components and its structural roles. The last section of the movement features heightened degree of activities in various aspects. By focusing on these sections of the first movement, my study discusses structural ideas found in the solo part that are commonly shared throughout the entire concerto. This detailed analysis includes a demonstration of how a specific set of dyads, one of

the event-properties, operates under a rigorous structural plot in the first movement.¹⁵ The last part of this study is a discussion of the orchestra part's construction in relation to the violin solo part. This analysis illuminates a ritornello form that molds the first movement. Throughout this study, C4 refers to the middle C.

2.2 BACKGROUND-STRUCTURE OF *VIOLIN CONCERTO*

2.2.1 General concept of tempo modulation and its application in *Violin Concerto*

In reviewing Carter's compositions in 1951, Richard Franko Goldman coined the term "metric modulation" to describe the process of tempo changes in Carter's music.¹⁶ In discussing his technique of tempo changes, Carter himself used "temporal modulation" in addition to "metric modulation". Although used interchangeably to describe Carter's idiom of rhythm, the two terms represent it from different perspectives. "Metric" modulation is a derived term, alluding to a notated change of time signature or metronomic beat unit in the modulating process. "Temporal" modulation suggests a change of perception of speeds due to implemented pulse streams, and is not necessarily concomitant with a notational change of time signature or metronomic beat unit.¹⁷

Carter carefully pre-planned the tempo shifts throughout the piece by using more complex rhythmic ratios and establishing unifying tempo relationships. In most pieces Carter sets up a pivotal rhythmic subdivision unit soon before a metronomic tempo change, and integrates the

¹⁵ I adapt contour analysis as a tool to examine intervallic motion.

¹⁶ Wierzbicki, James. *Elliott Carter*, 2011. p. 36

¹⁷ Eva Poudrier points out this aspect with a few examples in her dissertation. (p.52-54)

unit into the fundamental speed component of the next region with the changed tempo. Carter uses temporal modulation to map out the tempo relationships of an entire movement or a complete piece by, for example, using metronomic tempo markings derived from a common denominator or using figurations under varied metronomic tempi with speeds with common denominators.

Considering how vigorously Carter has developed and presented his idea of temporal flux with temporal modulation since his middle period, the changes in application of such ideas seen in *Violin Concerto* are striking. There is no metronomic tempo change throughout the first two complete movements; the only tempo indications are at the beginnings of each movement. The last movement features more active tempo changes, both between the soloist and the orchestra and among its inner-sections. Overall, the tempi among the movements in *Violin Concerto* are strongly connected. The three tempo markings at the beginning of the movements are as follows:

1. Impulsivo: ♩ = 105 (beginning - m.212)
2. Tranquillo: ♩ = 52⁺ (m. 213 - 423)
3. Scherzando: ♩ = 105 (orchestra, with 4/4 meter)
/ ♩ = 157⁺ (violin solo, with 6/4 meter) (m. 424 - 626)

Figure 1: The Tempi of the Three Movements in *Violin Concerto*

Although the movements are separated by written-out general pauses, the concerto is considered not as a multi-movement work but as a single piece in performance. Besides the fact that the measure numbers in the score count the entire concerto as one body of work, the three

movements are connected with one metronomic tempo of $q = 105$.¹⁸ Overall, the three different numbers of tempo markings in the piece--52⁺, 105, and 157⁺--are related by the prime-number ratio of 1:2:3.¹⁹ While the metronomic tempo is consistent, the overall character of each movement changes with contrasting terms--from impulsive (“Impulsivo”) to calm (“Tranquillo”)²⁰ to playful (“Scherzando”). Carter was concerned with how to write within the traditional genre of the concerto²¹, and maintaining unified tempo with character contrasts is one of the solutions to the question.

As mentioned earlier in this section, the last movement--Scherzando--contains more tempo changes, which are characterized by temporal modulation with pivotal rhythmic patterns played beforehand. In the beginning of the movement in measure 424, dual tempi of $q = 105$ and $q = 157^+$ appear due to Carter’s consideration of beat divisions--rhythmic layering--between the violin solo and the orchestra. While the orchestra’s beat subdivision is varied within its simple quadruple meter of 4/4, the violin solo constantly plays eighth-note triplets in the compound duple meter of 6/4. The two meters have the ratio of 2:3 (4/4:6/4). As Carter chose to notate the contrasting rhythmic layers with two different meters, indications of corresponding tempi with the identical ratio between the orchestra and the solo are essential.

¹⁸ Firstly, “q”=quarter note. Secondly, in his introductory analysis, David Schiff sets the basic tempo as half note = 52.5 (*MEC*), but Carter’s writing of both the violin solo and the orchestra parts shows more quarter-note based beating than half-note based beating, as they mostly consist of quarter-note based tuplet subdivisions.

¹⁹ Instead of writing out “52.5” as the tempo in the Tranquillo movement, Carter marked the tempo as 52 with a plus sign.

²⁰ The second movement is generally referred to as “tranquillo/angosciato.” The contrast of characters between the violin solo and the orchestra is evident in this movement in the use of these two expressive terms, one meaning “calm” and the other “distressed.”

²¹ Schiff provides a background of Carter’s life and talks about the composer’s concerns upon approaching the medium of a violin concerto. (*MEC*, p.266-272)

Then in measure 462, the meter of the violin solo changes to 4/4 and joins the orchestra with the tempo marking of $q=105$. Soon after that, in measure 464, temporal modulation occurs as the music slows down to $q=87^+$. The new tempo of 87^+ results from the following calculation for tempo modulation:

$$\begin{aligned} & \text{tempo of the preceding pivotal beat (52.5)} \\ & \times \text{beat subdivision of the preceding tempo (5)} \\ & / \text{beat subdivision of new tempo (3)} \\ & = \text{new tempo (87.5)} \end{aligned}$$

Another new tempo of $q=131^+$, which appears in measure 538, is also a calculated result from the above formula.

Temporal modulation occurs a few more times in this movement, shifting the sense of speed while transitioning without perceptively abrupt shifts. However, the two new tempi, 87^+ and 131^+ , which are only seen in this movement, function as structural markers; the roles of the violin solo and the orchestra switch in the relatively short section from measures 464 to 476, and the character change led by the violin solo is conspicuous in the section from measures 538 to 593. More detailed explanations of the role of character changes will be provided later in the phrase analysis chapter of this study. The following table summarizes the tempo modulation in the entire Scherzando movement:

measure number	424	462	464	476	478	538	540	594
tempo change (all quarter-note based except the orchestra in m.540)	orch.: 105	105	87+	105	orch.: 105	131+	orch.: ♩.=87 ⁺	orch.: 105
	vn. solo: 157+				vn. solo: 157+		vn. solo: 131+	vn. solo: 157+

Table 1: Tempo Modulation in the Scherzando Movement

2.2.2 Large-scale construction based on polyrhythmic stratification

"I think that the basic thing that this all comes from is an effort to combine different strands of music that have different characters...."

- Elliott Carter²²

Carter's Cello Sonata is referred to as the first piece in which the composer's idea of "simultaneous streams" is realized.²³ The idea mainly arose from his desire to distinctly characterize the instrumental voices of the piano and cello. To create a recognizable "stream," Carter assigned particular rhythmic patterns to each instrumental part and used them for certain lengths of time to maintain the musical "characters" of the parts. In the 1960s and 1970s, Carter continued to employ such rhythmic practices, but they remained focused on local sections in his compositions.

²² Quote from John Link's interview with the composer on August 31, 1992. (from "Long-range Polyrhythms...", p.47)

²³ Bernard, Jonathan. "The Evolution of Elliott Carter's Rhythm Practice," 1988

From the late 1980s on, in order to realize larger rhythmic structures, Carter first created a thorough pre-compositional map of rhythm and tempi, then worked on smaller-scale details.²⁴ This was a reaction to the “problem” of contemporary music around him: the “irregular” and “very small-scale cycle organization.”²⁵ In his conversation with Allen Edwards, Carter indicated that he had been interested in this issue since the early 1960s.²⁶ His perspective on the issue of structure--in this case, with polyrhythmic layout--led him to eventually develop the *long-range polyrhythms* as a large-scale rhythmic structure in the 1980s.

Beginning in 1980, Carter employed his idea of large-scale rhythmic structure on a more global level and focused on a more detailed organization of rhythm.²⁷ John Link’s substantial analysis of Carter’s *Night Fantasies* (1980) demonstrates such a realization.²⁸ Link coined the term long-range polyrhythms for Carter’s application of this global-scale polyrhythmic construction. *Triple Duo* (1983) is another extensive example of Carter’s focus on long-range polyrhythms. As the title suggests, six instruments are grouped into three duos. Each group has its own rhythmic character with tuplet subdivisions of 3, 4, and 5. Carter used these particular subdivisions without common internal factors in order to achieve two goals: to maintain longer

²⁴ Sketches of Carter’s compositions often show drafts and traces of ideas on rhythmic organizations and tempi.

²⁵ Carter’s comment on this issue can be found in Allen Edwards’ *Flawed Words and Stubborn Sounds: ...* (1971, p.111).

²⁶ Ibid.

²⁷ John Link remarks that one of the most notable characteristic changes in Carter’s music from the 1980s is the “use of long-range polyrhythms to guide both the large-scale and the local rhythmic design of nearly every major work he has written.” (Link, John. “Long-Range Polyrhythms In Elliott Carter’s Recent Music”, 1994. p.2-3)

²⁸ Ibid.

musical streaming without converging pulsation points, and to remain more practical for performances.²⁹

While the notion of large-scale rhythmic planning still exists, the concerto and other symphonic works written since the 1990s show the change of its application in creating textures, especially in relation to orchestration. As both Eva Poudrier and John Link note, long-range polyrhythms are not the only structural idea in terms of rhythm in Carter's late-period compositions; for instance, Carter also utilizes various local-level pulse streams to create a polymetrically layered structure and subdivides slower pulse streams into faster pulse units.³⁰ Regarding the *Violin Concerto*, Carter states that the orchestra "comments in various ways on the solo part"³¹ throughout the piece. Along with this idea, the orchestration of the concerto shows that individualizing the instruments in the orchestral parts is not Carter's focus this time. Complex polyrhythmic voicing used in Carter's middle-period orchestral compositions rarely occurs within an instrumental group (i.e., woodwinds, strings, percussion, brass). Instead, the orchestra, whether a single group or the entire orchestra, plays unified beat subdivisions.

Considering the aforementioned changes in Carter's orchestral works written in the 1990s in terms of the structural application of polyrhythms, a different analytic approach than identifying the large-scale rhythmic stratification seems necessary to understand *Violin*

²⁹ Both Andrew Mead and John Link explain the reason for using certain smaller prime factors to realize polyrhythm. To quote from Link: "The larger the denominator value of the number-of-beats-between-pulsations formula, the finer a beat must be divided in order to express a pulsation." He notes that for this practical consideration of performers and performances, Carter's works since 1980 show beat divisions with limited prime factors of 2, 3, 5 and 7 in his chamber music, and factors of 2, 3, and 5 in orchestral works. ("Long-Range Polyrhythms...", p.43-44), Andrew Mead, "Rhythm as a formal determinant" in *ECS*, p. 148-149)

³⁰ Poudrier, Eva. "Toward a General Theory of Polymeter...", Ph.D Dissertation, 2008; p.8, Link, John. "Long-Range Polyrhythms...", p.5.

³¹ From Carter's program note of *Violin Concerto*.

Concerto. However, since large-scale rhythmic planning is part of Carter's ideas for the concerto, a brief look at its application will be useful before examining the concerto with another strategy. An original draft of Carter's shows his utilization of polyrhythm in the concerto.³² According to the variously colored markings shown in the photo of the second draft of the second movement in *Elliott Carter: A Centennial Portrait...*, the solo violin has pulse cycles occurring every twenty-eighth quarter-note triplet. The orchestra contains two different pulse cycles, one with sixty-three eighth-note quintuplet intervals, and another with forty-five eighth-note spans. These pulse cycles are materialized throughout the concerto by accenting them texturally or dynamically.

David Schiff provided a summary of the "three-way stratification" of the concerto in his book (see Figure 2).³³ Carter first planned to write *Violin Concerto* for violin, woodwind concertino, and orchestra, but then withdrew the idea, and instead integrated what he originally wrote as the concertino strata into the orchestra. In Schiff's stratification chart, "mixture" indicates the concertino strata.

³² Meyer, Felix, Anne Chatoney Shreffler, and Paul Sacher Stiftung (Basel, Switzerland). 2008. *Elliott Carter: A centennial portrait in letters and documents*. Woodbridge, Suffolk: The Boydell Press.; p.286-287

³³ One criticism of Schiff's writing is that he often does not provide enough explanation with his figures and data, thus it is difficult to clarify what this data indicates and how these findings are related to other data and ultimately to the corresponding Carter composition.

$$\text{♩} = 52.5$$

Violin $3/28 = 5.625$	135	27
Orchestra $4/45 = 4.666$	112	28
Mixture $5/63 = 4.16667$	100	20

Figure 2: Three-way Stratification of *Violin Concerto* by David Schiff

Schiff set the metronomic tempo as 52.5 bpm (beats per minute) with the half note as the fundamental beat value. According to the figure he presents, the violin solo has a pulse cycle of every twenty-eight quarter-note triplets at the metronomic speed of 52.5 to the half note.³⁴ Therefore, the speed of the each pulse is 5.625, after the calculation of $(52.5 * 3)/28$. The violin solo has 135 pulse cycles and coincides with the other rhythmic streams every 27 pulse cycles.

Schiff explains stratification as follows:

“Division of the musical texture into separate layers with contrasting harmonies, tone colors, rhythms and expressive characters. Counterpoint based on stratification rather than imitation is fundamental to Carter’s music from the *Second Quartet* onward. An elegant example of stratification is the duet, *esprit rude/esprit doux*... Each instrument plays rhythms derived from the slow pulses of a 25:21 structural polyrhythm... the flute plays durations of 42 triplet eighths and the clarinet, durations of 56 quintuplet sixteenths.”³⁵

If one follows Schiff’s definition, *Violin Concerto* mainly has two strata--the violin solo and the orchestra--in that the two parties oppose each other with expressive characters, rhythmic characters and activities, and tone colors. The pulse cycles in the concerto appear quite subtly;

³⁴ Schiff offers an explanation of similar formulation when explaining another Carter composition in his book. Since he did not separately offer an interpretation of the formulae he used in the book, I took his explanation of the identical-looking formula in his book, and then came up with the interpretation of the numbers in Figure 2 by replacing the numbers from the other piece in his verbal description with the numbers in the example.

³⁵ *MEC*, p.46

they form the underpinning scheme in the construction of the concerto.

2.3 ANALYTIC APPROACHES FOR PHRASE ANALYSIS

2.3.1 Montage and memory

Many Carter references point out the art forms that strongly influenced his perspectives on musical form. Carter encountered some of them--such as James Joyce's epic literary work, *Ulysses*, and Sergei Eisenstein's films--fairly early in his life, from his teenage years to his 20s. Both Joyce's and Eisenstein's works share a common perspective with Carter in terms of manipulating temporal layout and consequent perception of continuity and formal organization.³⁶ One of the essential characteristics of the art of film lies in the prominence of the temporal dimension, which strongly connects it with the art of music. The structural plot of the violin solo part is equivalent to that of montage in cinematography. Interestingly, Eisenstein's description of types of montage uses many musical terms, such as metric, rhythm, measure, beat, and so on.³⁷

Montage, in cinematography, is a technique that interweaves different visual moments with particular intentions. Eisenstein defines montage as: " Piece A, derived from the elements of the theme being developed, and piece B, derived from the same source, in juxtaposition give birth to the image in which the thematic matter is most clearly embodied."³⁸ Eisenstein insists

³⁶ It is well known that Joyce and Eisenstein communicated and influenced each other from the early half of the 20th century.

³⁷ Eisenstein uses these terms throughout his writings such as the books *The Film Sense* and *Film Form*.

³⁸ Eisenstein, *The Film Sense*, p.11 and p.69

that the fundamental design of a montage requires ‘conflict’. What he meant by the word, though, does not necessarily allude to using polar-opposite materials; the elements could be developed in an identical time period or space or share a common narrative. In general, montage involves a process of temporal manipulation that creates conflict and tension by splicing cut-off segments, and that is how the dialectic moment takes its position in the temporal continuity. The arrangement of such components in cinematography is linear in nature, and that is why montage is sometimes mistaken with a mere presentation of image “pieces.” Creating a montage, however, is a dialectic approach; it processes conflict and generates a new context.

Eisenstein states that the “metric beat” is not necessarily “recognizable as part of the perceived impression,” although one does not want to use overly complex “metric beats,” which “produce a chaos of impressions, instead of a distinct emotional tension.”³⁹ In *Violin Concerto*, the lengths of the aural moments used to create a montage are not equal. Furthermore, pairs of montage-moments occur either adjacently or distantly. While Eisenstein’s fundamental definition of montage involves two “pieces” occurring in linear motion, different types of montage exist and can be developed. For example, multiple pieces can be “run” and “bound” together to form a sequence, as Eisenstein exemplifies with a sequence of “diverse themes” in his movie *Old and New*.⁴⁰ Eisenstein defines such utilization as vertical montage, notably referring to the layering of voices as seen in an orchestral score; vertical montage is created as a unified image of multiple layers of activities. The concerto uses the notion of montage in terms of how particular musical events reoccur in the temporal dimension and how they are organized to invoke a sense of conflict or generate a new context in the linear progression.

³⁹ The quoted phrases are in regard to metric montage, the most basic type. Eisenstein, Sergei, and Jay Leyda. *Film Form: Essays in Film Theory*. New York: Harcourt Brace Jovanovich, 1949; p.73

⁴⁰ Eisenstein, *The Film Sense*, p. 74-76.

The phrase analysis of the violin solo in *Violin Concerto* focuses on identifying events and their relationships. The events are created from a few highly characterized musical statements, and their arrangement results in a montage structure. The entire concerto is composed with this notion. A cell of a few notes arranged with particular melodic contours, combined with particular intervallic properties, texture changes with multi-stops, and characteristic rhythmic patterns, all function to create events from sub-phrase to sectional levels.

The solo part in the first movement shows a multi-layered structure: a seven-section structure based on phrasing, a four-part structure in terms of density of rhythmic activity, and a montage form in terms of the realization of events. In the analysis section of the first movement, I will demonstrate the three structural layers with the most detail in my analysis of the montage form. Through this montage-construction, certain musical properties are transformed and arranged towards the dramatic narrative of conflict. Before moving on to the detailed phrase analysis, it is necessary to explain the term *events*.

2.3.2 Defining *events*

Describing his Second String Quartet (1959), Carter used the word “character-continuities”.⁴¹ Carter did not compose the piece with the attitude of traditional thematicism. Alternatively, he developed the idea of characterizing the voices by assigning each part specific rhythmic and intervallic identities. This approach has been fundamental in Carter’s compositions since his

⁴¹ Carter, Elliott, and Jonathan W. Bernard. *Elliott Carter: Collective Essays and Lectures, 1937-1995.*, p.232

middle-period. The characterization processes in Carter's compositions require the evolving of "sub-continuities" that constitutes the "event-patterns" or "character-continuities".⁴²

Both the violin solo and the orchestra in the concerto materialize through constant circulations of particular musical ideas. In order to explore the "character-continuity" of the two parts and provide a detailed analysis of the concerto, I have searched for a proper term to use in place of Carter's descriptive expression, "sub-continuities", with a clear implication for the musical objects that are fundamental to the composition of the piece. One possible term for consideration is "entity". Pierre Boulez's notion of musical "entity", which supports the concept of thematism in a newer, late-modern context, could be associated with Carter's idea of character-continuities. Boulez describes the essential existence of "theme" and that he is "convinced that music must be based on recognizable musical objects." Explaining his idea, Boulez avoids the traditional definition of "theme" as it has the connotation of a type-cast musical idea. Instead, he uses the word "entity", which contains certain properties but is more flexible and variant in its utilization.

Another term, which is found in Carter's own writings, is "event". Carter used the word in an interview to explain his ideas of "time-continuity" and musical form:

.... for example, the moment, as it occurs, may consist of a number of simultaneously evolving event patterns or sub-continuities of more or less radically different musical character, which interact with each other to produce a "total" continuity and character-effect.⁴³

⁴² All of the terms in quotation marks are Carter's own words that he used in many occasions to explain his music. David Schiff uses "character-patterns" as the identical term to "character-continuities." (*MEC*, Technical Glossary.)

⁴³ Edwards, Allen. *Flawed Words and Stubborn Sounds: A Conversation with Elliott Carter* (New York: Norton, 1971, p.90), quoted in Bernard, Jonathan W. "Elliott Carter and the Modern Meaning of Time," *The Musical Quarterly*, Vol. 79, No. 4 (1995); p. 655.

Carter's use of "event" may relate to his early influence from philosopher Alfred North Whitehead. Whitehead's notion of "principle of organism," which Carter became familiar with in his early 20s, is one of the fundamental ideas that eventually had a crucial impact on Carter's perspectives on musical form and the process of textural layering. Carter understood and applied Whitehead's concept of "events" to create "processes" that together form a "total organism" of music.⁴⁴ Jonathan Bernard describes Whitehead's notion of events as "aris[ing] from their environment".⁴⁵ Whitehead defines "events" as a nexus, a limiting type, to actual occasions. To quote Whitehead's exact definition: "An event is a nexus of actual occasions interrelated in some determinate fashion in some extensive quantum."⁴⁶ Considering this connection, it makes sense that Carter termed "sub-continuity" along the line of Whitehead's notion of "events".

While inspired by Carter's choice of the term, I use *events* from a different perspective than that of Carter and Whitehead. In the concerto, components of a musical occasion-- rhythm, intervals and their contours, and change of texture due to the use of multi-stops--change their make-up in varying ways in the concerto, while maintaining each of their common characteristics even after transformation. As first defined in the main Introduction, in my analysis, an *event* refers to a structural unit created by a characteristic activity of diverse yet controlled merging of musical properties in the concerto. Events are moments in the temporal progression of the concerto. Events can occur in different lengths and various structural levels as the actual musical properties may interact differently in the moment from other events.

⁴⁴ Bernard, Jonathan W. "Elliott Carter and the Modern Meaning of Time," *The Musical Quarterly*, Vol. 79, No. 4 (1995); p. 649-656.

⁴⁵ *Ibid.*

⁴⁶ Whitehead, Alfred North. *Process and Reality* (Gifford Lectures Delivered in the University of Edinburgh During the Session 1927-28). Simon & Schuster, Inc.. Kindle Edition.

Contents of events consist of the reoccurred and synthesized character-objects that are made of musical properties in varied domains. These events are examined as if watching shots in a film--in other words, how the events behave in the moment and relate to other events. The following figure presents an example of an event that appears in the first movement of the concerto. This figure shows the composition of the event that focuses on presenting one type of event-property: event-interval. Two types of event-interval properties--perfect 5th-minor 6th, and minor 7th-minor 3rd--comprise the event. This figure represents the sixth section of the first movement, and will appear again in the detailed analysis of the section.

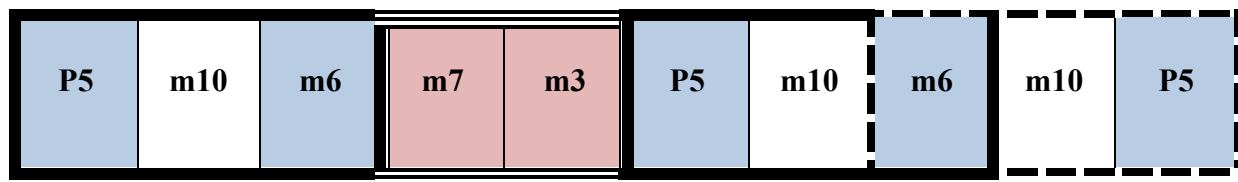


Figure 3: Organization of An Event, mm.154-166, *Violin Concerto*

Another example can show how events are created and organized in the concerto. The following figure presents a partial analysis of the first two sections of the first movement. This figure indicates that events are distinguished by highlighting different types of event-properties. Together, Figures 3 and 4 show that the events can be defined at various structural levels: from an entire section in a movement (Figure 3) to a sub-phrase (Figure 4). Figure 4 will appear again in a detailed analysis of the second section.

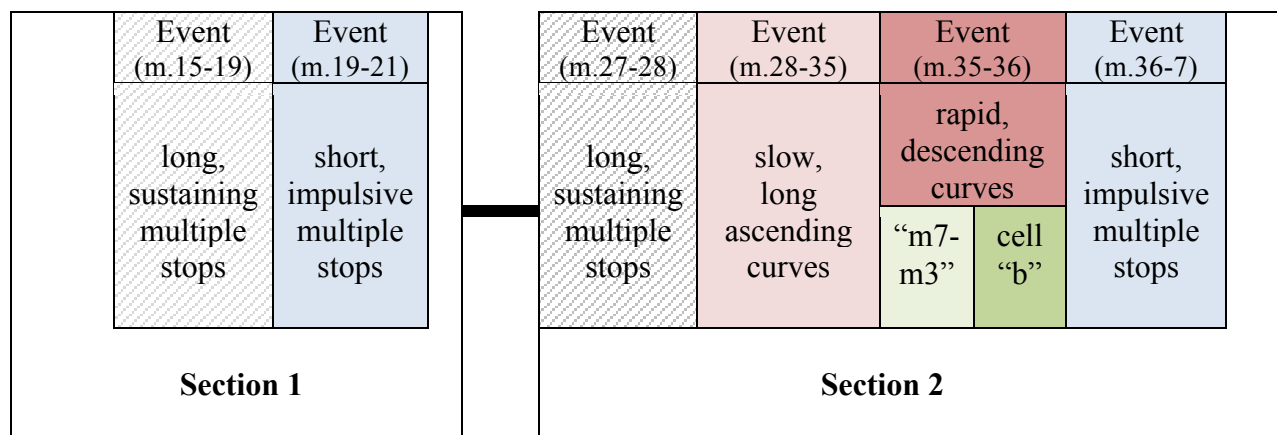


Figure 4: Arrangement of Events according to the Occurrence of Highlighted Event-Properties

By applying the concept of events in phrase analysis, I conduct a detailed analysis of the concerto’s violin solo part in the first movement. As stated in the main Introduction, I will analyze the first movement of the concerto through the following process: defining the characteristic properties of the events in sub-phrase and phrase levels; locating the events created with similar or identical event-properties; and then exploring how they are mapped to a larger-level structure.

As the last part of this section, I provide the following summary of what constitutes an event:

1. An event refers to a moment in the musical structure that is generated by a synthesis of certain musical properties in the domains of interval, rhythm, and texture.
2. Different musical parameters can be highlighted to give an event its character--for example, melodic contour, intervals and their arrangements, and rhythm (beat subdivision)

patterns. These characterized presentations of certain musical parameters are “event-properties.”

3. When a characteristic musical statement appears more than a few times in the piece, recalling the past occurrence of that character, the character is established as an event-property.
4. To describe the nature of the event-properties, I use musical and theoretical terms, such as unit, cell, interval, tuplet, and contour-analysis terms (CC (contour class), CAS (contour adjacency series)).
5. An event is not static in nature. A new event is generated through integrating the properties of a past event. A new event can be created just like a film shot can be graphically edited and rearranged.
6. Events with identical event-properties can still vary in their presentations. Events with identical event-properties could be different lengths, or their constituents (event-properties) can be modified or transformed either in part or in entirety. (This is an extension of notion no.5.)
7. Event-properties contribute not only to characterize the events, but also to realize a variety of structural ideas by being placed anywhere in a section. In other words, beginnings or endings of the event-property statements do not always coincide with those in the concerto’s phrase structure.

2.4 ANALYSIS OF VIOLIN SOLO--FIRST MOVEMENT

2.4.1 Large-scale structures: seven-section and four-part structures

The first movement of the violin solo part consists of seven sections when considering phrasing of the melody and how the orchestra interacts with the solo. Often, rests lasting for a few beats to a few bars divide the sections of the solo part. Certain rhythmic gestures and melodic contours suggest the beginning and the ending of phrases, as Carter frequently utilizes characterized rhythmic ideas or melodic contours that contribute to clear phrasing. Such characteristics are a main point of discussion in the phrase analysis chapter, which I will present after this subchapter. Dividing the seven sections of the violin solo in the first movement suggests a structural plan between the sections. As the following table shows, the first section is a few bars shorter than the second, the third, and the fifth sections. These latter three sections have almost equal duration. The fourth and the last (seventh) section have similar lengths, which are longer than the other sections. The phrase analysis will later demonstrate that these two sections feature heightened levels of activity. In contrast, the sixth section is the shortest among all and is characteristically quite distinctive from the others, as the phrase analysis will illustrate.

Sections	1	2	3	4	5	6	7
Corresponding bars	6-26	27-56	58-85	86-119	121-148	150-166	171-206
No. of bars of the section	21	29	28	34	28	17	36

Table 2: Structure of Violin Solo Based on Phrasing, First Movement

In regards to the concerto's rhythm, three primary beat divisions--in 3, 4, and 5--appear, along with their subdivisions--sextuplets as another version of triplets, and eighth notes as a modified version of sixteenth notes. All beat divisions are based on the quarter note beat, except for eighth note quintuplet figures in half-note durations and a sixteenth note nontuplet in the space of a half note (the latter occurs only once in the movement.) By limiting the numbers of beat subdivision factors, Carter controls the possible rhythmic combinations in the piece. By controlling certain tendencies of tuplet streaming, Carter schematizes the violin solo part.

To discern Carter's plan in this regard, I created a table of beat subdivisions used in the first movement. In the charting process, I followed Carter's four-beat gridding of the piece (i.e., using the 4/4 time signature). A column represents a measure. After entering the data in the beat-subdivisions row, I removed all the gridlines, except for the one that distinguishes the measure-number-row and the beat-subdivisions row, so that we can trace the changes of rhythmic subdivision units and their durations only by the color changes and beat-subdivision numbers. The columns are categorized into three types of tuplet division complexes:

1. [mono-pattern] (columns in lime green: columns with quintuplet eighths in a half-note span are in darker green)

A four-beat unit consists of one type of beat division. These mono-patterns are most frequently triplet eighth notes over a quarter note unit. Quintuplet eighths over a half note unit occurs second most frequently.

2. [bi-pattern] (columns in light grey or light blue⁴⁷)

⁴⁷ These bars in light blue contain more than two beat subdivisions. However, some of the beat subdivisions are derived from the same beat division factor. For instance, in the score, sixteenth note sextuplets are grouped per quarter note with tuplet markings of 3, instead of 6. This indication shows that Carter considered the sextuplets as a part of triplet beat divisions with more rapid sounding figurations.

A four-beat unit features two different types of beat divisions.

3. [multi-pattern] (columns in darker blue)

A four-beat unit contains three or more different beat divisions.⁴⁸

The following is an explanation of the numbers and markings in the table of beat divisions:

- The violin solo begins on measure 6, thus the measure number in the table begins with 6.
- The first row is for measure numbers. The bold-font numbers in parentheses indicate the beginnings of phrases. Braces indicate the openings and the closings of sections for the solo part.
- Numbers in the second row indicate beat subdivisions. All beat subdivisions are based on quarter note timespan units, except “5^h”, which indicates quintuplet eighth notes in the timespan of a half note, and “9^h”, which indicates nontuplet sixteenth notes in a half-note duration.
- Beat divisions are indicated in chronological order, separated by “/”.
- Numbers with a dot (e.g., 4.6, 6.4) indicate that two types of beat subdivisions (4, 6) occur one after another in one quarter-note beat.
- When the number 1 appears, it indicates that the measure contains an on-the-beat onset of a quarter note or a longer valued note. I distinguished these “1” notes from other quarter notes or longer valued notes that are tied from other beat divisions, which are understood as durational extensions and not independent attacks. (When the on-the-beat notes with durations longer than a quarter note are tied to specific beat division tuplets of 3, 4, and 5, the numbers are indicated with bold font.)
- Measures highlighted in red contain a beat-subdivision figure that appears only in that particular moment in the score. There are two such occurrences in the first movement.
- A dash (--) means the former beat division unit continues until the next change.

Therefore, a bar containing beat divisions of 2/3/3/6 can be categorized as a unit with two beat divisions (2/3/3/(3) => divisions of 2 and 3).

⁴⁸ To trace the rhythmic activity, all tuplets were entered with their own subdivision-numbers, ranging from 2 to 6, and 9.

- Each star (*) indicates a quarter rest. If the sign is located before a number, it means a quarter note rest was placed before the notes. Any rest that is shorter than a quarter rest is not marked.
- If the beat subdivision number is in parentheses, that indicates that the corresponding measure has this specifically numbered beat subdivision rhythm, which is tied to longer rhythmic values of which the sum accounts for more than 50% of the duration of the total number of beats in the given time span.

{ (m.6)	7	8	9	10	11	(12)	13	14	15
6/6/4/3	4/2/3/3	3--	3--	3--	3--	3--	3--	--/ 1	3--
m.16	17	18	(19)	20	21	22	23	24	25
1--/3--	2--/3	4--/3--	4*/4	3/4/3/4	6.4/4/5/6	5/4/3/2	6/3/3/6	3-- *	* 3--
m.26 }	{ (27)	28	29	30	31	32	33	(34)	35
-- **	** 3--	3/3--	1/(3--)	1/(3--)	(3--)/1	--/(3--)	(3--)/2	2/3--	2/6/4.6/6
m.36	37	38	(39)	40	41	42	43	44	45
6/6/3/2	(3--)	3-- **	* 3--	1/3--	--3--	2/3/4/3	1/2/3/4	5/6/6/5	4/3/2/3
(m.46)	47	48	49	50	51	52	53	54	55
3--/3--	--/1*	(3--)*	3--	(3--)	1* 5 ^h	5 ^h /3--	(3--)	3* 3--	3/3/4/5
m.56 }	57	{ (58)	59	60	61	62	63	64	65
2/3/2/*	****	5 ^h --	5 ^h --	5 ^h /1/4	3/2/3/3	3--	3--	3--	3--
m.66	67	(68)	69	70	71	72	73	74	(75)
(3--)	3--	3-- /2	3/9 ^h /6	5/4.6/3--	5 ^h /2	1/(3--)	--/5	3-- **	* 3-- *
m.76	77	78	79	80	81	82	83	84	85 }
** 3--	5 ^h --	5/3--	3/2/3/6	3/3/4/4	(3--)/1	-- (3--)	-- 5 ^h	----	3-- **
{ (m.86)	87	88	89	90	(91)	92	93	94	(95)
1* 3--	* 3--/3	--/4/3	--/1/5/2	5 ^h /3--	3** 3	* 3--	3-*/3/*	3*/3--	3--*/3
m.96	97	98	99	(100)	101	102	103	104	105
-- 1	-- 4	--/3	-- 4 --	3-- /6	--2--/3	--/2/2/3	2/5/3/3	5 ^h /3--	(3--)
m.106	107	108	109	(110)	111	112	113	114	115
(3--)	(3--)	(3--)	(3--)	2--/4/6	-/4/2/3	4/4/3/2	4.6/6.4/4/5	5--	6--/5/4
m.116	117	118	119 }	120	{ (121)	122	123	124	125
6/2-/1	--1--	(3--)	-- *	****	1 **	(3--)*	* 3--	(3--)	(3--)

(m.126)	127	128	129	130	131	132	133	(134)	135
3/*3--	1/(3--)	3--/2/3	4/3/3--	--/2/5 ^h	3--5 ^h	2/3--	2-- **	**(3--)	(3--)/2
m.136	137	138	139	(140)	141	142	143	(144)	145
6/4--/3	(3--)	(3--)	(3--)	1/3--	(3--)	(3--)/3	--***	2/3/2/3	3--/3
m.146	147	148 }	149	{ (150)	151	152	153	154	155
--/4/3--	3--/5 ^h	(3--)	****	*** 3	(3--)	----	(3--)	(--3-)	----
m.156	157	158	159	160	161	162	163	164	165
3----	(3--)	(3--)	--/3-	(3--)	-/3--	(3--)	(3--)	----	(3--)
m.166 }	167	168	169	170	{ (171)	172	173	174	175
3***	****	****	****	****	(3--)	(3--)	(3--)	(3--)/3--	3--
(m.176)	177	178	179	180	181	182	183	184	185
5 ^h --	3/3/2/3.4	3/5--	5 ^h /3/3	3/4/3/3	(3--)/4	6/4.6/5--	6/3--	6/5/6/6.4	6--/5 ^h
(m.186)	187	188	189	190	(191)	192	193	194	195
5 ^h /(3--)	(3--)	-- 1 *	(3--)	4/3/5 ^h	* (3--)	1/3	(3--)	(3--)	3--
m.196	197	198	199	(200)	201	202	203	204	205
3--/5 ^h	6/3/3/2	5 ^h --	3/3/4/5	4/3/3/6	(3--)/6	3--	3--	2/5 ^h	----
m.206 }	207	208	209	210	211	212			
-3 ***	G.P.	* 3/3/*	G.P.	****	****	****			

Table 3: Beat Division Patterns in the First Movement in *Violin Concerto*

By analyzing the data in Table 3, we can schematize the first movement in terms of rhythm. Carter assigns triplets as the fundamental rhythmic character of the solo part. Except for the 12 bars with whole rests, only 13 bars out of 212 total bars contain all non-triplet figurations. (The 13 non-triplet-rhythm-only bars are marked in dark grey in the measure-row.) All of the triplets are based on quarter note beats; triplets do not divide a half-note or longer duration in this movement. Carter leaves no more than six beats without a triplet figuration, except for bars 57-60 and those moments with whole rests.

The beat subdivision thread from Table 3 shows a region where triplets are used continuously for the longest duration in the movement. Starting from the last beat in measure 150, only the triplet mono-pattern is used until measure 166, after which the four bars of rests occur, and then the mono-pattern continues until measure 175. Measure 150 marks approximately the 70% point of the movement. Positioning this “static”, long mono-rhythmic section at this structural point, lasting a significantly shorter duration than in the other sections, suggests that this section behaves in a particular way in this movement, especially when it is followed by a “mobile” section of a vivid rhythmic thread with multi-patterns. The structural function of this static section will be defined later in a more detailed phrase-level analysis of the movement, as other properties must be considered to interpret this section.

In comparison, the other sections of the first movement contain no more than 6 bars of continuous triplet-mono-patterns. The rhythmic activities are more varied in these sections. It is notable that the 6-bar triplet-mono-pattern occurs twice in the movement. The first 6-bar triplet-mono-pattern occurs at the very beginning of the movement, from bars 8 to 13. The second instance of the pattern is between bars 62 and 67 in the third section. These are followed by two similarly continuous triplet-mono-patterns. The fourth section has a 5-bar pattern between bars 105 and 109, and then the beginning of the seventh and last section has a 5-bar pattern from bars 171 to 175. There are other regions that feature the triplet-mono-patterns for five consecutive bars, such as bars 91-95 and bars 122-126, but these mono-patterns are rather disjunctive.

Carter’s application of beat subdivisions demonstrates his intention to keep an aural perception of continuous flow. In the first movement, few notes are executed on the beat. Carter meticulously obscures the metronomic pulsation in the solo part by putting rests on the downbeats in the meter of 4/4, starting or accenting notes within the upbeat notes of the tuplets,

using pitch-contours that cross over metronomic beats, or creating longer-duration notes over a few beats by tying the pitches starting from off-beat positions. The orchestra, which comments in various ways⁴⁹, supports the ideas of the constant masking of metronomic beats and the shifting of speeds, and leaves spaces via rests in order for the solo part to take the main role.

To visibly trace and further interpret the rhythmic activity in the first movement, I created a domain-transformation diagram from rhythm to pitch according to the figuration-data of Table 3. The diagram is useful for viewing the rhythmic activity and the resulting structure of the entire movement. This approach was inspired by Andrew Mead's method of presenting tempo ratios between voices in a polyrhythm using pitch notation.⁵⁰ Mead used the overtone series to visualize the tempo relationships, converting the tempi-ratios upon calculating tempo differences into the frequency ratios between partials (i.e., intervals). Here, I used the overtone series in its natural array--the lowest pitch becomes the fundamental, and higher pitches are arranged according to the overtone series. The fundamental tone is numbered as 1, and this note represents the beat subdivision of 1 (i.e., a quarter note or more in time span) in the graph. The first overtone is numbered as 2, and it represents eighth notes. The second overtone is number 3, representing a triplet. The same method is applied for the rest of the overtone-beat division substitutions. Each vertical-array of solid notes represents the beat division patterns occurring per four beats (i.e., a bar). When only one solid note appears, that means a whole bar is organized with a mono-pattern tuplet with its corresponding overtone-numbered beat subdivision. The lowest pitch in the following example, G3, represents an on-the-beat onset (beat subdivision "1" from Table 3). The first overtone, G4, represents eighth notes. In a similar fashion, D5

⁴⁹ This was mentioned at the beginning of the chapter as a quote from Carter's program note.

⁵⁰ For more information, refer to Mead's article, "Time Management: rhythm as a formal determinant in certain works of Elliott Carter" in *ECS*.

represents triplets, G5 sixteenth-note subdivisions, B5 quintuplets in quarter note beats, and D6 sextuplets. B^b5 represents half-note-beat quintuplets. The result of this substitution process is shown below in Figure 5.

This figure shows the relationships between different beat subdivisions with their frequency-ratio correspondent. A good example is the pitch notation of triplets and sextuplets; they would appear with the same pitch names but in different registers (one octave). This reflects Carter's idea of co-categorizing the latter as a subdivision of the former. In the diagram, more pitches are vertically aligned when multi-patterns occur. The graph effectively demonstrates the rhythmic flux: the higher the pitch, the more subdivisions per beat. The change of intensity in rhythmic activity is clearly visible in the graph: the denser the rhythmic texture becomes, the more intense the musical activity becomes. When more higher pitches accumulate, the perceived rate of speed is faster.

In this figure, each system begins a new section. Upon examining the properties of voicing and frequency range, clear structural differences are visible between the sections; these differences show the strong relationship between the large-scale formal design and the organization of beat subdivisions. More detailed interpretation of the diagram follows:

- There are seven sections in the first movement.⁵¹ Each system consists of a section.⁵²
- A fundamental note indicates that a downbeat-onset⁵³ occurred. There are a few instances where more than two consecutive downbeat-onsets occurred.

⁵¹ This segmentation is based on the delineated phrasing shown in Table 3.

⁵² The last staff appears to contain two sections, but the last short part is only transitory.

⁵³ This, however, does not create a pulsation.

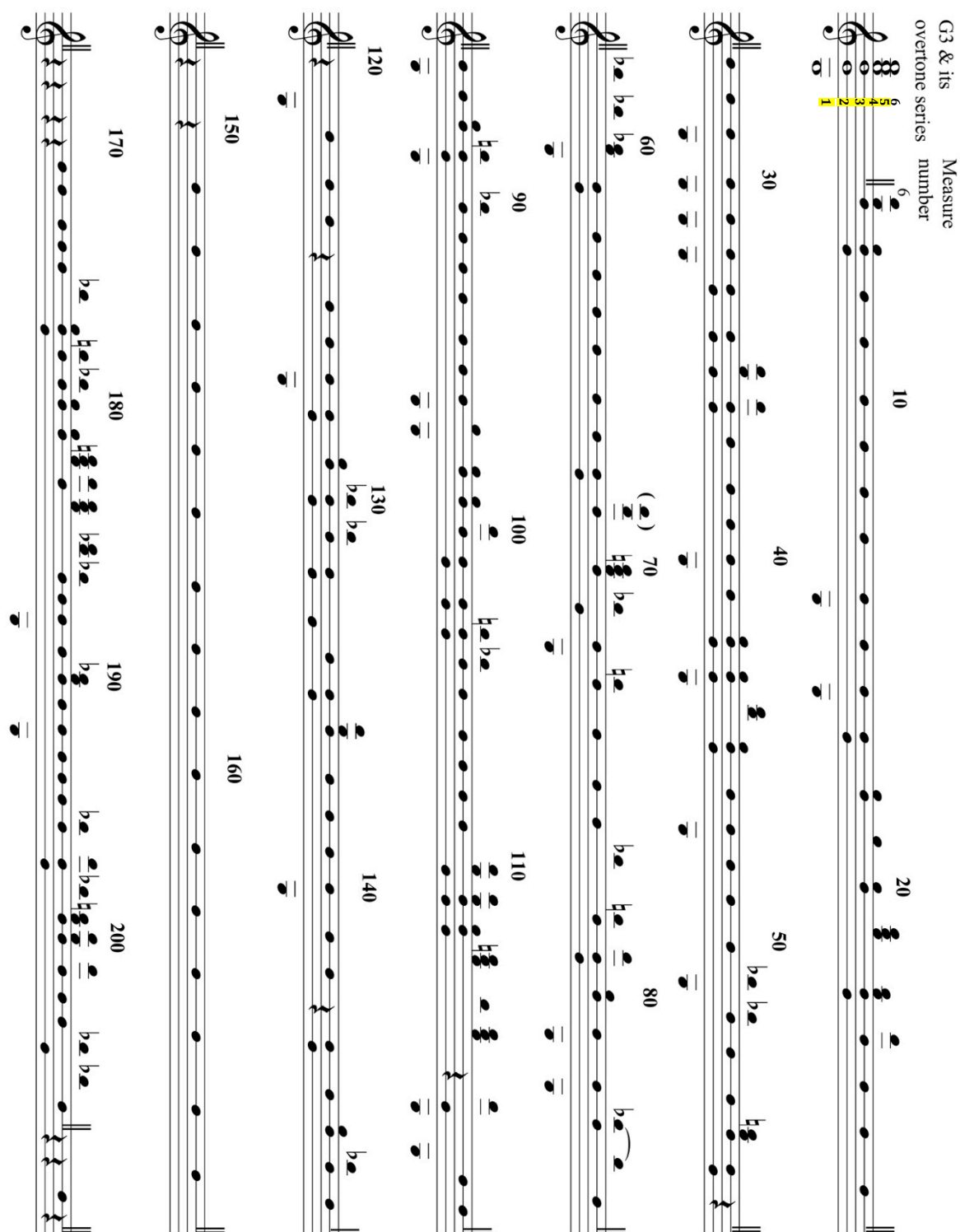


Figure 5: Domain-Transformation Graph of Beat Divisions in *Violin Concerto*, First Movement

(A D5 indicates an occurrence of eighth-note triplet rhythm in a measure)

- In the graph, D5 (the triplet) appears the most frequently, and the fundamental note (on-the-beat onset notes) makes rare appearances; Carter uses triplet-based rhythms as the center of rhythmic activity.
- The determining factors of the activity level include the textural density in voicing, sectional duration, and the frequency of higher pitches appearing in the diagram. Summarizing the rhythmic activity level from the diagram, the first movement features the following scheme (Figure 6):

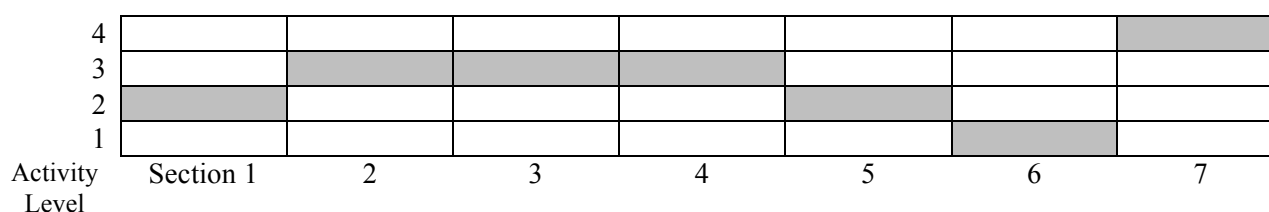


Figure 6: Relative Density of Rhythmic Activity, *Violin Concerto*, First Movement

The music becomes rhythmically more charged and in-flux in sections with higher activity levels. Figure 6 shows that the solo part starts with relatively little activity in the first section, then becomes highly active and maintains rhythmic energy for its following three sections. After slowing down during the fifth section, the solo then remains still by restoring itself to triplets in the sixth section, then becomes hyperactive at the end. The most heightened drama takes place in the last two sections. This narrative expresses a four-part structure: a low-energy beginning (section 1), a higher-energy sustain (sections 2-4), a gradual recess leading to a complete reservation of energy (sections 5-6), and finally a hyperactive ending (section 7).

2.4.2 How the drama begins: opening of the violin solo

The orchestral parts in the first and the last movements of *Violin Concerto* feature a flux of beat subdivisions. The beginning bars of the concerto quickly synopsizes this scheme. The period of certain beat subdivisions of the orchestra is mostly a few bars long or as short as one beat, while the violin solo features more consistent streams of triplet subdivisions throughout the entire piece. The soloist pervasively plays eighth-note triplets in the first and the last movements and quarter-note triplets in the second movement. Sixteenth-note sextuplets, used as subdivision-variations of the eighth-note triplets, appear occasionally in the first movement.⁵⁴ The second most prominent beat subdivision of the solo part in the first movement is that of five, appearing mostly as an eighth-note quintuplet over a half-note duration and at times as a sixteenth-note quintuplet over a quarter note.

At the beginning, as Example 1 shows below, the violin solo enters with a sense of internal conflict. This entrance--with a beat division combination of $6(3)^{55} + 6(3) + 4 + 3 + 4 + 2 + 3 + 3$ occurring in two bars--is quite dramatic. There are other factors, however, that make this entrance less frantic-sounding than it looks. Carter writes the sextuplet sixteenth notes for the first two beats so that the solo part gradually emerges as part of the rhythmic structure along with the orchestra. On the first beat of bar 6, when the solo starts, both the soloist and the first violin play the same beat division of sextuplet sixteenth notes. The solo part imitates the violin part of the orchestra in terms of beat division combination; the solo enters one beat after the first violin begins with the same rhythmic motive of $6(3) + 6(3) + 4 + 3 + 2 + 3 + 3$. This thread continues with varied mixtures of beat subdivisions. Through this rhythmic imitation, the solo takes the

⁵⁴ Carter's notation of sextuplets with the beat subdivision number of 3 shows his consideration in this regard.

⁵⁵ "6(3)" indicates sextuplet sixteenth notes grouped as a triplet of two-sixteenth notes.

baton from the orchestra and then immediately leads the game as the orchestral voice becomes dynamically softer and texturally lighter. The solo follows the dynamics of the orchestra. By playing in the instrument's lowest register, the solo starts with a richer timbre that help the part stand out despite registrally blending with the orchestra. Relative to the other orchestral violin parts, the solo plays the lowest voice. In the beginning phrase (bars 6-11), Carter uses pitches ranging from G[#]3 to G[#]4, mostly in the solo part, and avoids orchestrating other instruments within this range. Overall, the solo features a quietly emerging yet clear and dramatic entrance.

[illegible]

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Example 1: Beginning of the First Movement, mm. 4-11

2.4.3 Phrase analysis of the first movement

The first movement consists of seven sections that were construed by examining larger-scale phrasing and the trend of beat divisions. The following detailed phrase analysis will consider many other aspects--interval organization and contour, rhythmic patterning, register, and orchestration--and will make it possible to figure out the structure on various levels. The first

movement, as well as the entire concerto, presents a multi-tiered montage of musical events with morphing phrases in the solo part. These events occur based on five characteristic musical ideas. The five ideas become a constructional basis of the entire concerto. As stated earlier, each individual event-property can be combined with another to generate a new event. The following description illustrates the five types of event-properties, all of which are introduced in the first section of this movement: Abbreviations of the categorized qualities, which I bracket below, will be used in the phrase analysis in place of verbal descriptions.⁵⁶

1. Mixed rhythmic-subdivisions: multiple tuplet patterns occur over a few beats (mostly more than four beats). I will refer to it as event-rhythm 1 [E-R1] in the following phrase analysis.
2. Consistent triplets used over a recognizable period of time (a few bars, for example). This will be referred to as event-rhythm 2 [E-R2].
3. Multiple stops that expand in terms of number of notes (from double to quadruple, for example) and register. This will be referred to as event-multi-stop [E-MS].
4. Zigzag melodic-contour: usually presented over a duration of a few bars with wide interval spanning and longer note durations. This will be referred to as event-zigzag-contour [E-ZC]
5. Significantly emphasized and recognized pitch-related motions
 - a. Contour cells (as presented in Figure 6 in the later part). CC<1,0,1> will be referred to as contour-event-cell type “a” [E-Ca], and CC<1,0,2> as contour-event-cell type “b” [E-Cb]. In the analysis, E-Cbs are distinguished from the

⁵⁶ I use brackets in the categorization to show how I label each property, but do not use brackets in the main part of the phrase analysis.

interval-successions that are categorized below. The most common E-Cb form is a minor 2nd-minor 3rd pair.

- b. Interval-successions. Three pairs are prominently featured: minor 7th-perfect 5th, minor 7th-minor 3rd, and perfect 5th-minor 6th. They mostly form curved contours when used melodically. These will always be labeled as event-interval [E-I]. The particular pair will be indicated in the phrase analysis. It is noteworthy that the two E-Is containing a minor 7th are related in that an identical set of three pitches creates both E-Is depending on how the pitches are arrayed.

The solo part in the first movement is kinetic in the way it keeps generating its plot from the memory of past events. The part features montages and other memory-based characteristics at moments. The following phrase-level analysis demonstrates the design of the first movement of the solo part.

2.4.3.1 Section 1

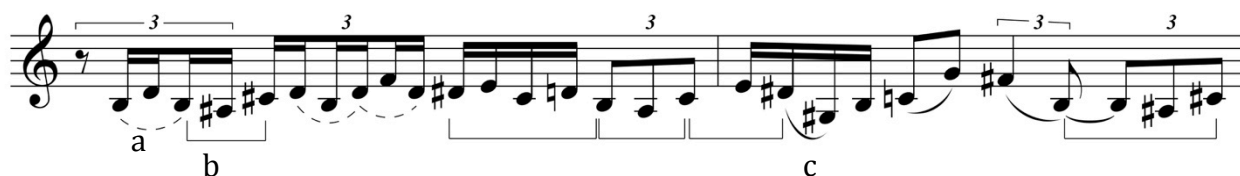
The first section of the first movement introduces all the event-properties we hear throughout the concerto; the section is an exposition. In the first section, as explained before in Section 2.4.2, the solo part enters by imitating the orchestra's first violin part. The solo part does so in terms of rhythmic figuration and intervallic contour. The first phrase, bars 6 to 11, features two sub-phrase-level events, one from bars 6 to 7, and another from the last beat of bar 7 to bar 11. Each event contains one E-R and one E-C. While the second event is definitely born from the first, the two events are highly contrasting. Figure 7 shows the first event:



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Figure 7: The Beginning of the Violin Solo, mm. 6-7

This event features a chain-like repeating character in melodic contour. The first five-note pattern, B-D-B-A[#]-C[#], is used in various ways in the event. Although not literally imitating the entire five-note pattern, the pitches in the event repeat themselves in a limited register, and in the course of the repetition, a similar contour takes place. Figure 8 shows the three types of melodic contour cells found in the two bars:



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Figure 8: Using Melodic Contour, mm.6-7

- a. E-Ca: CC<0,1,0> cell and its variations (with dotted slurs below the figures). The beginning three-note contour is quickly imitated and inverted in the second beat of the same bar. This cell appears as the main figure of the orchestra part in the beginning of the first movement, and is used throughout the concerto.

- b. E-Cb: CC<1,0,2> cell and its variations (cells with solid-line brackets underneath them).

This contour grouping explains the second bracketed five pitches, D[#]-E-C[#]-D-B, a combination of the cell's retrograde inversion and inversion.

- c. Perfect 5ths (the solid-line-slurred notes): in bar 7, perfect 5th is introduced in the first beat, then ascending C-G in the next beat, which is mirrored as descending F[#]-B.⁵⁷

These beginning two bars forecast some of the major procedures of constructing the solo part--*contracting, extending, imitating, and mirroring* of the melodic and rhythmic motions.⁵⁸

The second event begins with the note B in the third beat in bar 7 (the last “b” cell seen in Figure 8). After the bracketed melodic contour, the progression moves to E in the next bar (bar 8). In bar 8, however, instead of staying in the same cyclic motion and range, the sub-phrase forms a longer line up to the last beat of bar 11. The second event starts with the contour material and the tuplet rhythm from the first event, but runs with a contrasting rhythmic character to the first. While the first event has a rhythmically excited character with constant changes of beat division, the second event has a consistent and slowed-down rhythm based on eighth-note triplet divisions. The two events reoccur in various structural levels over the course of the first movement and then continue to occur throughout the entire concerto.

The first phrase also introduces a few interval-related event-properties. The first sub-phrase contains two contour-cell-event properties, types “a” and “b”, as seen in Figure 8. In the

⁵⁷ I did not include the perfect 5th as an event-property contour cell in my events category. The interval gains its significance by being used adjacently with a minor 7th or a minor 6th, which I categorized as event-property type 5. In this example, the perfect 5th is either preceded or followed by a minor 2nd, which produces a minor 6th including the perfect 5th. Although these occurrences are E-I (P5-m6), I did not mention the event-property here, as the point of the example is to explain the two contour cell types that are mainly featured throughout the concerto.

⁵⁸ More process-terms will be introduced with examples as the analysis continues.

second sub-phrase, one of the E-Is (minor 7th-minor 3rd) is played for the first time at the end of the phrase in bar 11. Example 2 shows the entire second sub-phrase.



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Example 2: mm. 7-11, Violin Solo

The second phrase starts with a mirroring of the rhythm and the melodic contour to the last bar of the last phrase; the beginning of the second phrase is *linked* to the ending of the first phrase.



Figure 9: Mirroring Between Bars 11-12, Violin Solo

The melodic-contour and rhythmic character of bar 12 (as seen in Figure 9) is utilized throughout the phrase. The four beats from the third beat of bar 12 to the second beat of bar 13 consist of another mirroring of both melodic and rhythmic entities. The mirroring is marked with dashed slurs in Figure 10.

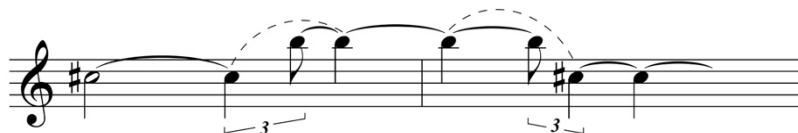



Figure 10: Mirroring Between Bars 12-13

The ascending perfect fifth, C[#]5-G[#]5 in bar 13, imitates the ascending C[#]5-B5 motion in bar 12, with its similar ratios of the notes' durations of 2.66: 2.66: 2: 2.66 (beats). The periodically ascending contour is then even more *contracted*--from a minor 7th in bar 12 to a perfect 5th in bar 13 to a minor 3rd from bars 14 to 15. The ascending minor-3rd motion (with the C[#]5-E5 dyad) is *interrupted* by a F[#]4 between the two notes. Through this interruption, two things occur: recalling the previously appearing minor 7th and its ascending motion (F[#]4-E5), and introducing another E-I of perfect 5th-minor 7th (C[#]5-F[#]4-E5).

Another minor 7th then appears as a double stop in the next cell, D[#]4-C[#]5 in bar 15, and part of a triple stop as G[#]3-F[#]4 in bar 16. This E-MS that *expands* from one to the next stop reoccurs throughout the rest of the second phrase, from bars 16 to 19, and continues to the beginning of the third phrase from the last beat of bar 19 to the end of bar 20. The upper voice of these two stops makes a C[#]5-D5 line, which is melodically *imitated* immediately between bars 16 and 17. The last E-I is introduced as a quadruple stop in bar 17--a minor 6th-perfect 5th with pitches A[#]3, F[#]4, D5, and A5.

Bars 17 and 18 are made of a sequential rhythmic idea-- .⁵⁹ The subsequent bar, bar 19, seems to have a different rhythmic pattern, but the onset-points of the notes map closely to those of the previous two bars:

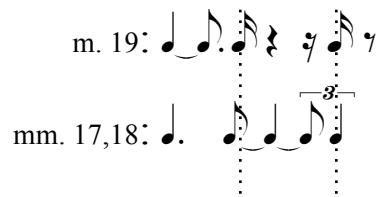


Figure 11: Comparison of Rhythmic Onset-Points, mm. 17-19

The last phrase of the first section begins at the last beat of bar 19 with a double stop. The segment from here to the next bar presents an energetic motion with double to quadruple stops. These five beats contain a short local pulse stream.⁶⁰ The first, third and fifth beats have syncopated onsets of stopped notes, thus an upbeat-pulse occurs every two beats that results in a perceptual tempo of 52.5bpm (Figure 12; pulse-notes are underlined):

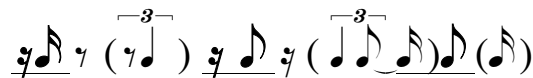


Figure 12: Short Periodic Pulsation, mm. 19-20

⁵⁹ Bar 18 has a sixteenth rest before the first eighth note, but this is the attack rhythm.

⁶⁰ This stream does not present the pulse stream of the part's strata of long-range polyrhythm.

In addition to the repeating melodic contours and rhythmic patterns, E-I (P5-m7) appears as multiple stops in this phrase. Bar 20 consists only of multiple stops, every one of which contains either a minor 7th or a perfect 5th, or both. The five-beat concentration of stops from bars 19 to 20 has been prepared by the preceding phrase. Beginning with a double stop in bar 15, the stops appear in every bar from bars 15 to 21. While the stops in the second phrase are mostly sustained, leaving two voices sounding until the next onset of notes, those in the third phrase tend to be shorter; the E-MS is *recycled*, yet the character changes in the third phrase with rhythmic and durational contractions. The beginning double stop of the third phrase in bar 19 is played as staccato sixteenth notes, referencing the single staccato sixteen note from the end of the second phrase. This method of *linking*, where a phrase begins by imitating the entities from the ending of its preceding phrase, is an essential character that is used extensively throughout the first movement. The beginning short gesture with the syncopated onset of sixteenth notes is utilized afterwards in various musical contexts: with different textures, rhythmic durations and pulsations, and intervallic spans.

The third phrase consists of three sub-phrases. The first one is the above-mentioned concentration of stops (E-MS) until the first beat of bar 21. From the end of the first beat in the bar to the first beat of bar 23, mixed-rhythmic multi-patterns (E-R1) appear. While contrasting with the first sub-phrase in terms of textural density and perceived speed, the second sub-phrase carries the heightened excitement from the first sub-phrase by accelerating in bar 21. As the sub-phrase slows down, the first beat of bar 23 features a sixteenth-note sextuplet, which plays a rubato-like effect in tempo. This gesture is followed by a series of eighth-note triplets where onsets of notes always occur on the upbeat subdivision within the triplets. This sub-phrase of

triplet mono-pattern appeared in the first and second phrases; this time it is much shorter than the former two occurrences.

The third phrase shows a strong connection with the first phrase in terms of rhythmic design in that bars 21-26 also feature an E-R1 followed by an E-R2. This last phrase in the first section of the solo part ends with an elision into the next section on a single sustaining high G6. Rather than trailing-off, this last note becomes louder and leads the orchestra to expand in texture and dynamics.

Furthermore, as Figure 13 below shows, the endings of the second and the third phrases are derived from those of the first phrase. Their melodic contours, rhythmic patterns, and intervallic relationships show a strong connection among them. The first ending features an interval array of minor 3rd-minor 2nd-minor 7th-minor 3rd with the CC <2,1,0,4,3>, or CAS <- , -, +, -> with triplet-subdivisions. The second ending features the same interval array as the first one with the minor 2nd omitted, with CC<2,1,3,0> or CAS<-, +, ->. Although the CC looks different between the two endings, usage of the same intervals and same CAS make the two endings quite similar events. The third ending recalls the first ending by applying the same interval array of minor 3rd-minor 7th-minor 3rd, but twists the contour pattern by making an inversion of the array from the minor 7th and extending the array with a minor 10th, expanded from minor 3rd (compound interval).

first phrase, mm.10-11

second phrase, mm. 18-19

third phrase, mm. 23-24

inverted and extended from mm.10-11

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Figure 13: Endings of the Three Phrases in Section 1, First Movement

Activities of these multiple musical domains expand towards the middle phrase, then contract towards the end of the section. The following table displays the activities in the first section:

Phrase	1	2	3
Measures	6-11	11-19 (2nd beat)	19 (3rd beat)-26
Highlighted intervals	minor 3rd, perfect 5th	minor 7th, perfect 5th	perfect 5th, minor 6th, minor 7th
Utilization of events by	contracting, imitating, mirroring	mirroring, expanding, imitating	recycling, contracting
Beat subdivision mix patterns	multi→ mono (3)	mono (3)→ bi	bi→ multi→ mono (3)→ extension
Change of texture	none	single line to stops (sustained double)	stops (short multiple) to single line

Table 4: Summary of Violin Solo in Section 1, First Movement

2.4.3.2 Section 2

The second section begins by recalling the beginning of the first section. The first melodic-contour type we encountered in the analysis of the first section (E-Ca) starts the solo part. This can be interpreted as a linkage if we take the orchestral part into consideration; the final few bars of the orchestra in the first section feature an E-Ca as well. The specific event-property is used to open the two sections and close the first section. The combined gesture of the orchestra and the solo part at the beginning of the second section recalls the beginning of the concerto.

In the first two bars of this section, the momentary appearance of the double-stop event-property (E-MS) follows this pitch-contour event-property. This brings back the memory of the stops from the former section, which first appeared in bars 15-16, with an *expanding* character from one to the next. This E-MS is implemented a few more times throughout the second section, however it is utilized differently each time.

Along with these two event-properties, another event-property from the first section appears in bar 28; two of the most highlighted intervals in the first section, the minor 7th and the minor 3rd, are played consecutively in descending motion. This E-I (m7-m3) is realized both melodically and harmonically. The double stop in the second beat is comprised of a minor 9th, which is the result of adding a minor 7th and a minor 3rd. This minor 9th is also a result of its preceding minor 2nd double-stop moving in contrary motion: the upper E and lower D[#] of the 2nd both move a tritone.

Immediately after the recalling of these events, the A3 in the last beat of bar 28 moves up a minor 10th, a compound-interval expansion from a minor 3rd. This larger-span ascending motion is utilized as one of the major properties of the second section. In fact, this E-ZC--a larger-span motion in both interval and duration--is the main characteristic of the second movement, and is recalled occasionally in the last movement as well. Example 3 below includes excerpts from the two latter movements along with the first phrase.⁶¹ The first excerpt from the third movement features a similar event as the former two excerpts. The last excerpt of the example is another event characterized by an up-down contour over a larger time-span. These E-ZCs are recognized and highlighted in the concerto, because they are laid out next to or in between other characteristic events that generally raise the level of contrast with the E-ZCs.

⁶¹ The examples from other movements were selected to represent the idea of recalling the events. There are more examples in the two latter movements.

First movement, mm. 29-32



Partial beginning of the second movement, mm. 219-224



Third movement, mm. 490-493



Third movement, mm. 521-524



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Example 3: Excerpts of Event-Zigzag Contour (E-ZC), Violin Concerto

An ascending minor 13th and a series of ascending minor 10ths are combined with descending perfect 5ths and a minor 7th to create curves in contour from the last note of bar 28 to the end of bar 32. E-I (m6-P5) appears in the contour from the second beat of bar 29 to the first beat of bar 30. In repeating the curves, the solo line reaches C7 in bar 33. The last ascending interval to reach C7 is a minor 9th, which appeared as a double stop for one beat in bar 28. Moving from the last A in bar 28 to the high C in bar 33--another compound form of minor 3rd--the curves are gradually expanded in cyclic durations then slightly contracted in the last curve as the C moves down a minor 6th to E6 (Figure 14).

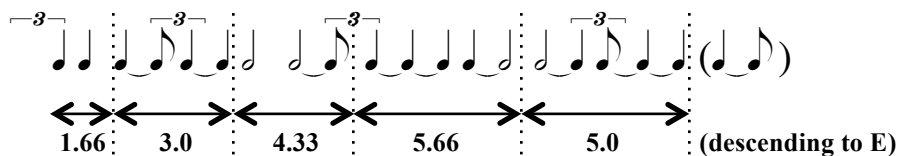


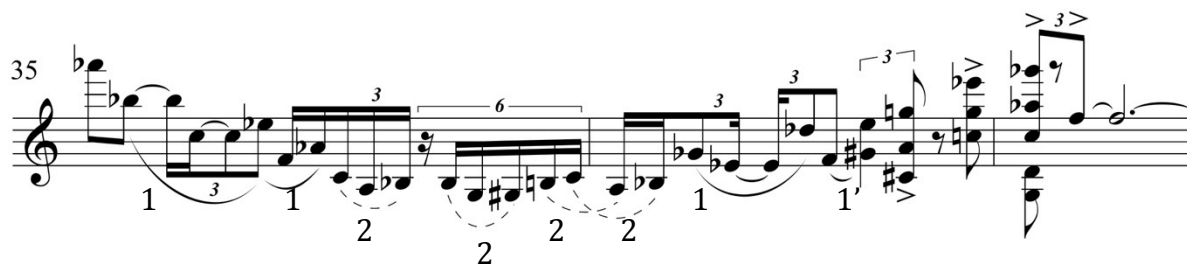
Figure 14: Durations of the Intervallic Cell-Curves, mm. 28-33⁶²

This E-ZC, characterized by larger-ascending-smaller-descending motion, is quickly contracted in the beginning of the next phrase, where it unfolds in 5.16 beats from the second eighth note (C[#]5) of the first beat in bar 34 to the C5 of the second beat in bar 35. Compared to the zigzag motions that draw together the big ascending contour in bars 28-34, the ascending line in bar 34 has a simple and smooth contour. This smaller curve is constructed via intervallic mirroring with an ascending line of C[#]-B-A followed by a descending line of A^b-B^b-C.

The rhythmic motion in the second phrase becomes more rapid as the sixteenth-note sextuplets play a series of two excavated intervallic event-properties that originate in the first section. Figure 15 shows how the earlier part of the second phrase is composed. The E-I (m7-m3), which was emphasized at every phrase ending in the first section, begins with the upbeat eighth note in the first beat of bar 35, and repeats once. This pattern is followed by E-Cb, which we have seen in the first section, in its inversion. In Figure 15, E-I (m7-m3)s are marked with solid-line slurs and a number “1”, and E-Cbs with dashed-line slurs and a number “2”. The last slurred E-I is numbered with a prime mark, 1'. Here a major 7th replaces a minor 7th, and the previously placed E-I's texture changes to a double stop.

⁶² The dotted lines mark the switching points of the curves; the last note before a dotted line is the highest pitch in the curve.

A new relationship develops here between the two events--a great *montage*-moment. Sharing the same CC of $\langle 2,0,1 \rangle$ connects the two event-properties. The former event-property intervallically contracts to the latter. This part of the second phrase is also strongly connected with the first phrase of the current section, as the former's ascending E-ZC is used again in an inversion-contraction format. Aside from this similarity, the two phrases feature a contrast in rhythmic motion. While the first phrase combines the E-ZC and an E-R2 with long note durations, this part of the second phrase features the E-ZC with an E-R1 in rapid-sounding mixed beat subdivisions. The motion is accelerated as the big zigzag motion of the first phrase is contracted in the beginning of bar 34.



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Figure 15: Two Event-properties Appearing Melodically in the Second Phrase, Section 2, First Movement

The fluid motion stops in bar 36, as an E-MS enters and texturally expands. This event references the other momentary stops we saw in bar 28 as well as in the first section. What is striking with this connection of E-MS is that we have seen this specific scene of E-MS installation in the previous section; long, sustained stops appear first in the first phrases (bars 15-

19 and bars 27-28) and then short, more impulsive-sounding stops appear in the second phrases (bars 19-21 and 36-37⁶³). So far, all the E-MSs, whether they occur in short or long time-spans, feature an identical tendency towards expansion, either texturally or registrally. As in a *montage* in a movie, this aural shot, which is cut in different lengths and edited without losing its distinctive quality, is implemented in the continuing time-reel of the concerto.

From bars 15 to 37, multiple cases of montage have occurred through processes of recalling formerly heard events, reordering the events, and then either highlighting conflict or reaching towards a new meaning through a new arrangement. The following figure graphically presents this montage structure (Figure 16). Arrows and the dotted-end line in the figure represent the connections between the two events that create a montage together. Arrowed lines connect the parts that contain identical event-properties but with contrasting characters. The line with dotted ends indicates that the two interval event-properties are arranged together to regenerate a new moment.

⁶³ Figure 15 shows this example in bars 36 and 37.

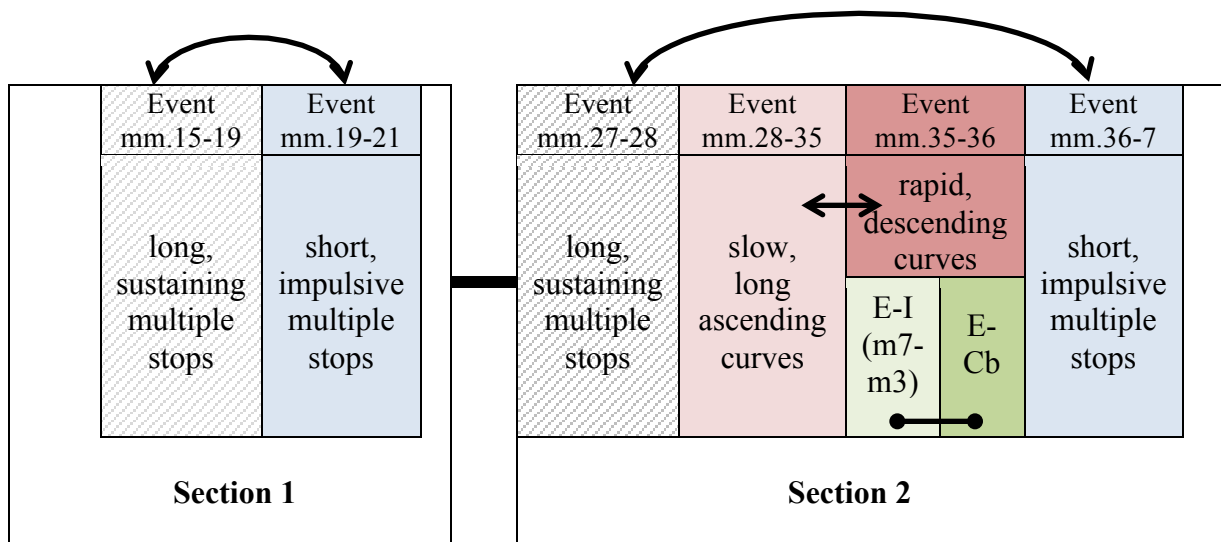


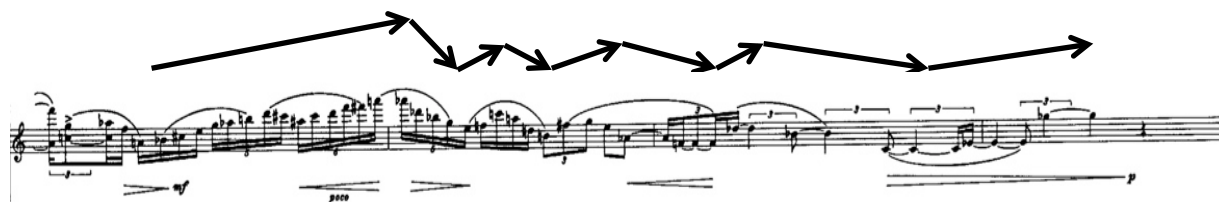
Figure 16: Montages Occurring in Parts of Sections 1 to 2, Violin Solo, First Movement

From the E-MS and then E-R1 with E-I (m7-m3) in bar 37, another leaping E-ZC is unfolded over 18 beats. It begins with the last two bars of the second phrase and then continues with the third phrase. The beginning of the third phrase plays an E-I (P5-m6) that is connected by a half step. This event-property occurs twice in the first section. The first E-I that appeared in the first section was the (m7-m3) pair. These E-Is manifest in various forms throughout the entire concerto. After completing the analysis of the second section, I will show how an E-I (P5-m6) reoccurs in the first movement as an example.

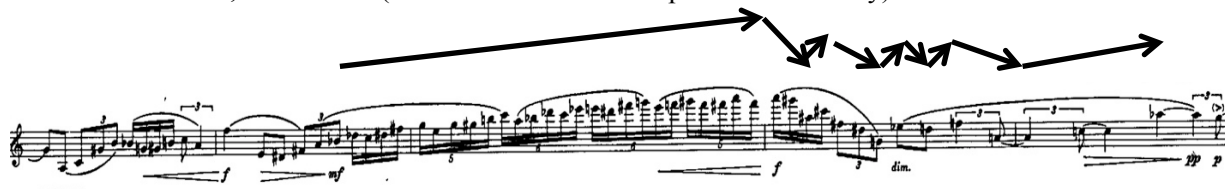
The third phrase consists of two contrasting E-Rs. First, E-R2, a consistent occurrence of syncopated triplet eighth notes, occurs in the first part of the phrase from bars 39 to 42 and then in bars 45 and 46. E-R1, a pattern of mixed beat subdivisions that gives the impression of rapid motion, is played in between E-R2s. The first bar of this event (bar 42) contains one beat of ascending eighth-note triplets followed by another beat of sixteenth notes with an excavated contour. This segment is imitated in the next bar (bar 43). Each beat in bar 44 features a similar

melodic contour from one beat to another--E-Cas and E-Cbs appear consecutively with triplet-sixteenth notes. This activity ends in bar 45 with an E-I (m7-m3) in sixteenth notes. It is notable that part of the third phrase, from the E-R2 to its following E-R1, occurred similarly in the first section between bars 21 and 24. When comparing the two moments, their larger-scale contour motion and their E-R arrangement are identical. Furthermore, both moments conclude the phrases in which they are involved; they occur at the same position in the phrase structure. Example 4 shows the similarity between the two moments.

First section, mm. 21-24



Second section, mm. 42-46 (look from m. 43 to compare the similarity)



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Example 4: Comparison of Rhythms and Melodic Contours, First Movement

The fourth and last phrase of the second section is also composed of variations of the events we have heard in the first section. The phrase consists of two characteristic contours: an imitation of motion from bars 12-15, and the E-ZC. Bars 12-15 from the first section presented a

consistent eighth-note triplet rhythm (E-R2) that kept returning to C[#]5 and was constantly syncopated. The first event of the fourth phrase in the second section (bars 46-51) combines an E-R2 and the pitch-centering idea, and thus is connected to the aforementioned part of the first section (bars 12-15). The differences between these two events lie in the function of the centered pitches and the sense of continuity between their components. Whereas the centered pitch in the first section, C[#], is a departing point for local motions, the corresponding pitch in the second section, E5, is the arrival point of the motions. Furthermore, all the E5s in the event between bars 46-51, and the end of the event's extended gesture in bar 54, are played pizzicato. This gesture cuts the continuity in performance. Additionally, this sub-phrase (in the second section) intervallically expands (m3-P5-m7-m9) with an E-I (m7-P5) in the middle of it, while the corresponding sub-phrase in the first section contracts (m7-P5-m3) introducing an E-I (m7-P5). These sub-phrases make a contrasting pair while they utilize common event-properties.

The E-ZC reappears in the second sub-phrase of the fourth phrase (bars 51-56). This event-property is a dominant feature in the second section, and returns again and again throughout the concerto. While the E-ZC could be regarded as a universal feature of post-tonal music, the motion gains a significant recognition and distinctive character when utilized with the concerto's core constructional concept of memory and montage. Returning to the fourth phrase, its second sub-phrase is composed of an E-ZC that gradually contracts in terms of intervallic span and duration of the up-down contour.

In summary, the second section is constructed entirely out of the first section. The first section introduces all the event-properties. The second section then reorganizes the previous section by recalling the events and event-properties in varied arrangements, going through

editing in some degrees.⁶⁴ New contexts emerge by placing the events or specific event-properties in varied distances from each other. The thorough phrase analysis of the first two sections of the violin solo shows the montage-construction of events between the two sections.

The figure below (Figure 17) illustrates a structuralization of the two sections (bars 6-56) using the event-category (property) terms. Similarly to Figure 16, arrowed lines in Figure 17 connect the events that share an identical event-property category but contrast with their characters.⁶⁵ A montage unit and its length are determined based on two standards: an emergence of conflict due to a characteristic contrast, and structural divisions from the event-level to higher levels. Most of the boxed event-property pairs are examples of montage that consist of contrasting types in one event-property category. The series of E-Rs locating in the second and the third phrases in the second section instantly create a metric montage that repeats a set of [E-R2]-[E-R1]-[E-R2]. This longer-montage scene occurs towards the end of the second section.

The conflicting characteristic of a montage is intensified by simultaneous occurrences of multiple event-property layers. For example, the sense of conflict between the two E-Rs in the first montage arises more due to the E-ZC character that appears only with an E-R2 in the first section's first phrase. In the second E-R-montage, E-I (m7-m3) highlights the passage after the montage segment switches to E-R2. Figure 17 also shows that the montage instances of the E-R layer are placed with a certain pacing between themselves over the two sections. The first and the second [E-R1]-[E-R2] montage instances are placed in the first section. The events' reversed

⁶⁴ Here I use "editing" from a cinematographic perspective that the event-properties are cut, extended, separated, and so on.

⁶⁵ Solid lines indicate adjacent occurrence between the two contrasting montage-components. Dashed lines indicate a pair of montages placed in varied distances.

form, [E-R2]-[E-R1], is attached to the second [E-R1]-[E-R2] montage, bridging the second and the third phrases of the first section.

It is interesting to observe that two contrasting E-MS segments are placed in the same location as the [E-R2]-[E-R1] in between two different phrases. In this case, the conflict caused by juxtaposing the two distinguished E-MS and two E-R components support the structural division in the phrase level: differentiating the characteristics of two adjacent events. In creating and managing the montage scenes, while the other event-properties are faithful to the narrative of conflict by contrast, the E-Is mostly share their components with their neighboring events. However, this application does not apply to both sections' endings. The last two events in the first section and the last four events of the second section do not share an E-I or E-C. E-MSs are used across two adjacent phrases in both sections in their first two montage-format occurrences.

Carter connects the phrases by contrasting the characterized E-MSs, and then the first and the second sections by reusing the first set of E-MSs as closing gestures in the two phrases in the second section. After these two occurrences, E-MS is utilized again by the end of the second section, not by recalling the past occurrences, but by a distant placing of a few single multi-stops at the beginning, the middle, and the ending of the second section's last event. As for the E-ZCs, Carter used the most transformed type of the contour property in the second phrase of the second section. Whereas the other E-ZC properties have largely ascending curves in their motion, this E-ZC in bars 34-38 features a descending curve. This E-ZC contrasts the preceding E-ZC by featuring an inversion-contraction type of the previous contour. The figure below shows this structural plot that reflects the concept of montage.

2.4.3.3 Application of E-I (P5-m6) in the first movement

As claimed in the earlier part of this phrase analysis, certain intervals have a strong tendency to be used adjacently. This constant recalling of certain intervallic relationships, even with the events' modified appearances, function as a device to maintain the unity of the concerto. One such interval event-property is a minor 6th-perfect 5th succession. This event occurs in various shapes, although when presented melodically, it mainly forms a $CC<0,2,1>$ and its variant forms. This m6-P5 event-property is located at different parts of phrases, usually with slower rhythms rather than rapid-moving tuplets. There are many occurrences of this E-I (m6-P5) in the first movement, and even more instances in its subsequent movements.

This particular event-property contains an intriguing feature; when arranged in specific ways, this event-property illustrates tertian harmony. If it is utilized with a straight-line contour of $CC<0,1,2>$ or $<2,1,0>$, this progression suggests the sonority of either a minor or a major triad. In the fourth section, the two such occurrences are also aurally emphasized with longer-duration occupancy or accentuation. From bars 96 to 98, the D-major-triad-sounding event of $F^{\#}5-D6-A6$ unfolds over 8.33 beats. In bar 115, two E-I (m6-P5)s occur twice over the last two beats, while being connected by the E-Ca (inversion). The second instance in this moment, $B6-D^{\#}6-G^{\#}5$ ($CC<2,1,0>$) presents a $G^{\#}$ minor-triad impression, and is accentuated by registral difference from the preceding beat as well as the downbeat position of B6--the first and the highest pitch of this $G^{\#}$ minor instance. In addition, an E-MS becomes a major or a minor triad when a triple stop stacks the minor 6th and the perfect 5th over one another. An exemplary case occurs with the last triple stop in bar 36: $C5-G5-E^b6$. Because these triadic assertions take place in between chromatic or dissonant sonorities, the consonant-triadic characteristic of these specific instances is aurally distinctive.

The E-I (P5-m6) happens for the first time in bar 7 as a descending minor 2nd-perfect 5th melody. After another such pattern occurs across bars 9 and 10, the next two appearances arise in E-MS forms in bars 17 and 20. The latter E-MS, the last beat of bar 20 has a double stop of G3-D4, which moves to a triple stop containing both the perfect 5th (A3-E4) and the minor 6th (A3-F5). The E-I (P5-m6) is then realized melodically again three times in the last phrase of the first section, in melodically straight-lined minor 2nd-perfect 5th successions. In the second section, in bars 29-30, A3-F5-Bb4 (CC<0,2,1>) is played after E-I (m7-m3) takes place. Beginning from the last eighth-note quintuplet in bar 51, an E-I (P5-m6) of A5-D4-B^b5 is played as part of the E-R2. Similarly to the example in bars 29-30, this event is mapped next to an E-I (m7-m3) event. The E-I (P5-m6) often occurs along with the other two interval event-properties in the category. These other E-Is are either arranged adjacently to the E-I (P5-m6) or emerged as the melodic-contour of the E-I (P5-m6). The following table details every occurrence of the E-I (P5-m6) in the first movement. In the table, more significant occurrences of the event-property are underlined. Multiple occurrences within a phrase are included in one column, or in multiple columns with dashed lines when the descriptions are lengthy.

Section 1	mm. 7, 9-10	melody: a minor 2nd-perfect 5th pair suggests E-I (m6-P5)	G4-F [#] 4-B3 and F4-E4-A3
	m. 17	E-MS: quadruple stop in the last beat	A [#] 3-F [#] 4 and D5-A5
	m. 20	E-MS: double stop led to a triple stop	G3-D4 (double stop)/ A3-E4, A3-F5 (triple stop)

	mm. 21-22	three occurrences of the melody pattern first shown in m.7	A6-A ^b 6-D ^b 6, E5-F5-C6, B4- F [#] 5-G5
Section 2	mm. 29-30	melodic contour following E-I(m7-m3)	A3-F5-B ^b 4 CC<0,2,1>
	mm. 36, 37	E-MS: triple stop (mm. 36) <u>five-note stop (mm. 37): a perfect-5th double stop below a triple stop containing a minor 6th; minor 7ths blend with E-I(P5-m6)</u>	C5-G5-E ^b 6 G3-D4-C5-A ^b 5- G ^b 6
	m.52	melodic contour; followed by extended E-I(m7-m3) with CC<3,0,2,1>	A5-D4-B ^b 6 CC<1,0,2>
Section 3	mm. 70, 73	melodic contour; <u>the shortest appearances, in sixteenth-note septuplet and quintuplet</u>	Bb3-Gb4-Db5 CC <0,1,2> B ^b 4-D4-A4 CC<2,0,1>
Section 4	mm. 89-90	melodic contour with a minor 6th double stop extension: contour components and the double stop connected by compound minor 2nds. This time <u>the E-I is interrupted and aurally obscured as the first compound minor 2nd is accented</u>	F [#] 4-C [#] 5-C4- A ^b 4-G3-(B ^b 4- G ^b 5)
	m. 93	E-MS: quadruple stop	C [#] 4-B4-G5-D6
	m. 95	E-MS: <u>six-note multi-stop</u> built as P5-P5-m6-P5-m6 (ascending order)	G3-D4-A4-F4- C6-A ^b 6
	mm. 96-98	melodic contour	F [#] 5-D6-A6 CC<0,1,2>
	mm. 105-106, 109-110	melodic contour: two occurrences; <u>creates an impression of periodicity</u>	C [#] 5-G [#] 5-C5 CC<1,2,0> / F [#] 4-D5-G4 CC<0,2,1>
	mm. 110-111	melodic contour: contour components connected by a compound minor 2nd. Like mm.88-90, <u>the E-I is interrupted and aurally obscured as the</u>	A ^b 5-D ^b 4/D6-F [#] 5

		<u>dissonant compound interval is accented</u>	
	m.115	melodic contour: <u>mixed in the rapid motion E-R1</u>	F5-A4-E5 CC<2,0,1> / B6-D [#] 6-G [#] CC<2,1,0>
Section 5	mm. 124-125	melodic contour over stop-events: upper voice of double stops features a minor 6th, which connects to the single pitch via a perfect 5th	F6-D ^b 7/ G ^b 6 CC<0,2,1>
	mm. 127-128	E-MS: triple stops/ upper three voices of a quadruple stop melodic contour over stop-events: upper voice of three stop-events	G [#] 4-D [#] 5-E/ (B3)-A4-E5-C6/ A4-B ^b 4-F5 ----- E5-C6-F5 CC<0,2,1>
	mm. 136-137	E-MS: triple stop/ quadruple stop containing perfect 5th and minor 6th; followed by a triple stop containing m3-M7 (pitches in parentheses in the next column)	D4-E ^b 4-B ^b 4/ G3-D4-C5-A ^b 5/ (D4-F4-C [#] 5)
Section 6	mm. 162-166	melodic contour: upper voice of the double stops; <u>the longest presentation of the interval-event in the movement; locates in the last part of the section; containing the highest pitch in the first movement</u>	G6-E ^b 7-A ^b 6 CC<0,2,1>
Section 7	m. 176, mm. 178-179	E-MS: triple stops	F [#] 4-G4-D5/ G [#] 4-A4-E5 (repeats)/ G [#] 4- D [#] 5-E5
	m. 198, m. 200	E-MS: <u>the event components are separated and extended</u> mm.198: a minor-6th double stop followed by a perfect-5th double stop and another minor-6th double stop (<u>m6-P5-m6</u>) mm. 200: <u>P5-m6-P5-m6</u>	A [#] 4-F [#] 5/ G3-D4/ D [#] 4-B4 ----- D4-A4/ D [#] 5-B5/ A4-E5/ A [#] 5-F [#] 6

Table 5: Occurrences of E-I (P5-m6)s in Conjunction with Other E-types in the First Movement

An analysis of these E-I (P5-m6) occurrences unfolds a clear structural scheme regarding the event-property:

First, Sections 1 and 4--the beginning and the centrally-located sections of the first movement--feature the most occurrences of E-I (P5-m6), combining melodic and multi-stop realizations. Sections 7--the closing section of the first movement--contains this E-I only in E-MS form.

Second, Sections 3 and 6 feature the event only with melodic contours. While they share the common realization, the third section presents the events with the shortest melodic durations in the entire first movement, and the sixth section with the longest melodic duration, the highest pitch among all the E-I (P5-m6)s , with a contour-inversion from the third section's event.

Third, the two biggest multi-stops in the first movement--a five-note stop in section 2 and a six-note stop in section 4--both contain this specific E-I; the five-note stop blends minor 7th with the E-I, while the six-note stop only uses the two E-I components (perfect 5th and minor 6th) as its immediate intervallic connection among its notes.

Fourth, the three instances that dissonant intervals are integrated in--the E-MS in section 2 (bar 37) and the E-ZCs in section 4 (bars 89-90 and 110-111)--show contrasting aural images based on the E-I (P5-m6). In section 2, the minor 7th links the perfect 5th and the minor 6th, and the three intervals are equally emphasized. In section 4, however, the E-I is interrupted by dissonant intervals, such as minor 9th and augmented 15th, and the E-I is aurally de-emphasized as the dissonant compound interval is also accented; the E-I becomes the background in the motion.

Fifth, Section 4 features the most occurrences of the E-Is. This section locates in the center of the first movement and almost equally divides the durations before and after the section (85 bars

[sections 1-3] - 35 bars [section 4] - 86 bars [sections 5-7]).⁶⁶ The activity level of the E-I (P5-m6) is the highest in this center-period of the first movement.

Sixth, Section 4 features an interesting plot with the use of this E-I. Among the more characteristic instances underlined in the table, the event is first emphasized with the biggest multi-stop, then is reasserted by the melodic-contour repetition within a close distance, then is completely masked its aural image, and then trailed off with a rapid rhythmic motion.

Seventh and last, the last section features a new formulation of the E-I; in bars 198 and 200, the two interval components are separated as two double stops, and extend linearly while maintaining the texture. This double-stop utilization is derived from the section's preceding sixth section. This transformation contributes to the dramatic shift towards the end of the first movement.

The above interpretation of the E-I (P5-m6) occurrences points towards three ideas. First, as mentioned earlier, a clear structural planning exists for this specific event property. Second, contrast is the main concept of this planning. Last, this examination proves that specific intervallic relationships are used in the violin solo more prominently than other possible combinations. Based on the aforementioned comparisons, the following figure presents an event-property-specific scheme of the first movement.

⁶⁶ This division includes the bars that the violin solo rests. The rest-only bars were not counted in determining the phrase lengths of the solo part. In addition, the part after section 4 is close to 85 bars, as the music--sounding part--ends in the first 1.5 beats in bar 206.

Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
melody- melody- stop-stop- melody- melody- melody	melody- stop- melody	melodic- contour only CC<2,0,1>	melody(+double stop)-stop-stop- melody- melody- melody-melody	melody- stop- melody- stop	melodic- contour only CC<0,2,1>	stops only
		the shortest instances			the longest instance	
the most occurrences			the most occurrences			
	event includes dissonance; equal treatment among intervals		event includes dissonance; event de- emphasized			
	five-note stop		six-note stop			

Figure 18: Pattern of Occurrences in the Violin Solo, E-I (P5-m6), First Movement

2.4.3.4 Section 6

The sixth section is the most unique in the first movement for various reasons that can be understood within one unifying notion--*contrast*. The section institutes a simple but sublime aural gesture throughout. The quiet, calm, and self-contained motion of this section creates intensity and suspense with these characteristics. This is especially true given the highly contrasting material that follows this section. The entire sixth section, except for the beginning and ending single notes, consist of long and sustained, almost all consonant-interval double-stops. This is a huge change in the texture-narrative. In the former sections, multi-stops have been used

momentarily in a section in conjunction with single-note patterns. The fourth and fifth sections feature intensified activity and textural density along with the multi-stops and dynamic changes of texture. In contrast, this section presents a steady thread of double-stops.

This distinctive character, however, does not completely separate the sixth section from the rest of the movement. This newly designed event combines with the events we are now familiar with. The wide-spanning ascending E-ZC with larger intervallic leaps occurs over the entire section. This combines with the long and sustaining rhythm-event 2. The overall-ascending motion of the section is accompanied by expansion and contraction of intervallic spaces; the space expands when the local melodic contour ascends, and shrinks when the local melodic contour descends. The ascending local motions are emphasized more than the descending motions by durational differences; ascending motions are always longer than the descending ones.

Instead of invoking an interval-event in conjunction with melodic-contour-events, all the frequently-used intervals appear as double stops in the sixth section. Since Carter uses a consistent system of harmony throughout the piece, one would expect that it is inevitable to see certain intervals more than others. Additionally, as the harmonic idiom of the concerto originates from Carter's notion of set theory, determining the set-based relationship seems a just approach in examining this section. The concerto, however, suggests that the typical approach is not sufficient in analyzing its intervallic motion. Specific intervals are preferred, and there are certain intervallic successions that are prominently used throughout the movement, either melodically or harmonically, with varying structural significance. The traditional concept of "theme" does not apply to these event-properties (or any other events in the concerto), as the event-properties contribute to flowing strands rather than becoming developed statements within

a molded form. There is no hierarchy among the event-properties or events; organization of the events results from constant processes of recalling and regenerating. The sixth section summons all the significant intervals used in the concerto with consistent use of double stops--the minor 2nd, minor 3rd and its compound expansion (minor 10th), perfect 5th, minor 6th, and minor 7th. Only the six intervals govern the progressions in the sixth section both linearly and vertically. Figure 19 shows the make-up of intervals in the entire section as well as its contour motion. Minor 10ths occur at the highest points of the E-ZC, except for the second to last instance, where the upper voice of the interval becomes part of a long ascending motion to reach the last minor 10th. This final minor 10th of the section is highlighted both by containing the highest pitches in the section and having the longest duration among all of the minor 10th (7 beats). After the first minor 10th of the sixth section, the minor 10th always occurs in between the perfect 5th and the minor 6th. From bars 154 to 166, the intervals form an array of (m2)-P5-m10-m6-(m7)-(m3)-P5-m10-m6-m10-P5. The perfect 5th-minor 6th interval-event has a more pronounced role in this section. Besides the arrangement of double stops, the first P5-m10-m6 segment is composed with the upper-voice-intervals of P5-m6, and the last m6-m10-P5 segment is composed of the former segment's retrograde (m6-P5).

This section features a montage of the above-mentioned interval event-properties. The E-I (P5-m6) occurs with a new form, a double-stop texture, and the insertion of a minor 10th transforms the event. Another familiar event-property of the minor 7th-minor 3rd appears in between the new events. This structural process creates a new scene and context from the events that we have either consciously or unconsciously experienced earlier in the piece. A graphic presentation of the structural interpretation of the events follows with Figure 19.

Section 6: composition of intervals (ones in rectangles: enharmonically measured)

150

153

158

162

Section 6: ascending zigzag motion

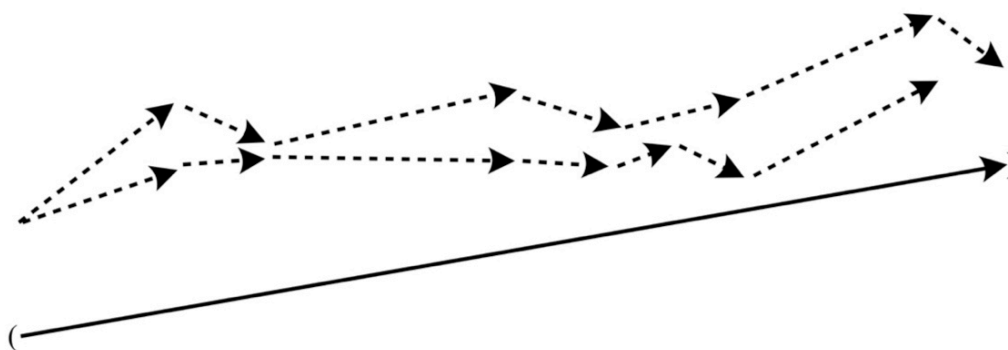


Figure 19: Compositions of Intervals and Melodic Contour, Section 6, First Movement

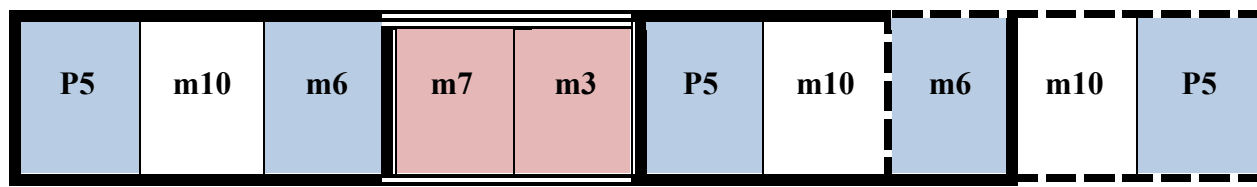


Figure 20: Montage-structure of the Sixth Section, mm. 154-166, First Movement

This section features the lowest level of activity among the seven sections of the first movement with its use of a singular rhythmic pattern as well as a singular texture idea. This characteristic of the section highlights the rhythmic activity in the climactic last section, while assigning the section the role of musical bridge or recess area for the solo part. The conceptual simplicity of this section generates the same level of intensity created via complexity in other sections. This contrast creates a heightened sense of conflict between this section and the sections surrounding it. This is especially true in the distinction between the current section and the dense outbursts and vivid rhythmic activity of the following section.

2.4.3.5 Section 7

The last section of the violin solo in the first movement begins at bar 171, after the orchestra utilizes its full force for the first time, recalling the beginning of the movement with its rhythmic and intervallic gestures. The first note of the violin solo in the seventh section is A^b₆, which links this section to the preceding section by using the same pitch that ended the former.

This section features a new event via synthesis of the two event-rhythms. After presenting a familiar E-ZC occurrence with large-span compound intervals and a slow E-R2, the second phrase (bars 176-185) fuses an E-R1 and an E-R2 within the phrase. The two E-Rs occur

interchangingly with much shorter durations of only a few beats per each E-R. A subtle use of such E-R alternation occurred in the fifth section as sixteenth notes or quintuplet eighth notes are occasionally inserted in the long thread of an E-R2, but these insertions did not break the overall flow of the section. However, in the current section, the two E-Rs occur with equal significance within one phrase, interrupting each other. This montage of the second phrase forms a frantic motion through much shortened spans, playing more notes within the beat subdivisions and loud dynamics throughout the phrase. The following chart shows the E-R composition of the second phrase in this section.

Measure Number	176	177	178	179	180	181	182	183	184	185
E-R type	1	2	1	2	1	2	1	2	1	2

Table 6: E-R Organization of the Second Phrase, Section 7, Violin Solo, First Movement

This dynamically paced phrase ends with a quintuplet eighth-note subdivision, which is picked up by the beginning of the next (third) phrase. Beginning from the third phrase in bar 186 to the end of the fourth phrase in bar 196, the violin solo plays an identical motion (relatively slow-paced E-ZC with large intervallic leaps) as the section's first phrase. The beginning of the fourth phrase is comprised of an E-I (P5-m7). The highest pitch of the entire first movement, F7, occurs within this E-I. It is notable that the ending gestures of the first four phrases in this section all use the quintuplet eighth-note subdivision.

The fifth phrase, from the last two quintuplet eighth notes in bar 196 to the third beat of bar 200, features activity that contrasts with the preceding two phrases. This phrase contains the most event-types in the shortest duration found anywhere in the movement: E-R1, E-MS, E-ZC, and all three E-Is. A complex weaving of E-MS and E-ZC adds intensity to the phrase. Such concentration of significant ideas (event-properties) makes this phrase the climactic conclusion of the first movement. The following figure illustrates the E-MS and E-I construction of this phrase.

mm. 196-200

Annotations on the score:

- Top Staff:**
 - $m3 + m7$
 - $m7 + P5$
 - $m3+ M7$ (modified E-I)
 - $m7$ (double stop) + $P5$ (single notes)
 - $P5/m7$ (divided to double stops then extended)
 - $P5/m6$ (divided to double stops then repeated)
- Bottom Staff:**
 - $P5+m7$
 - $P5+m6+P5$ $CC\langle 3,2,1,0 \rangle$ $m7+m3$ extended E-I $CC\langle 2,0,1 \rangle$
 - $P5+m6$ (D-G-Eb) + $m7$ (Eb-Db double stop)

Legend:

- Solid-line arrows indicate contracted E-S
- Dashed-line arrows indicate expanded E-S
- Dashed brackets indicate E-Is

Figure 21: Analysis, mm. 196-200, Violin Solo, First Movement

In addition to the above-mentioned event-property realization, much local contour mirroring and imitating occurs in this phrase. The figure below features the mirroring (marked with a pair of arrows ascending towards each other) and imitating (marked with dashed slurs) that occurs in the phrase. As Figure 22 shows, the center of the phrase consists only of local contour-mirroring. This explicit usage of mirroring and imitating in this phrase is unique in the first movement.

mm. 196-200



Figure 22: Mirroring and Imitating Contours, mm.196-200, Violin Solo, First Movement

Following this phrase is the last phrase of the seventh section and of the first movement. After the explosive fifth phrase, the last phrase calms by returning to E-R2. Beginning from the mid-register, featuring C[#]4 and C4 in the first two bars of the phrase, the solo climbs up again to E^b7 in bar 203. Beginning from this pitch, bar 203 features the sonorities of A^b major triad, A minor triad, and D minor triad with a series of dovetailed E-Is (P5-m6). In contrast with the descending pattern of E-MS pairs in the preceding (fifth) phrase, the ending of the phrase

features a continually ascending motion of multi-stops. If we look at the fifth and sixth phrases together, this scene reminds us of the very beginning of the concerto; the first phrase of the movement featured an E-R1+E-R2 structure. The same scene expands to two phrases, ending the movement. In addition, the end of the last phrase concludes with a minor sixth of B5-G6. This double stop was prepared in the last part of the fifth phrase, where generally-ascending double stops ended with a double stop of A[#]5-F[#]6. Being a minor sixth dyad and a half step away from this double stop in the same register, the B5-G6 double stop in the last phrase contributes to the phrase's function as an extended ending. In making this double stop the last occasion of the first movement, Carter creates yet another dramatic contrast to all the frantic, loud action throughout the entire section by diffusing this stop to pianissimo.

2.5 ANALYSIS OF THE ORCHESTRA PART: RITORNELLO FORM

After completing his pre-compositional rhythmic planning on *Violin Concerto*, Carter first finished the violin solo part to give to Ole Böhn.⁶⁷ These facts illustrate how the orchestra behaves in *Violin Concerto*; mainly, the orchestra is complementary to the violin solo, showing a tendency to accompany and comment.

The characteristic dualism is clear between the violin solo and the orchestra in that the two parties utilize different generative interval components. Contrasting with the violin solo, the orchestra features the major second, major third, perfect fourth, major sixth, and major seventh as its essential intervallic properties.⁶⁸ With regards to rhythm, throughout the concerto, the orchestra rarely plays in rhythmic unison with the violin solo. The two parties mostly play

⁶⁷ Additionally, while composing, Carter edited his original draft by eliminating parts of his score.

⁶⁸ This is a “typically Carterian assignment.” Meyer, F. *Elliott Carter*:..., p.287

different rhythmic subdivisions and accentuate different moments. If one part plays on the beat, the other either sustains or rests, and then may play an upbeat rhythm pattern. When both parties play, they do not share the same attack onsets, even when sharing an identical beat subdivision. They avoid invading each other's speech, and the orchestra usually acts as a listener and companion while both parties engage in conversation.

The intricate and continuous rhythmic desynchronization between the two parties occurs with few exceptions throughout the discourse. However, these exceptions require analytic attention. The first rhythmic coincidence between the violin solo and the orchestra occurs in the sixth section, from bars 154 to 165. The reason for this alignment lies in the balance between the quiet solo and the orchestra. In this instance, the two desks in the first violin section play in sync with the violin solo. In shadowing the solo with the same timbral characteristics, the orchestral violin players aid the solo in maintaining a soft dynamic. Carter leaves this orchestral support as an option for the concerto's soloist (Example 5).

[illegible]

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Example 5: The Sixth Section (Excerpt) of the First Movement, Violin Concerto

The second occasion takes place in the last section of the first movement. From bar 176, where the second phrase of the section begins, onsets of notes in both the violin solo and the orchestra arise concurrently. However, the coincident points between the two parties are not intended to accentuate together. The onset-alignment happens as the orchestra constantly plays rapid sixteenth-note tuplets while the violin solo plays an E-R1 gesture with E-MS variants. Combining the two contrasting rhythmic motions, the running character of the orchestra in this section does not become disjunctive for the sake of maintaining complex rhythmic counterpoint as it did before, but now maintains its streaming characteristic. These onset-coincidences occur intermittently between bars 177-179, 186-187, 191-193 (Example 6), and 197-199. These alignments are gestural overlaps rather than as an amplifying or supporting role to the violin solo, because the solo part's most structurally significant moments all project in performance without the orchestral support. Such moments include the first movement's highest pitch (F7) in bar 192, the A#5-F#6 double stop in bar 200, and the last double stop that concludes the movement.

(190)

The image displays a page of a musical score for the Violin Concerto by Elliott Carter, specifically measures 191 through 193. The score is written for a large orchestra and a solo violin. The instruments listed on the left are Flute (Fl.), Oboe (Ob.), Clarinet (Cl.), Bass Clarinet (Bs. Cl.), Bassoon (Bsn.), Violin Solo, Violin II (Vln. II), Viola (Vla.), Violoncello (Vc.), and Contrabass (Cb.). The score is divided into three systems. The first system covers measures 191 and 192, and the second system covers measures 193 and 194. A double bar line is placed between measures 190 and 191. Vertical rectangles are drawn around specific musical phrases in measures 191, 192, and 193, highlighting coincidental onsets between the Violin Solo and the Orchestra. The score includes various musical notations such as notes, rests, and dynamic markings like *f* (forte) and *pp* (pianissimo).

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Example 6: Coincidental Onsets Between Violin Solo and Orchestra, First Movement (mm.191-193)

Examining the orchestra part, the concerto's dualism is clear in regards to how some of the event-properties are utilized by the two parties. Analysis of the violin solo shows the five event-property types used throughout the concerto. Among the five types, E-Cs occur the least in the violin solo. However, this event-property is most significantly utilized in the orchestra in the first movement, as E-Ca is featured prominently with quintuplet and septuplet sixteenth note rhythms. Other interval-related event-properties, such as E-MS or E-I, should be regarded differently in the orchestra part, as the orchestra produces harmonic textures by nature and the orchestra and the solo each use their own prioritized intervallic properties. In contrast, E-R1 and E-R2 were originally derived from the orchestra's opening gesture at the beginning of the concerto, and are used extensively throughout the concerto. The opening event of the orchestra part begins with E-Ca and simultaneously playing mixed triplets (a vertical realization of E-R1), as the following example shows:

ELLIOTT CARTER
(1990)

Violin Concerto by Elliott Carter © 1990 Hendon Music, Inc. Reprinted by permission.

81

E-ZCs do appear in the orchestral parts, when the orchestra plays in a small ensemble format (mm.62-68) or when pointillistically orchestrated gestures result in zigzag-like intervallic motions in the orchestra's harmonic realization (mm.85-98, 110-111). The following score excerpts show these gestures.

The image displays two excerpts from a musical score, illustrating zigzag-like intervallic motions in an orchestral context.

Excerpt 1 (Measures 60-68):

- Measures 60-62:** Horns 1, 2, and 3 play a descending line. The first horn part is marked *pp* and *contando*. The second and third horn parts are marked *pp* and *dolce, accomp.*. The tuba part is marked *pp* and *dolce, accomp.*.
- Measures 63-68:** The first horn part continues with a descending line, marked *pp* and *contando*. The second and third horn parts continue with a descending line, marked *pp* and *dolce, accomp.*. The tuba part continues with a descending line, marked *pp* and *dolce, accomp.*. The violin solo part is marked *mf* and *esp.*.

Excerpt 2 (Measures 65-74):

- Measures 65-68:** The first horn part continues with a descending line, marked *pp* and *contando*. The second and third horn parts continue with a descending line, marked *pp* and *dolce, accomp.*. The tuba part continues with a descending line, marked *pp* and *dolce, accomp.*. The violin solo part is marked *mf* and *esp.*.
- Measures 69-74:** The first horn part continues with a descending line, marked *pp* and *contando*. The second and third horn parts continue with a descending line, marked *pp* and *dolce, accomp.*. The tuba part continues with a descending line, marked *pp* and *dolce, accomp.*. The violin solo part is marked *mf* and *esp.*. The violin II part is marked *mf-p* and *esp.*. The viola part is marked *mf-p* and *esp.*. The cello part is marked *mf-p* and *esp.*. The double bass part is marked *mf-p* and *esp.*.

(85)

(90)

(95)

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Example 8: Examples of E-ZC Gestures in the Orchestra, First Movement

There are a few occurrences in the first movement where the orchestra's long ascending-descending arch partially recalls an E-ZC due to its large-span interval content. This contour is first suggested in the beginning of the concerto as the orchestra's rhythmic motion slows down in bars 7-8. Flute and Violin I play $A^b6-D^b6-E^b5$, a descending contour. Then from bars 37 to 51, two arch contours take part in the orchestra's melodic motion in its harmonic texture. The first of the contours occurs over 9 bars (mm.37-45) with a mirroring of intervallic and rhythmic values within it, while the second contour occurs over 7 bars (mm.45-51) with a non-symmetrical relationship between its ascending and descending progressions. These contour motions feature more prominently either on a single or on both of the outer voices in the orchestral texture. It is notable that a similar arch-contour to the first one mentioned above (mm.37-45) occurs one more time in the first movement, in the third section (mm. 73-77), in a contracted form from its former occurrence. The following excerpts show these examples. (The arrowed lines in the examples approximately present the contour motion, and do not aim to precisely indicate the voice-leading.)

(40)

Picc.

Fl. 1

Ob.

Cl. 1

Cl. 2

Bs. Cl.

Bsn. 1

Cbsn.

Vln. Solo

Vln. I

Vln. II

Vla.

Vc.

Cb.

con sord.

mf-p

pp

f

plaz

arco

f

mf

f

(45)

Cl. 1

Vln. Solo

Vln.

Vln.

Vla.

Vc.

mf esp.

pp

dim.

p

f

pp

p

f

pp

p

75

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Example 9: Arch Contour Motions in the Orchestra, First Movement

Whereas the violin solo features persistent playing with few breaks within sections, the orchestra plays sonic punctuations and brush-stroke-like gestures in either pointillistic or sustaining forms. The orchestra part largely plays three types of roles in the first movement: structural markers in between sections or at the opening and closing of movements, responses for the solo part within sections, and timbral accompaniments (Section 6, Violin 1, as seen in Example 5). One of the most prominent event-properties in the orchestral parts is an E-R1 combined with an E-Ca. However, through the combining of these event-properties, the orchestra presents a distinctive pattern from the violin solo. The combination of the two event-

properties results in trill-like waves of rapid motion. The wave-events feature a variety of lengths, registral dispositions, textures, and densities, while maintaining their essential characteristics derived from the two event-properties defined in the violin solo part.

Beyond adding vitality to the music and commenting on the violin solo within the movement's sections, this wave-event has a major structural function; its first appearance at the beginning of *Violin Concerto* and its repeated occurrences while the violin solo rests give the first movement a ritornello structure. In the case of the concerto, the orchestra introduces the event-properties (except the solo's interval component) before the violin solo utilizes these properties itself. As the first section of the first movement ends in bar 25, the wave-event fades in bars 24-26 and continues until the second section begins. The same type of transition occurs between the second and the third sections, within the fifth section between phrases (mm. 133-134), between the fifth and the sixth sections (mm. 148-150), and between the sixth and the last sections (mm. 165-169 (170)). In addition to functioning as a ritornello, this wave-event is used as the main orchestrational idea in the second and the last section of the first movement, and also appears momentarily as a much smaller texture (mm. 78-81) or as punctuations (Section 5, mm. 126 & 134). The wave gesture also occurs as tremolos, from bars 171 to 174 in the woodwinds, for example.

3.0 CONCLUSION

This study is based on a new analytical perspective for Carter's *Violin Concerto*. Initial ideas for the study's analytical approach arose in the course of repeated listening of the concerto. Noticing that several musical ideas, such as intervallic and rhythmic patterns, and texture-density changes, keep returning as the music continues, and discovering how Carter treats these ideas to form and arrange musical blocks in varied structural layers, I found it necessary to create a method to explain the strongly unifying characteristics of the concerto. The concept of events as structuring units (or containers of the event-properties) makes it possible to structuralize the event-properties' occurrences regardless of their status in the structural tiers. In regards to categorizing the reoccurring musical ideas as event-properties, I defined the event-properties based on two major considerations: their prominent and repeating occurrences, and their positioning at structurally meaningful moments, such as the beginning, high point, or ending of a phrase or a section.

The concept of events, as a structure-term, is distinguished from that of the traditional structure based on a hierarchical construction. Events are formed according to how simultaneously occurring event-properties divide the musical moments. As the detailed phrase analysis shows, event-properties are realized with varied lengths, from a few beats to an entire section of a movement. Thus, an event as a grouping unit inevitably and flexibly crosses between the traditional structural levels, from sub-phrase to phrase to section. This study integrates the traditional and new formal concepts to explain the construction of the concerto.

Detailed phrase analysis of this study shows that conflict is the essential narrative of the concerto. The notions of montage and memory play a significant part in understanding the construction of *Violin Concerto*. As seen in the phrase analysis, the events are treated in the concerto as shots are arranged in films. Events are created and arranged based on the event-properties that are expositied in the first section of the first movement. As seen many times in the movement, the characteristics of adjacent events contrast with one another. New contexts are created by inserting a new element to split an event-property or by rearranging a previously seen pair of events. These transformations of event-properties contribute to the construction of the concerto without a connotation of thematic development in a traditional sense.

While demonstrating the schemes of temporal modulation and long-range polyrhythms to present *Violin Concerto*'s large-scale structural pre-planning, my analysis of *Violin Concerto* focuses on examining the violin solo of the first movement of *Violin Concerto*. A detailed analysis of the solo elucidates the entire concerto's most significant structuring components-- event-properties and the dramatic narrative of conflict. The seven sections of the first movement carry their own structural significances. The first section of the movement functions as an exposition, and the second section exemplifies how the event-properties and the events will be utilized throughout the concerto, as well as its following sections continuing the phrasing scheme. The fourth section is located in the center of the first movement in terms of duration, and the idea of this section being the center is supported by several aspects, such as the violin solo that features the biggest multi-stop of the movement (and the entire concerto), as well as the most active shifts in texture up to that point. The movement's penultimate (sixth) section is distinguished from the other sections of the first movement. The section highlights certain event-properties with its simplified rhythm, and heightens the dramatic aspect of the movement with its

own character. The last section strives for a climactic ending of the entire movement with dense activities of both the violin solo and the orchestra.

The role of the orchestra in *Violin Concerto* is that of an accompanying part. However, the orchestra begins *Violin Concerto* with a texturally charged opening. This opening event introduces some of the rhythmic and contour event-properties, which the violin solo imitates as it enters after the orchestral introduction. Then throughout the concerto, the orchestra remains to stay behind the violin solo and support the part. In the first movement, contrary to the vivid presentation of event-properties and events in the violin solo, the orchestra consistently features the beginning gesture of the concerto, most prominently in between different sections. Invoking a formal idea of ritornello with the accompanying orchestra part, the first movement of *Violin Concerto* illuminates a multi-layered construction. On top of the layers of temporal modulation and long-range polyrhythms, the seven sections led by the violin solo are constructed around concepts like montage, and then are encapsulated in the orchestra's ritornello form.

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Jonghee Kang

Immersed in an Ethereal Blue Light

for Clarinet, Bassoon, Violin, Violoncello,

Piano, Guitar, and Percussion

(2015)

Suggested Stage Setting

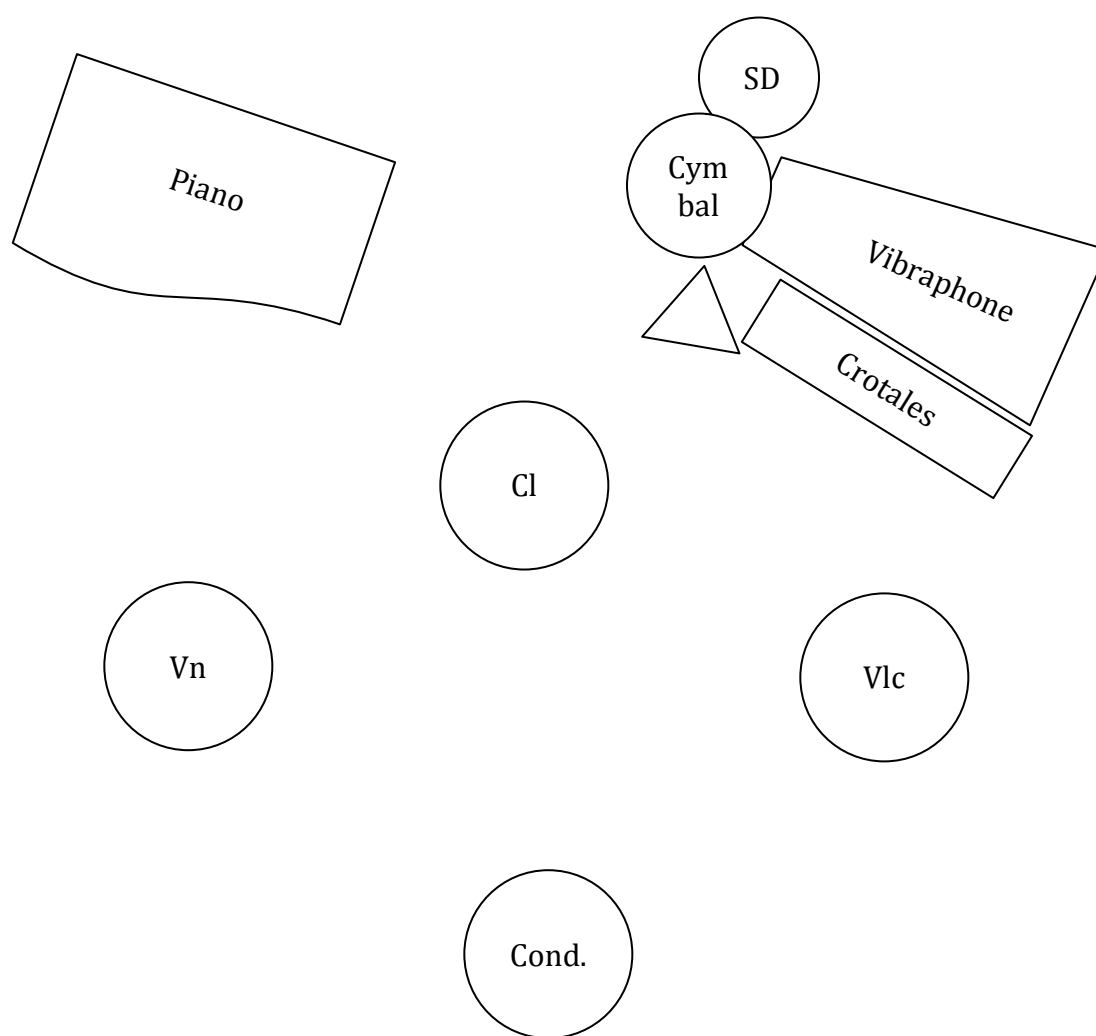



Figure 23: Stage Setting for Performance, Immersed in an Ethereal Blue Light

Explanation on Techniques


General

Solid line with an arrow () between technique symbols indicate a gradual change from executing one technique to the next. When there is no technique sign at the beginning of the arrow, the change toward the next effect should occur from where the arrow begins.

n in dynamics: niente


l.v.: let vibrate

Strings

 ricochet

◇ above note: extremely light finger pressure
to produce harmonics and/or varied timbral and pitch changes

◆ above note: normal finger pressure (in contrast with the hollow diamond-shape sign)

 : gradually increase bow pressure to produce noise

clt: col legno tratto

ord: ordinary

pizz: pizzicato/ **arco**: arco

sp: sul ponticello/ **mst**: molto sul ponticello

st: sul tasto/ **mst**: molto sul tasto

Guitar

+ and nail pizzicato signs: try to imitate the effects of a string instrument's pizzicato.

rasg.: rasgueado

sp: sul ponticello

ord: ordinary

Clarinet

+ above note: slap tongue

slap tone with plus (+) sign above the note: use slap tongue for the attack-effect then hold the note for the duration

vib add more vibrato than usual, with more amplitude

Percussion

List of Percussion Instruments:

snare drum, suspended cymbal (dark timbre, sounding less present), triangle, vibraphone, crotales (E4 - E5 in written pitch)

Using mallets: Use the same type of mallets indicated with previous instrument(s) when switching to different instruments

Percussion Key:



damp: stop the instrument from keep vibrating

Piano

“+” above notes: mute all the corresponding strings with a hand and play the key(s) to get less pitch and a percussive effect

About the Work

I've been sitting with an idea for a while now. It began with a question: What would it be like to dive into the deep ocean and stay there to sense and observe the surroundings and the ocean's surface? The title of my composition, *Immersed in an Ethereal Blue Light*, describes that status. One sees only blue light in the deep sea, as the particles in the water tend to absorb warm colors and blue light penetrates the farthest. In addition, water that is blue, rather than green, has less particles and nutrients in it. My piece features the contrast and the phenomenal differences between the dark and deep blue sea and the bright ocean surface. While the second movement, *Open Water*, is saturated with a dark, monochromatic, and relatively empty character, the first movement, *Nearer the Coast...*, features brighter and more dynamic aural illustration. But the two movements are strongly connected as they share common musical ideas. The second part of this piece, *Open Water*, was written first for the IonSound Project.

Immersed in an Ethereal Blue Light

Jonghee Kang

Nearer the Coast...

♩ = 62

Clarinet in B \flat

Bassoon

Violin

Cello

Guitar

Percussion

Piano

non vibrato throughout the piece unless noted otherwise

ppp *p* *n*

n < *p*

pp

p

8^{va}

Immersed in an Ethereal Blue Light

5

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ppp

p

n

ppp

pp

Immersed in an Ethereal Blue Light

8

B♭ Cl.

bisbigliando

p

pp

Bsn.

pp

Vln.

ppp

Vc.

ppp

poco sp

sp

Gtr.

p

mf

Perc.

(soft mallets)

ppp

l.v.

Pno.

p

ppp

7:4

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features seven staves: B♭ Clarinet (B♭ Cl.), Bassoon (Bsn.), Violin (Vln.), Viola (Vc.), Guitar (Gtr.), Percussion (Perc.), and Piano (Pno.). The score begins with a measure marked with a fermata and a wavy line, indicating a sustained, ethereal sound. The B♭ Clarinet part includes a "bisbigliando" (whispering) instruction and dynamic markings of *p* and *pp*. The Bassoon part starts with a *pp* dynamic. The Violin and Viola parts have a *ppp* dynamic. The Viola part includes a tempo change from *poco sp* to *sp*. The Guitar part has a *p* dynamic followed by a *mf* dynamic. The Percussion part uses soft mallets and has a *ppp* dynamic, with a *l.v.* (left hand) instruction. The Piano part has a *p* dynamic followed by a *ppp* dynamic. The score ends with a 7:4 time signature.

Immersed in an Ethereal Blue Light

B♭ Cl. *11* *5*

Bsn. *ppp* *(b)*

Vln. *(8va)-* *8va-* *ord*

Vc.

Gtr. *mf*

Perc. *OFF (soft mallets)* *pp* *7* *7* *7* *7*

Pno. *ppp*

Detailed description: This is a page of a musical score for a piece titled "Immersed in an Ethereal Blue Light". The score is arranged in a standard orchestral format with seven staves. The instruments are: B♭ Clarinet (B♭ Cl.), Bassoon (Bsn.), Violin (Vln.), Viola (Vc.), Guitar (Gtr.), Percussion (Perc.), and Piano (Pno.). The B♭ Cl. part begins with a dynamic of *ppp* and features a series of notes with a slur and a fermata. The Bsn. part has a *ppp* dynamic and a note marked with a *(b)* symbol. The Vln. part has a *ppp* dynamic and a note marked with *(8va)-*. The Vc. part has a *ppp* dynamic and a note marked with *ord*. The Gtr. part has a *mf* dynamic and a chord marked with a *mf* dynamic. The Perc. part has a *pp* dynamic and a series of notes marked with *7*. The Pno. part has a *ppp* dynamic and a series of notes marked with *ppp*. The score includes various musical notations such as slurs, fermatas, and dynamic markings.

Immersed in an Ethereal Blue Light

14

B♭ Cl. *mf-pp*

Bsn. *mf-pp* (stop trilling)

Vln. *msp*

Vc. *n*

Gtr. *ppp*

Perc.

Pno. *mf* (rapid)

This musical score page, numbered 103, is for the piece 'Immersed in an Ethereal Blue Light'. It features a multi-staff arrangement for the following instruments: B♭ Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The score is divided into two measures. The B♭ Clarinet and Bassoon parts begin with a wavy line indicating a trill, followed by a half note and a dotted half note, with a dynamic marking of *mf-pp*. The Bassoon part includes the instruction '(stop trilling)' at the start of the second measure. The Violin and Viola parts play a sustained note with a dynamic marking of *msp*. The Viola part has a dynamic marking of *n* at the end of the second measure. The Guitar part plays a half note with a dynamic marking of *ppp*. The Percussion part features a rhythmic pattern of eighth notes in the first measure, followed by a half note in the second measure. The Piano part features a rapid, sustained chord in the first measure, followed by a half note in the second measure, with a dynamic marking of *mf*.

Immersed in an Ethereal Blue Light

16

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ppp

p

n

n

quasi col legno
(half wood, half hair)
rubato rhythm

arco
(ord)

mp

pp

sp

p

pp
(u.c.)

The musical score is written for a chamber ensemble. The B♭ Clarinet part begins with a measure of rest, followed by a half note G4 marked *ppp*, which then transitions to a half note A4 marked *p*, and finally a half note B4 marked *n*. The Bassoon part has two measures of rest. The Violin part has a measure of rest, followed by a half note G4 marked *n*, and then a measure of rest. The Viola part has a measure of rest, followed by a half note G4 marked *mp*, which then transitions to a half note A4 marked *pp*. The Guitar part has a measure of rest, followed by a half note G4 marked *p*, and then a measure of rest. The Percussion part has a measure of rest, followed by a half note G4 marked *p*, and then a measure of rest. The Piano part has a measure of rest, followed by a half note G4 marked *pp* (u.c.), and then a measure of rest.

Immersed in an Ethereal Blue Light

18

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

mf-pp

ppp

p

n

sp

p

ppp

p

ppp

n

mf

ppp

mf

p

decresc.

mst
(slow tremolo)

(♦)

(soft mallets)

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features six staves: B♭ Clarinet, Bassoon, Violin, Viola, Guitar, and Percussion. The score begins at measure 18. The B♭ Clarinet and Bassoon parts are mostly silent, with the Clarinet playing a single note in measure 20. The Violin part has a melodic line starting in measure 20. The Viola part has a melodic line starting in measure 19. The Guitar part is silent. The Percussion part has a melodic line starting in measure 20. The Piano part has a complex melodic line starting in measure 18. The score includes various dynamic markings such as *mf-pp*, *ppp*, *p*, *n*, *mf*, and *decresc.*. It also includes performance instructions like "mst (slow tremolo)" and "(soft mallets)".

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

25

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

non legato

p

ord pizz

non legato arco

non legato arco

p

p

non legato

p

107

Immersed in an Ethereal Blue Light

28 $\text{♩} = 48$

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr

Perc.

Pno.

legato

pppp

p > *ppp*

(soft mallets)

pppp

<

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It begins at measure 28, with a tempo marking of a quarter note equal to 48 beats per minute. The score is arranged for a chamber ensemble consisting of B♭ Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The B♭ Clarinet, Bassoon, Violin, and Viola parts feature long, flowing melodic lines with ties across measures. The Guitar part starts with a "legato" marking and plays a series of sixteenth-note runs, with a dynamic marking of "pppp" (pianississimo) and a crescendo leading to a "p" (piano) marking before a final "ppp" (pianissimo) chord. The Percussion part is mostly silent, with a final entry in measure 30 using "soft mallets" to play a chord, marked "pppp". The Piano part provides harmonic support with sustained chords and moving lines in both hands, marked with a forte "f" dynamic.

Immersed in an Ethereal Blue Light

31

B♭ Cl. *ppp* *mf* *pp* softly, breathing out

Bsn. *ppp* *mf* *pp* softly, breathing out

Vln. *ppp* *mf* *pp* softly, breathing out

Vc. *ppp* *mf* *pp* softly, breathing out

Gtr. *p*

Perc. *p* *pppp* l.v.

Pno. *ppp* *mf* *pp* softly, breathing out

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features seven staves: B♭ Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The score begins at measure 31. The B♭ Cl., Bsn., Vln., and Vc. parts have a dynamic of *ppp* and a performance instruction "softly, breathing out". The Gtr. part has a dynamic of *p*. The Perc. part has a dynamic of *p* and a performance instruction "l.v.". The Pno. part has a dynamic of *ppp* and a performance instruction "softly, breathing out". The score is written in 4/4 time and includes various musical notations such as notes, rests, and dynamic markings.

Immersed in an Ethereal Blue Light

$\text{♩} = 104$ softly, no accent on Bb

34

B \flat Cl. *pp* *ppp* *pp* *ppp*

Bsn. *mf-pp* *mf-pp*

Vln. *sp* *mf* *>* *pp* *mf* *>* *pp*

Vc. *mf* *3* *>* *pp* *mf* *3* *>* *pp*

Gtr. *mf* *>* *pp* *mf* *>* *pp*

Perc.

Pno.

Immersed in an Ethereal Blue Light

38 (multiple pitches lower than C6) chord

B♭ Cl. *p* < *f* *p* *ppp* *p* (less pitched beginning if possible) *ppp* <

Bsn.

Vln. *mf* > *pp*

Vc. *mf* ³ > *pp*

Gtr. *mf* > *pp*

Perc. (medium mallets) *ppp* *f* *p* (b) *tr*

Pno.

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features seven staves: B♭ Clarinet (B♭ Cl.), Bassoon (Bsn.), Violin (Vln.), Viola (Vc.), Guitar (Gtr.), Percussion (Perc.), and Piano (Pno.). The score begins at measure 38 with a "chord" instruction and a note that it consists of "multiple pitches lower than C6". The B♭ Clarinet part starts with a dynamic of *p*, followed by a crescendo to *f*, then a decrescendo through *p* to *ppp*, and finally back up to *p*. The Bassoon part is mostly silent, with a few notes at the end marked *ppp* and a decrescendo. The Violin and Viola parts enter in measure 41 with a *mf* dynamic, followed by a decrescendo to *pp*. The Guitar part also enters in measure 41 with a *mf* dynamic and a decrescendo to *pp*. The Percussion part features a *ppp* dynamic in measure 38, followed by a *f* dynamic in measure 40, and then a *p* dynamic in measure 41. The Piano part is mostly silent, with a few notes in measure 41 marked *tr* and a decrescendo.

Immersed in an Ethereal Blue Light

42

B \flat Cl. *pp* *ppp* *pp*

Bsn. *p* *ppp* *mf-pp*

Vln. *mf-pp* *mf > pp*

Vc. *mf-pp* *mf ³ > pp*

Gtr. *mf-pp* *mf > pp*

Perc. *mf*

Pno.

Immersed in an Ethereal Blue Light

46 *ppp* *bisbigliando* *p* *pp* *3* *5* *f* (bow pressure - noise) *pp* *sp* *msp* *3* *f* *pp* *mf* *ppp*

Immersed in an Ethereal Blue Light

50 (slow, free-rhythmic microtonal vibrato) $\text{♩}=78$

B \flat Cl. *ppp*

Bsn.

Vln.

Vc.

Gtr.

Perc. *f* *p*

Pno. *pp* *mf* *pp*

The musical score is arranged in a system with seven staves. The B♭ Clarinet staff begins at measure 50 with a note marked *ppp* and a wavy line indicating a slow, free-rhythmic microtonal vibrato. A tempo marking of $\text{♩}=78$ is present. The Bassoon, Violin, Viola, and Guitar staves contain rests. The Percussion staff features a rhythmic pattern starting with a forte (*f*) dynamic, marked with a sixteenth-note triplet and a sixteenth note, followed by a crescendo to a piano (*p*) dynamic. The Piano staff has two systems of notes; the first system is marked *pp*, and the second system shows a dynamic shift from *mf* to *pp* with a crescendo and decrescendo marking.

Immersed in an Ethereal Blue Light

♩ = 104

54

B♭ Cl.

pp *ppp* *pp* *ppp*

Bsn.

mf-pp *ppp < p > ppp*

(less pitched beginning if possible)

Vln.

sp *mf > pp* *mf > pp*

Vc.

sp *mf > pp* *mf > pp*

Gtr.

sp *mf > pp* *mf > pp*

Perc.

Pno.

The musical score is written for a chamber ensemble. The B♭ Clarinet part features a melodic line with long notes and slurs, transitioning between *pp* and *ppp* dynamics. The Bassoon part provides a harmonic foundation with a mix of *mf-pp* and *ppp* sounds. The Violin and Viola parts play staccato patterns, marked *sp* and *mf > pp*. The Guitar part mirrors the Violin and Viola with similar staccato figures. The Percussion and Piano parts are mostly silent, with the Piano providing a subtle accompaniment in the lower register.

Immersed in an Ethereal Blue Light

(*pppp*: Don't aim to produce a clean pitch)

58

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp

pppp

mf *pp*

mf *pp*

mf *pp*

(slow) ON

(medium mallets)

ppp

p

(Dashed lines divide this measure by half-note durations, and are drawn only for convenience in counting. Play this bar with a "rubato" gesture, balancing dynamics with clarinet.)

Immersed in an Ethereal Blue Light

♩=78

59

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

p

pp *3* *5* *f*

ord *pp* *f*

ord *pp* *3* *f*

ord *pp* *f*

still *pp* *mf* *pp*

still *pp* *mf* *pp*

still *pp* *mf* *pp*

pp *< mf > pp*

Immersed in an Ethereal Blue Light

63 $\text{♩} = 62$

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp mf *pp*

pp mf *pp*

n p

n p

pp mf *pp* *ppp*

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It is marked with a tempo of 62 beats per minute (♩ = 62) and a rehearsal mark of 63. The score is arranged for a full orchestra, including B♭ Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The B♭ Clarinet and Bassoon parts are mostly silent, with the Bassoon having a short melodic phrase in measures 64-65. The Violin and Viola parts have a similar melodic phrase in measures 64-65, with dynamics ranging from pianissimo (pp) to mezzo-forte (mf) and back to pianissimo (pp). The Guitar part is silent. The Percussion part is also silent. The Piano part features a complex, arpeggiated texture in the left hand, with dynamics ranging from pianissimo (pp) to mezzo-forte (mf) and back to pianissimo (pp). The right hand of the Piano part has a more melodic line, with dynamics ranging from pianissimo (pp) to mezzo-forte (mf) and back to pianissimo (pp). The score is written in a single system, with measures 63-67. The key signature is one sharp (F#), and the time signature is 4/4.

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

71

B \flat Cl. *mf-pp* (less pitched beginning if possible)

Bsn. *mf* *ppp* <

Vln. *f* *ord* *mf* > *pp* *mf-pp* *mf* > *pp*

Vc. *f* *ord* *mf* ³ > *pp* *mf-pp* *mf* ³ > *pp*

Gtr. *f* *ord* *mf* > *pp* *mf-pp* *mf* > *pp*

Perc.

Pno. *p* *f*

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features seven staves: B \flat Clarinet (Bb Cl.), Bassoon (Bsn.), Violin (Vln.), Viola (Vc.), Guitar (Gtr.), Percussion (Perc.), and Piano (Pno.). The key signature has one flat (Bb), and the time signature is 3/4. The score begins at measure 71. The Bb Cl. and Bsn. parts have a melodic line with a slur and a dynamic of *mf-pp*. The Bsn. part has a note with a flat and a dynamic of *mf*. The Vln. and Vc. parts have a melodic line with a slur and a dynamic of *f*. The Gtr. part has a melodic line with a slur and a dynamic of *f*. The Perc. part has a rhythmic pattern. The Pno. part has a chordal accompaniment with a dynamic of *p* and a crescendo to *f*. The score includes various dynamics and performance instructions, such as "ord" (order) and "less pitched beginning if possible".

Immersed in an Ethereal Blue Light

73

B \flat Cl. *ppp* *pp* 3

Bsn. *p* *ppp* 5 *f* *pp* 3 5 *f* *pp*

Vln. *sp* 5 *pp* *f* 5

Vc. *sp* *pp* 3 *f* 3 3 3 3

Gtr. *sp* *pp* *f*

Perc.

Pno. *p* *f*

Immersed in an Ethereal Blue Light

76

B \flat Cl. *f* *pp*

Bsn. *f* *pp*

Vln. (gradual bow pressure increase to produce distorted sounds) *f*

Vc. (gradual bow pressure increase to produce distorted sounds) *f*

Gtr. *f*

Perc. (hard mallets) *f*

Pno. *p* *f*

Immersed in an Ethereal Blue Light

78

B \flat Cl. *intensely* *f* *3*

Bsn. *intensely* *f* *3*

Vln. *5* *5* *5* *ff* *5* *5* *5*

Vc. *3* *3* *ff* *3* *3*

Gtr. *5* *5* *ff* *5*

Perc.

Pno. *p* *f*

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It features a 3/4 time signature and spans measures 78 to 80. The instrumentation includes B \flat Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The B \flat Clarinet and Bassoon parts are marked "intensely" and "f" (forte), with a triplet of eighth notes in the first measure of each. The Violin and Viola parts feature a triplet of eighth notes in the first measure, followed by a "ff" (fortissimo) dynamic marking. The Guitar part also features a triplet of eighth notes in the first measure, followed by a "ff" dynamic marking. The Percussion part consists of a single note in the first measure, followed by a rest. The Piano part consists of a single note in the first measure, followed by a rest. The score is written for a 3/4 time signature.

Immersed in an Ethereal Blue Light

80

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

mostly noise

ff

ff

ff

80

81

Immersed in an Ethereal Blue Light

82

B♭ Cl.

p

Bsn.

Vln.

ord (suddenly)

sub pp

ord (suddenly)

Vc.

sub pp

Gtr.

Perc.

Pno.

legato

sub ppp

Immersed in an Ethereal Blue Light

(aim to play clear pitch
with no accent)

84

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

(ord) → msp

(pp)

5

6

4/4

Immersed in an Ethereal Blue Light

86

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

The musical score is arranged in a standard orchestral format. The B \flat Clarinet and Bassoon staves are at the top, followed by Violin and Viola. The Guitar, Percussion, and Piano staves are at the bottom. The Piano part is the most active, with the right hand playing a continuous stream of sixteenth notes and the left hand providing harmonic support with sustained chords. The Violin and Viola parts play melodic lines with slurs and accents. The other instruments are mostly silent or have rests.

Immersed in an Ethereal Blue Light

88

B♭ Cl.

Bsn.

Vln. → ord

Vc. → ord

Gtr.

Perc.

Pno.

The musical score is for a piece titled "Immersed in an Ethereal Blue Light". It begins at measure 88. The instrumentation includes B♭ Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The Violin and Viola parts are marked with "ord" (ordine) and a diamond symbol, indicating a specific performance technique. The Piano part features a complex texture with sixteenth-note runs in the right hand and sustained chords in the left hand.

Immersed in an Ethereal Blue Light

90 $\text{♩} = 78$

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

The musical score for 'Immersed in an Ethereal Blue Light' at measure 90. The score is written for a full orchestra. The tempo is marked as quarter note = 78. The key signature is one flat (Bb). The score is divided into measures 90, 91, 92, 93, and 94. Measures 90-92 are in 3/4 time, and measures 93-94 are in 6/4 time. The Violin and Viola parts have complex melodic lines with slurs and accents, while the Piano part has a sustained chord in the right hand and rests in the left hand. The Bb Clarinet and Bassoon parts are mostly rests. The Guitar and Percussion parts are also mostly rests.

Immersed in an Ethereal Blue Light

93 $\text{♩} = 62$

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

p

p

p

pp

(t.c.)

8va-

7:4 7:4 7:4

6 6 6

Immersed in an Ethereal Blue Light

96

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

p

p

p

p

8va

7:4

6

Immersed in an Ethereal Blue Light

99

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

sp —→ msp

ord

pp

3

5

8va


5

5

5

attaca

Open Water

103  = 78

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp
(on the beat)

p

8vb-----

8vb-----

8vb-----



Detailed description: This is a musical score for a piece titled 'Open Water'. The score is for a full orchestra and piano. The instruments listed are Bb Clarinet, Bassoon, Violin, Viola, Guitar, Percussion, and Piano. The time signature is 3/4. The score consists of 103 measures. The Piano part is marked with *pp* (pianissimo) and *p* (piano). There are also markings for *8vb* (octave below) with dashed lines indicating the octave shift. The score is divided into measures by vertical bar lines. The Piano part has a specific notation for 'on the beat'.

Immersed in an Ethereal Blue Light

109 *somber*

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

n *pp* *n*

mst *sp* *n* *pp*

(start with unpitched, noise-like sound)

(E-D#, D-E: connect smoothly as possible with no accentuation)

pp *p* *pp* *mp*

8vb *8vb* *8vb*

Immersed in an Ethereal Blue Light

115

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ppp *p* *ppp*

(mostly noise, little pitch)

(blend in with clarinet)

ord *msp* *mst*

n *ppp < pp* *n*

OFF (soft mallets) subtle

(triangle beater) subtle l.v.

(soft mallets) l.v.

pp *n < p*

(no dynamic change)

ppp

8^{vb}

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

124

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp

n

n

msp

ord

ord

Immersed in an Ethereal Blue Light

126

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

msp

pp

ord → *msp*

poco ord

pizz arco

pp

mp

p

p

pp

138

Immersed in an Ethereal Blue Light

128

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

n

pp

ord

st

n

pp

5

(soft mallets)

ppp

mp

pp

pp

Immersed in an Ethereal Blue Light

131

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ord \rightarrow sp

pizz nail pizz

mf

slap tone

arco

mp > pp

ppp < p

(wooden tips of mallets)
snare ON
subtle

pp > n

p

8^{vb} -----

(♩=♩)

♩=52

[illegible]

(Gradually press the sustain pedal;
press fully by the last chord of the chord repetition)

calmly
♩=78

136

B♭ Cl. *p* *ppp* *5:3*

Bsn. *(p)* *ppp* *5:3*

Vln. *arco st* *p* *ppp* *5:3*

Vc. *arco st* *p* *ppp* *5:3*

Gtr

Perc. *pp* *n* *ppp* *mf-pp*

Pno. *ppp* *p* *ppp*

Immersed in an Ethereal Blue Light

138 (♩=♩)

B♭ Cl. *ppp* constrained, non vibrato

Bsn.

Vln. *pp* quasi col legno (half wood, half hair) (ord) sul G fragile (beginning) then remain sensitive

Vc.

Gtr

Perc.

Pno. *p* *s*

Immersed in an Ethereal Blue Light

141

B♭ Cl.

Bsn.

(ord) \triangleright msp

poco arco \triangleright arco

Vln.

ppp

Vc.

Gtr.

Perc.

Pno.

Immersed in an Ethereal Blue Light

142

B \flat Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp *mf* *p*

mf

sul D ord

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

144

B♭ Cl.

(ppp)

Bsn.

Vln.

pp

5

Vc.

p

Gtr.

Perc.

Pno.

Immersed in an Ethereal Blue Light

145

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ppp

st

ord

st

ord

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

148 (connect C# and F)

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

poco ord

ord

(plastic (xylophone) mallets)

pp

The musical score for measures 148-150 is written for a chamber ensemble. The B♭ Clarinet and Bassoon parts feature a melodic line starting on a half note G4, moving to a quarter note F#4, and then a half note E4. The Violin and Viola parts play a melodic line starting on a half note G4, moving to a quarter note F#4, and then a half note E4. The Viola part also has a 'poco ord' instruction. The Guitar part plays a rhythmic pattern of eighth notes. The Percussion part uses plastic mallets and has a 'pp' dynamic. The Piano part has a complex rhythmic pattern with slurs and ties.

Immersed in an Ethereal Blue Light

151 *(b)*

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

ppp *p* *ppp*

sp

6 *6*

sp

pp (tips of mallet handles)

n

p *mf*

Immersed in an Ethereal Blue Light

(two pitches
besides the fundamental,
preferably lower than C6)
chord

♩=86

155

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

p

pp

ord (non vib)

ord (non vib)

5

Immersed in an Ethereal Blue Light

158

B♭ Cl. *ppp* *mp*

Bsn. *ppp*

Vln.

Vc.

Gtr. (echoing clarinet) *ppp* *mp* > *pp*

Perc.

Pno.

The musical score for measures 158-159 features the following instruments and parts:

- B♭ Clarinet:** Measures 158-159. Starts with a triplet of eighth notes (F4, G4, A4) marked *ppp*, followed by a long melodic line marked *mp*.
- Bassoon:** Measures 158-159. Starts with a triplet of eighth notes (F3, G3, A3) marked *ppp*, followed by a long melodic line.
- Violin:** Measures 158-159. Rest.
- Viola:** Measures 158-159. Rest.
- Guitar:** Measures 158-159. Starts with a triplet of eighth notes (F4, G4, A4) marked *ppp*, followed by a rhythmic pattern of eighth notes marked *mp* and *pp*.
- Percussion:** Measures 158-159. Rest.
- Piano:** Measures 158-159. Starts with a long melodic line marked *ppp*, followed by a long melodic line marked *mp*.

Immersed in an Ethereal Blue Light

159

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp

pp

mf

mf-pp

mf-pp

pp

f

subito p

pp

f

piu vib

5

l.v.

(hard mallets)

Immersed in an Ethereal Blue Light

161

B♭ Cl. *p* *ppp*

Bsn.

Vln. *p* *ppp* ord *msp*

Vc. *p* *ppp* *pp*

Gtr.

Perc. *pp* OFF *pp* l.v.

Pno. *ppp* *mp* *pp*

Immersed in an Ethereal Blue Light

163

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp

mf

pp

mf

mf

mf

ppp < *mf*

Immersed in an Ethereal Blue Light

[illegible]

Immersed in an Ethereal Blue Light

168 $\text{♩} = 78$

B♭ Cl. $5:3^b$ p ppp

Bsn. $5:3^b$ p ppp

Vln. $5:3^b$ p ppp

Vc. $5:3^b$ p ppp

Gtr. $5:3^b$ p ppp

Perc. (soft mallets) pp

Pno. p ppp

Immersed in an Ethereal Blue Light

171 (♩=♩)

B♭ Cl. *p* *ppp*

Bsn.

Vln. *p* *ppp*

Vc. *p* *ppp*

Gtr.

Perc. *mp* *ppp*

rubato dynamics (not loud)

Pno. *p* *ppp*

Immersed in an Ethereal Blue Light

173

B♭ Cl. *p* *ppp*

Bsn.

Vln. *p* *ppp*

Vc. *p* *ppp*

Gtr.

Perc. *mf* *pp* *p* *mf*

Pno. *p* *ppp*

motor ON (slow)
rubato rhythm

damp

l.v.

5

Immersed in an Ethereal Blue Light

177

B♭ Cl.

Bsn.

Vln.

Vc.

Gtr.

Perc.

Pno.

pp

pp

pp

p

p

ppp

p

pp

p

balance with piano
blend

l.v.

(medium mallets)