ISSN 3034-3836 (Online)

Contemporary Musical Art

Original article
UDC 781.61
https://doi.org/10.56620/RM.2025.1.030-053
EDN: PKMHLG

Analysis of Chou Wen-chung's Manuscript of *Twilight Colors*

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Abstract. *Twilight Colors* is one of the most important works among Chou Wen-chungs late musical compositions. Through a study of the musical manuscript, the following conclusions may be drawn. First, this work is indeed structured by the use of variable modes, and the form of variable modes is not the same in each movement. For instance, the first movement employs a variable mode approximating the twelve-tone technique, the third movement utilizes a nine-note series, and the fourth movement adopts a twelve-tone series. Second, this work not only organizes the pitches according to the variable modes, but also possesses a combination of variable modes as well as a pre-conception of the layout of the large-scale variable modes. Third, the variable modes do not provide the single source of the pitch relations in *Twilight Colors*, and there exist a few musical components in this work that go beyond the variable modes. Fourth, the pitch organization of *Twilight Colors* also reflects the thinking of twelve-tone and serial logic, further revealing Chou Wen-chung's philosophy of confluence prominent during the late period of his music. In other words, the variable modes with Chinese cultural markings and the most representative Western twelve-tone compositional techniques in the first half of the 20th century are highly integrated in the pitch organization of this work, blending with each other in a blurry way.

Keywords: Chou Wen-chung, *Twilight Colors*, manuscript, variable modes, twelve tones, series

For citation: Wang Zhongyu. Analysis of Chou Wen-chung's Manuscript of *Twilight Colors*. *Russian Musicology*. 2025. No. 1, pp. 30–53. https://doi.org/10.56620/RM.2025.1.030-053

* Translated by Thomas Alexander Beavitt, Laboratory for Scientific Translation (https://nauka-perevod.ru/eng).

Introduction

The study of musical manuscripts represents an important component of contemporary music research. Studying a composer's manuscripts may not only reveal any possible errors in the published scores, [1, p. 52][1] but also provide insights into the composer's creative process and habits. In 2022, specialists Liang Lei and Luo Qin were preparing to publish the manuscripts of Chou Wen-chung's works *Twilight Colors* (霞光 xiáguāng) and *Gu Ying* (谷应 gǔ yīng). To this end, they sent me the manuscript of *Twilight Colors* and commissioned me to write a research article related to it. Following the research stage, I held lectures on the manuscript study at the Shanghai Conservatory of Music and other universities. The present article is based on the text of a spoken lecture. In what follows, we shall first briefly examine the background of the creation of this work, discuss its title and its connotation, and then elucidate Chou Wen-chung's theory of variable modes. After that, the manuscripts received by the author shall be analysed in chronological order. At the end of the article, three ideas arising from the manuscript study are presented along with an interpretation of the four manuscripts.

Introduction to the Background of the Work and an Explanation of the Connotation of its Title

Twilight Colors, which was commissioned by the Koussevitzky Foundation for the Boston Music Festival, had its premiere on 4 May 2007, at the Tsai Performance Center at the Boston University with Richard Pittman conducting. It is considered to be one of Chou Wen-chung's late-period compositions.[2]

The work consists of four movements and a coda. The movements are titled "A Thread of Light," "Colors of Dawn," "In the Mist," "Mountain Peaks Rising," and "Coda: Their Silhouettes being neither Parallel nor Contrary." From these titles, it may be seen that Chou Wen-chung's *Twilight Colors* is perceived as program music. The titles of each movement serve as further elaborations of the main title, reflecting either different moments of twilight scenes or views of twilight from various perspectives.

Each movement is accompanied by subtitles enclosed in parentheses. For example, the subtitle under the title of the first movement is "Contrapunctus Variabilis Va" ["Variations of Counterpoint"],[3] the subtitle under the title of the second movement is "Contrapunctus Variabilis VI," whereas the subtitle appearing under the coda of the last movement is "Contrapunctus Variabilis VIII." So why is the subtitle under the title of the first movement not "Contrapunctus Variabilis I" but "Contrapunctus Variabilis Va"? This decision can be traced back to an important work created by Chou Wen-chung before *Twilight Colors*, namely his Second String Quartet *Streams*, which was composed in 2003. As a work explicitly paying homage to Bach's *The Art of the Fugue*, *Streams* was written according to fugal principles, and its four movements are respectively titled "Contrapunctus Variabilis" 1, 2, 3, and 4. From this we can not only interpret the origin of the subtitle of each movement of *Twilight Colors*, but also gain some understanding of the composer's compositional

[1] For instance, the viola's second E-flat in m. 45 of the published score of the fourth movement IV of *Twilight Colors* should be corrected to E-natural, as verified by Chou Wen-chung's autograph manuscript.

[2] Chou Wen-chung. *Twilight Colors*. Leipzig; London; New York: C. F. Peters Corporation, 2007, title page.

[3] The notation "Contrapunctus variabilis Va" appearing in the published score of *Twilight Colors* Movement I, is a misprint. It should be spelt as "Contrapunctus variabilis V," consistent with the terminology used in the work's program notes. [1, p. 48]

techniques and intentions. In other words, the reason why the subtitle of the first movement of *Twilight Colors* is "Contrapunctus Variabilis Va" is that the composer wanted to emphasise the connection between this work and the earlier *Streams*. From the perspective of compositional techniques, since both *Streams* and *Twilight Colors* are tributes to Bach's *The Art of the Fugue*, the compositional techniques applied in them must include the use of fugue, fugato sections, and various imitation techniques.

An examination of the writing of each movement reveals the pervasive use of imitative counterpoint. For example, in the first movement, there is imitation of the musical material between the cello and viola parts in mm. 11–14. In the second movement, the melody of the cello part in the fourth measure is imitated by the violin one measure later. In the third movement, mm. 15–20 feature a chase-like interaction among the three woodwind parts. The passages where imitative polyphony is most evident are in the fourth movement and the coda. Two additional imitative progressions occur in mm. 2–11 of the fourth movement, while the start of the coda is characterised by imitative polyphony. The presence of imitative counterpoint inherently introduces a contrast with vertical simultaneity in compositional writing. For instance, vertical simultaneity is evident in the string parts of the first movement, mm. 48–51; the second movement, m. 13; and the third movement, mm. 15–20. In contrast to this, the vertically simultaneous writing in the fourth movement and the coda is relatively vague.

Although the title of this work is commonly referred to as *Twilight Colors*, the full title should also include the description of its instrumentation, namely *Double Trio for Woodwinds and Strings*. What does *Double Trio* mean here? The brief introduction to the work presented at the top of the score of *Twilight Colors* is as follows: "*Twilight Colors* is a double trio for woodwinds and strings, specifically for: flute, oboe and clarinet in one trio; and violin, viola, and violoncello in the other. The woodwind trio is by itself a double trio with some movements written for alto flute, English horn and bass clarinet played by the same performances as a separate entity. Therefore the movements of the work consist of a string trio in combination with one of two woodwind trios, which offers changing color combinations from movement to movement."[4]

While perusing the score, we may also observe that the first movement employs three woodwind instruments: the alto flute, English horn, and B-flat bass clarinet. The instrumentation in the second movement is the same as in the first movement. In the third movement, the woodwind instruments change to flute, oboe, and B-flat clarinet. At the beginning of the fourth movement, the instrumentation reverts to that of the first and second movements, where the three woodwind instruments are again alto flute, English horn, and B-flat bass clarinet. Beginning from m. 22 in the fourth movement, the instrumentation of the three woodwinds changes to flute, oboe, and B-flat clarinet, and this instrumentation continues through to the end, including the coda.

What are Variable Modes?

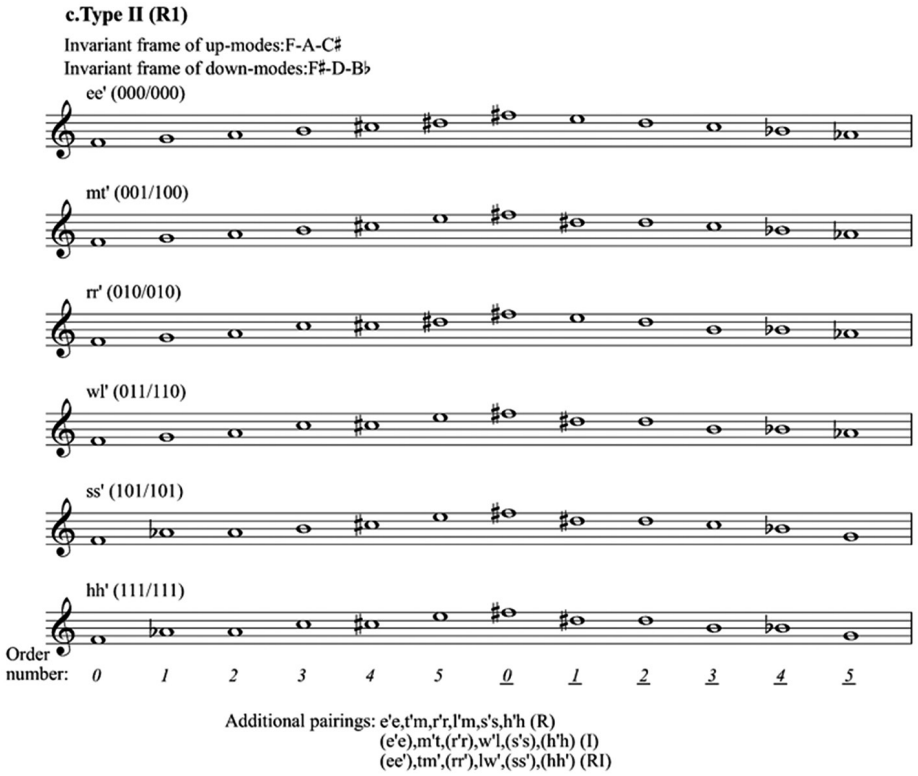
Chou Wen-chung's theory of "variable modes" (变调式 biàndiào shì) presents one of the most important theoretical focuses in the musicological research centred around his work. Scholars who have conducted studies in this area include Li Zhaogang (黎昭纲),

[4] Chou Wen-chung. *Twilight Colors*… Program note.

Guan Zhenming (关振明), Tang Yongbao (唐永葆), and Wang Zidong (王自东). For the purposes of the present discourse, we shall examine the musical scores compiled by Li Zhaogang to illustrate Chou Wen-chung's variable modes. According to Li Zhaogang's analysis, Chou Wen-chung's variable modes went through three stages. Specifically, Chou Wen-chung first used a method similar to the variable modes system to organise the pitches in his work *Metaphors* (1960). Li Zhaogang refers to this pitch organisation approach as the prototype of the variable modes. Chou Wen-chung first used the variable modes in his writing in *Cursive* (1963). Li Zhaogang refers to the method of pitch organisation used by Chou Wen-chung in *Cursive and Riding the Wind* (1964) as the "Type I variable modes," while the approach to the variable modes applied in Chou Wen-chung's later works is called the "Type II variable modes." The following are some musical examples of these three variable modes (Example No. 1a, b, c).

These three examples correspond sequentially to the so-called prototype of the variable modes, as well as the first type of variable modes and the second type of variable modes. The three types of variable modes share the commonality of derivation of their pitch material from the eight trigrams of the Yijing (易经 yìjīng), also known in English as the I Ching. However, the intervals corresponding to the trigrams

Example No. 1a, b, c The Three Classes of Variable Modes [2, pp. 45–46]



differ among the three types. For instance, in the prototype of the variable modes, the intervals are limited to major seconds and minor thirds. In the Type I and Type II variable modes, in addition to major seconds and minor thirds, minor seconds are also included. Nonetheless, the specific combinations of minor seconds, major seconds, and minor thirds demonstrate the fundamental distinctions between Type I and Type II variable modes. For the similarities and differences between the three modulations, please refer to the Table 1.

Table 1. The Principle Characteristic Features of the Prototypes, Type I and Type II [2, p. 46]

Modes	Prototypes	Type I	Type II
Period	1958–59	1960–69	ca. 1963–
Intervals of construction	M2, m3	m2, M2, m3	m2, M2, m3
Mode pairing relation	R0	R3	R1
“Frame”	–	[014589]	[048]
Aggregate formation	No	Yes	Yes
Shared pitch classes between the two modes within a pair	Yes	Yes	No
Shared features among the three classes	1. Modes as musical translations of the eight trigrams 2. Pairing of two modes to form larger structures 3. Opposing contour between modes within a pair: ascending-descending (e.g., mt’) or descending-ascending (e.g., m’t)		
Representative works	*Metaphors (1960)*	*Cursive (1963), Riding the Wind (1964)*	*Windswept Peaks (1990), Cello Concerto (1992)*

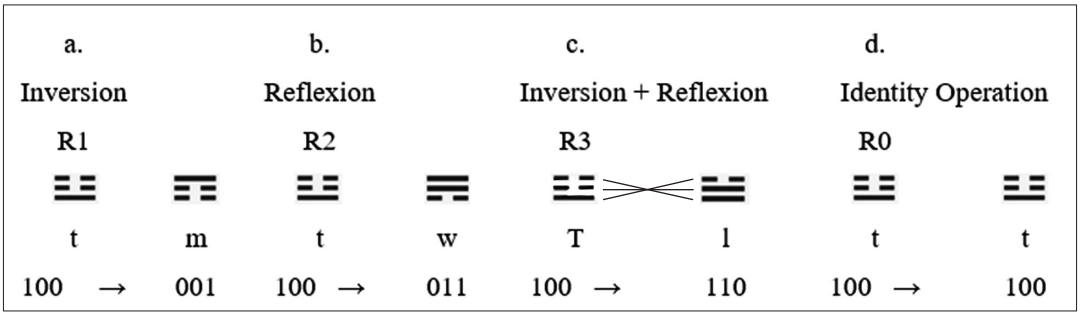
From this table, it may be seen that the three types of variable modes have a chronological succession in their application; differences can also be observed in the intervals used within each type. The third row of the table, featuring R0, R3, and R1, indicates the relationships between the paired modes. The Table 2 explains these three pairing relationships.

From this table, it may be seen that R0 represents an equivalence relationship, R1 represents a mirroring relationship, and R3 represents a combination of mirroring and reflection. The equivalence relationship (R0) is fairly straightforward to understand. The mirroring relationship (R1) may be observed in the second row of the variable mode from the second type (see Example No. 1c). From this line, we can see that the binary value of the variable modes of the ascending line is 001, which is Yin Yin Yang (阴阴阳 yīn yīnyáng). Since Yin Yin Yang reversed is Yang Yin Yin (阳阴阴 yáng yīn yīn), the ascending sequence is comprised of a continuous major second followed by a minor third, and the descending sequence is a minor third followed by a continuous major second. Let us look at the second line of the first variable modes regarding the R3 relationship (see Example No. 1b). We can see that the ascending binary sequence for this line of the variable mode is 001. First, a mirroring transformation (倒影 dàoyǐng) is applied, converting it to 100. Then, a reflection transformation (反射 fǎnshè) is applied, resulting in 011. This explains the derivation of the binary sequence for the ascending (001) and descending (011) lines of the second row in the Type I variable modes.

Table 1 also displays information about the three types of variable modes, including their framework tones, regardless whether or not they form a twelve-tone aggregate, and whether or not the ascending and descending modes share common tones. It also lists the representative works for each type. Since the table already presents this information clearly, there is no need for further elaboration of this.

Now, we shall focus on the second type of variable modes mainly used in *Twilight Colors*. From Example No. 1c, it may be observed that each row of the variable modes contains 12 notes, divided into 6 ascending notes and 6 descending notes. The initial note of the ascending row is a minor second away from the initial note of the descending row. The organisation of each six notes is arranged according to one of the eight Bagua (八卦 bāguà) trigrams. For example, the name of the first variable mode is ee', meaning both the ascending and descending sequences are organised according to the Earth trigram (土卦 tǔ guà), which consists of three Yin lines. In the second type of variable modes, a Yin line is converted into two consecutive

Table 2. Trigram Relations [2, p. 44]



major seconds, while a Yang line is converted into a minor third. Therefore, the three Yin lines are translated into the ascending and descending pitch sequences of the first row of the variable modes.

The name of the modulation in the second line is mt', which means that the ascending line is organized according to the "Mountain" trigram (山卦 shān guà), while the descending line is organized according to the "Thunder" trigram (Table 3). From the table below we can see that the "Mountain" trigram is composed of two Yin lines and one Yang line, while the "Thunder" (雷卦 léi guà) trigram is composed of one Yang line and two Yin lines.

Therefore, the "Mountain" trigram translates into musical notes as two major seconds, followed by two additional major seconds, and then a minor third. This explains the origin of the first six notes in the second line of the second type of the variable modes' musical notation. The descending "Thunder" trigram is translated into musical notes as a descending minor third followed by consecutive major seconds.

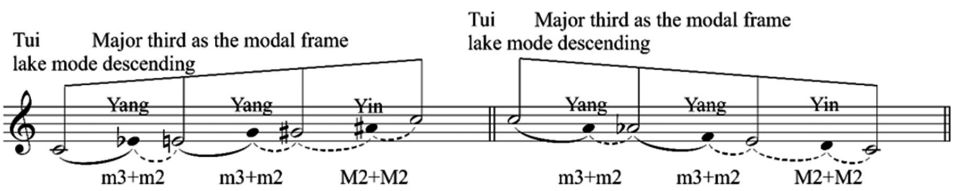
In order to explain the second type of variable modes, it would be necessary to introduce the concepts of the so-called modal framework (调式框架 diào shì kuàngjià) and "hinge tones" (铰链 jiǎoliàn). That is to say, regardless whether it is an ascending variable mode or a descending variable mode, the framework notes are comprised of two consecutive major thirds. Using Li Zhaogang's example of the second row of the second type of variable modes, the framework notes for the ascending six tones are F–A–C#, while the framework notes for the descending six tones are F#–D–B♭. The additional notes are determined by the specific trigram composition of Yin and Yang lines. The Yin lines divide the major third framework notes with major seconds, while the Yang lines divide them with minor thirds. The Example No. 2 further explains the principles of pitch organisation described above: the framework notes are represented with hollow white note heads, while the "hinge tones" are represented with solid note heads without stems. In this case, in contrast to Li Zhaogang's diagram, both the ascending

Table 3. The Eight Trigrams of Yijing [2, p. 44]

Symbol	☷	☶	☵	☴	☳	☲	☱	☰
Binary representation	000	001	010	011	100	101	110	111
Name	earth (e)	mountain (m)	rain (r)	wind (w)	thunder (t)	sun (s)	lake (l)	heaven (h)
Alternative name			Water (Wa)			Fire (F)		

Example No. 2

The Lake Mode Ascending and Descending in the Variable Mode [3]



and descending six-note sequences begin on the note *C*, whereas in Li Zhaogang's diagram, the initial pitches of the ascending and descending sequences differ by a minor second.

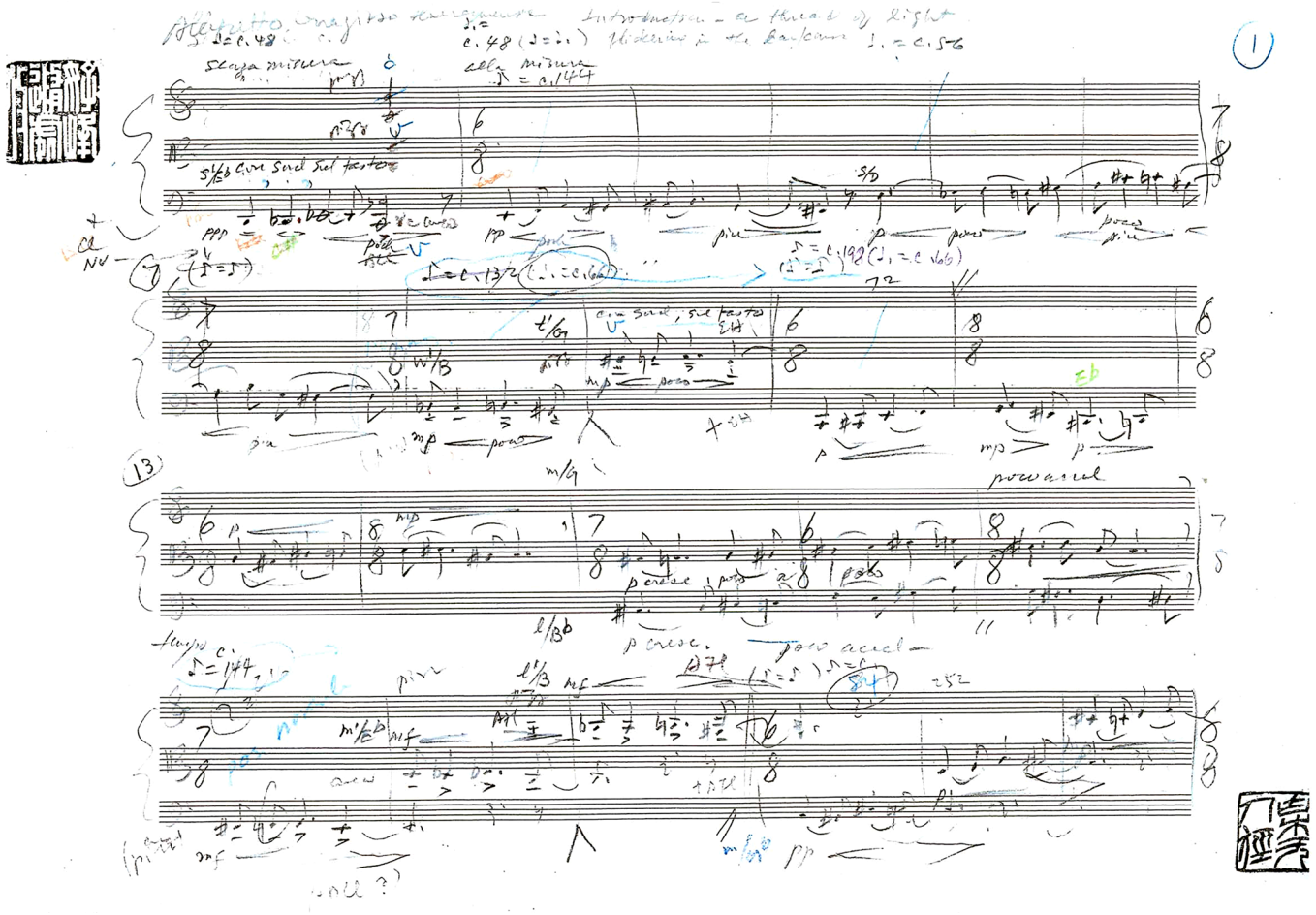
Analysing the Manuscripts in Sequential Order

Let us now explore the correspondence between the manuscript of the first movement of *Twilight Colors* and the published score of this work. First, we shall explore the manuscript marked as **I-2nd draft-p1** by Chou Wen-chung (Example No. 3).

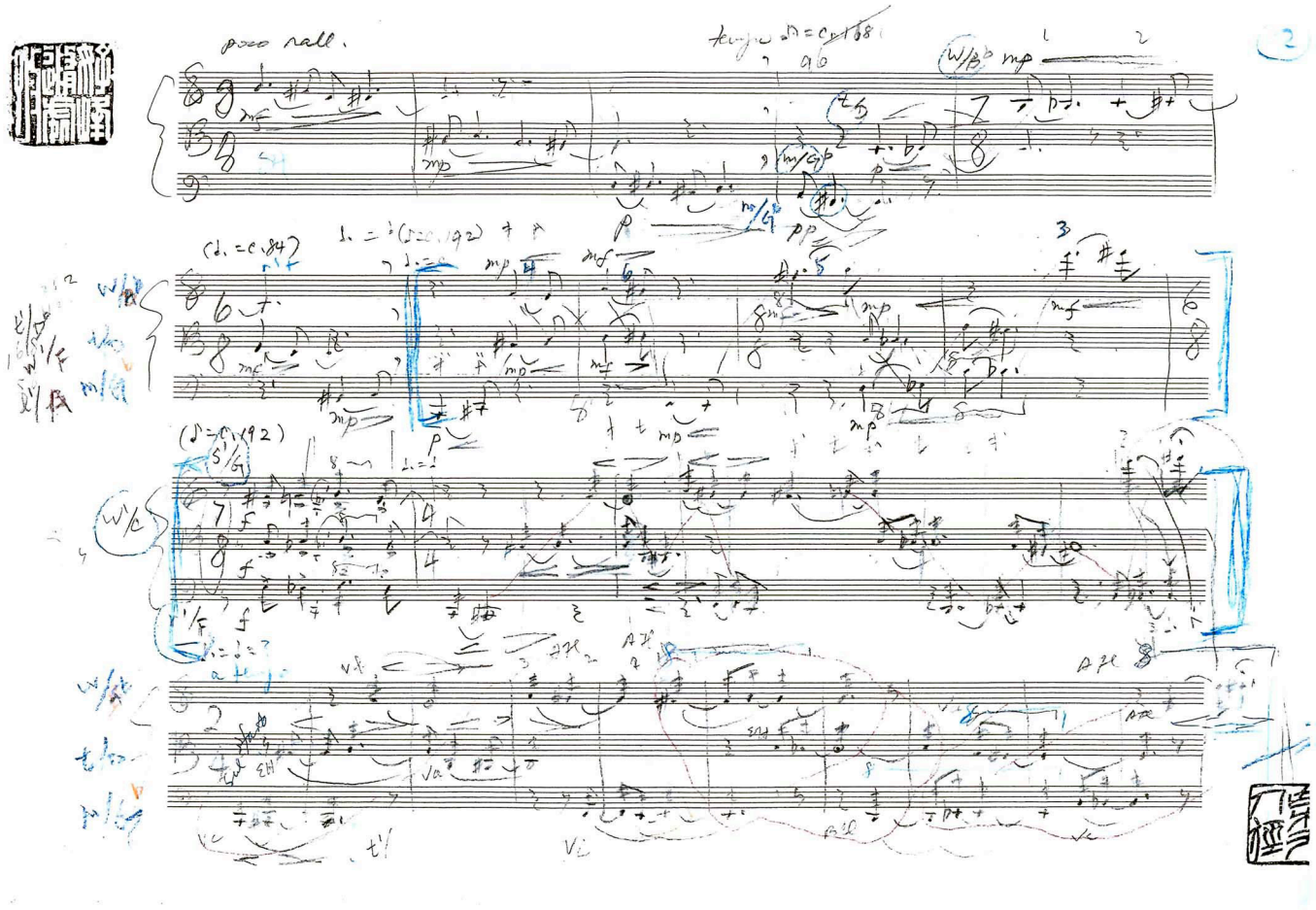
From a comparison with the published score of the composition, it may be observed that this page of the manuscript is relatively similar. Of course, the final musical score differs in some respects from the one shown in the picture above, for example, in the addition of the wind instrument parts. Also, the time signature of the first measure in the second line of the manuscript is 7/8, whereas in the published score, this measure retains its 6/8 time signature, only transitioning to 7/8 in the subsequent measure.

The second page of the manuscript (Example No. 4) continues from the previous one, with the composer marking the page number in the top-right corner with a circled Arabic numeral 2, just as the previous page had a circled numeral 1.

Example No. 3 Chou Wen-chung. *Twilight Colors*. The manuscript. I-2nd draft-p1



Example No. 4 Chou Wen-chung. *Twilight Colors*. The manuscript. I-2nd draft-p2



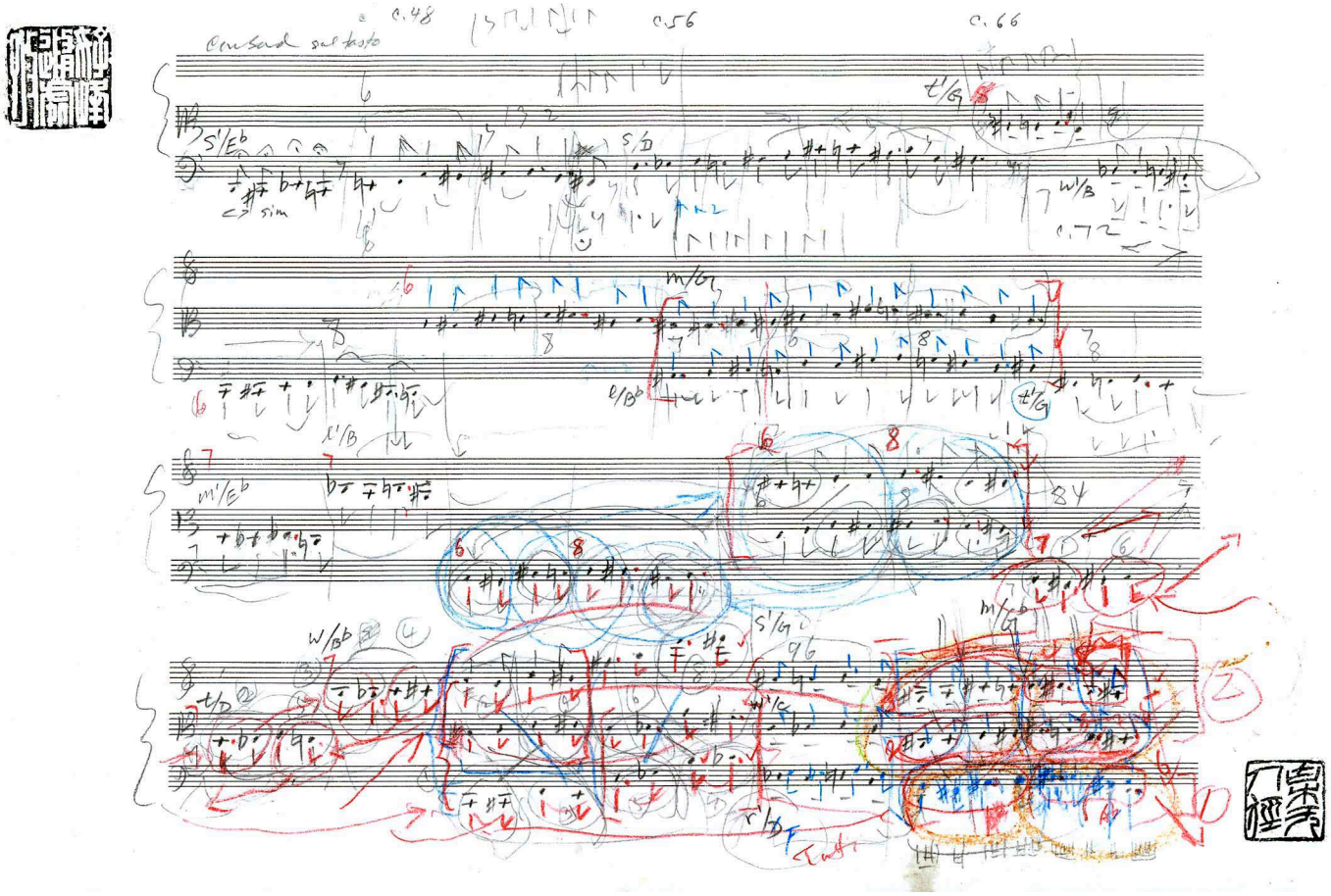
Compared to the previous page, this page possesses more of a sketch-like quality, showcasing the composer's iterative exploration of texture and rhythmic organisation for mm. 33–47. For example, in the second beat of the second line, two parts are rhythmically synchronised, whereas in the third and fourth lines, the arrangement shifts to varied rhythms. A key difference between these two lines is that the time signature changes to 4/4 from the second measure of the third line, while in the fourth line it adjusts to 2/4. Rather than concluding from this part of the manuscript that the composer's original musical design places m. 48 prior to m. 33, it becomes clear that the first measure of the third line should be viewed as a continuation of the music from the second line.

Compared with the two previous manuscripts, the manuscript from Example No. 5 still reveals a connection between its musical design and the published score, but it is less aligned with the final score than the earlier two, particularly the first one.

This, most likely, explains why the composer categorised this manuscript as a "draft" instead of labelling it as another "second draft". From this manuscript, it may be observed that the pitch organisation in mm. 33–77 still follows a four-part choral texture with synchronised rhythms (as seen in the last line of this manuscript), whereas in an earlier manuscript, the texture had already been arranged to include part imitation, thus aligning it with the final score.

From this manuscript, it may be seen that the pitch organisation up to m. 58 of the score

Example No. 5 Chou Wen-chung. *Twilight Colors*. The manuscript. I-draft-p2

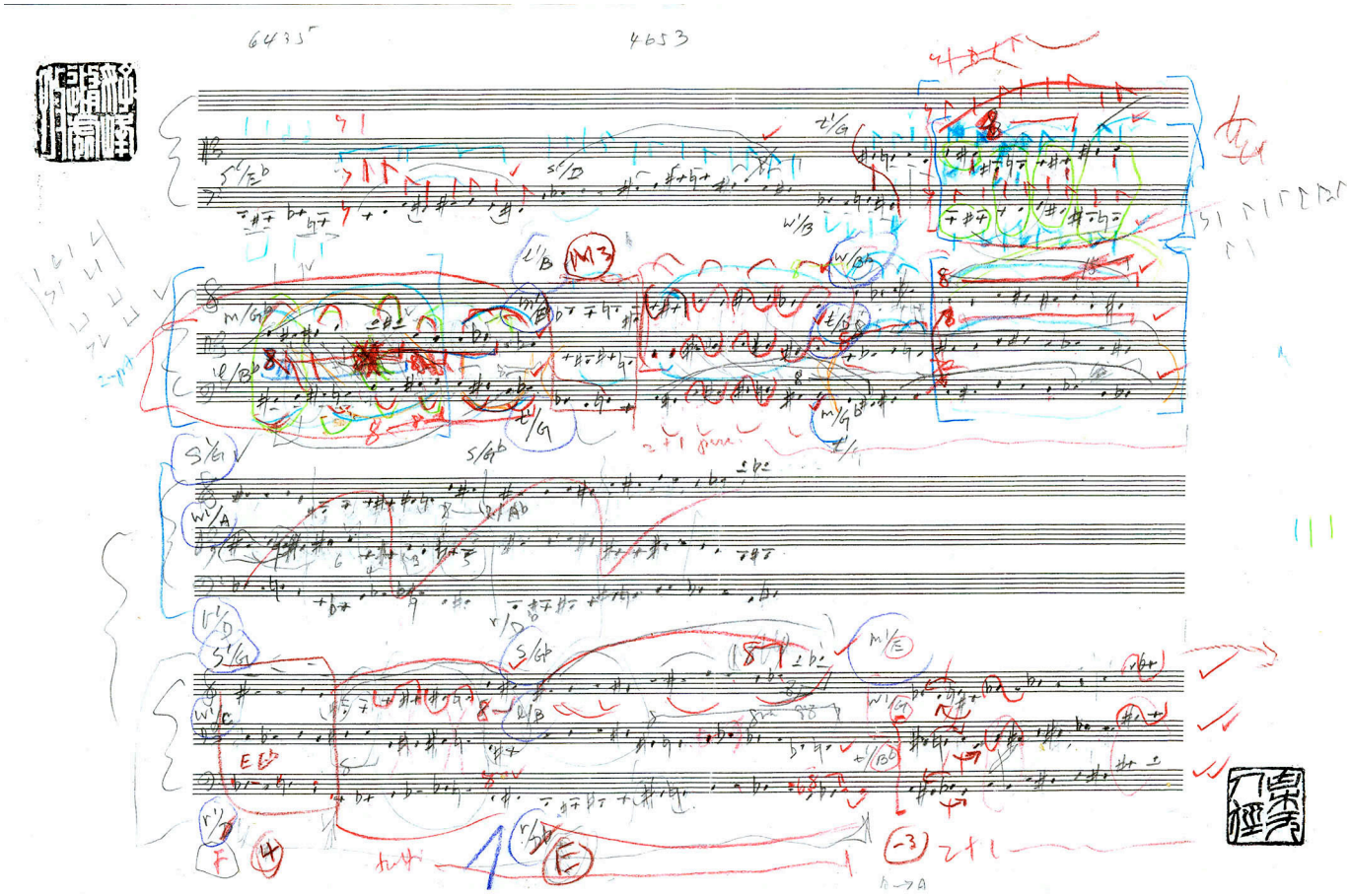


is carried out according to the plan in the above figure, but there are also local adjustments and insertions. The local adjustments observed in mm. 36–47 reflect the fact that, in the score, major seconds are primarily used for the organisation of pitch segments, whereas the manuscript retains a greater use of minor seconds in its pitch organisation.

Compared with the previous specimen, manuscript from Example No. 6 reveals a wider range of pitch organisation in the first movement of *Twilight Colors*. In other words, the picture reveals the original design of the pitches present in mm. 1–85. The manuscript provides a rich insight into the rhythmic organisation of the pitch structure at the beginning of the work, even though this rhythmic organisation differs significantly from that of the version presented in the final published score.

The most interesting discovery in the above manuscript is the change in the composer's creative intentions. From the comparison of the third and fourth lines in the manuscript from Example No. 6, it can be seen that the third line represents a pitch design subsequently abandoned by the composer. One of the important reasons for adopting the pitch organisation of the fourth line is that a parallel fifth progression is formed between the two lines on the staff above the fourth line. It is also due to considerations of parallel fifths that the design of the lowest voice part in the fourth line of the manuscript was replaced in the published score. The reason for adopting the new layout and discarding the design from the fourth line of the manuscript is

Example No. 6 Chou Wen-chung. *Twilight Colors*. The manuscript. I-draft-p3



that in the manuscript, the two lower parts in the fourth line do not form a progression of parallel fifths. In contrast to this, in the final published score, the adjacent string parts in the three-part ensemble consistently maintain a design based on parallel fifths. From the above manuscript, it can be observed that the lower voice parts in m. 48 of the final score were all additions made after the design of the manuscript. Moreover, the three woodwind parts merely present repetitions in unison of the pitch structures from the upper string voices.

The manuscript from Example No. 7 follows the previous specimen, revealing the pitch organisation starting from m. 86 of the first movement to the end. It may be observed from this manuscript that the composer's original design for the work went beyond its eventual presentation. In other words, the pitches in the second half of this manuscript were not converted into actual musical notation.

The markings on the upper and lower sections of the two manuscript scores consist of numbers or letters combined with numbers. These markings serve as reminders for the composer about vertical interval relationships when combining variable modes. Specifically, in **I-draft-p3**, "M3" represents a major third, "-3" represents a minor third, and "4" represents a perfect fourth. In **I-draft-p4**, "2" represents a major second.

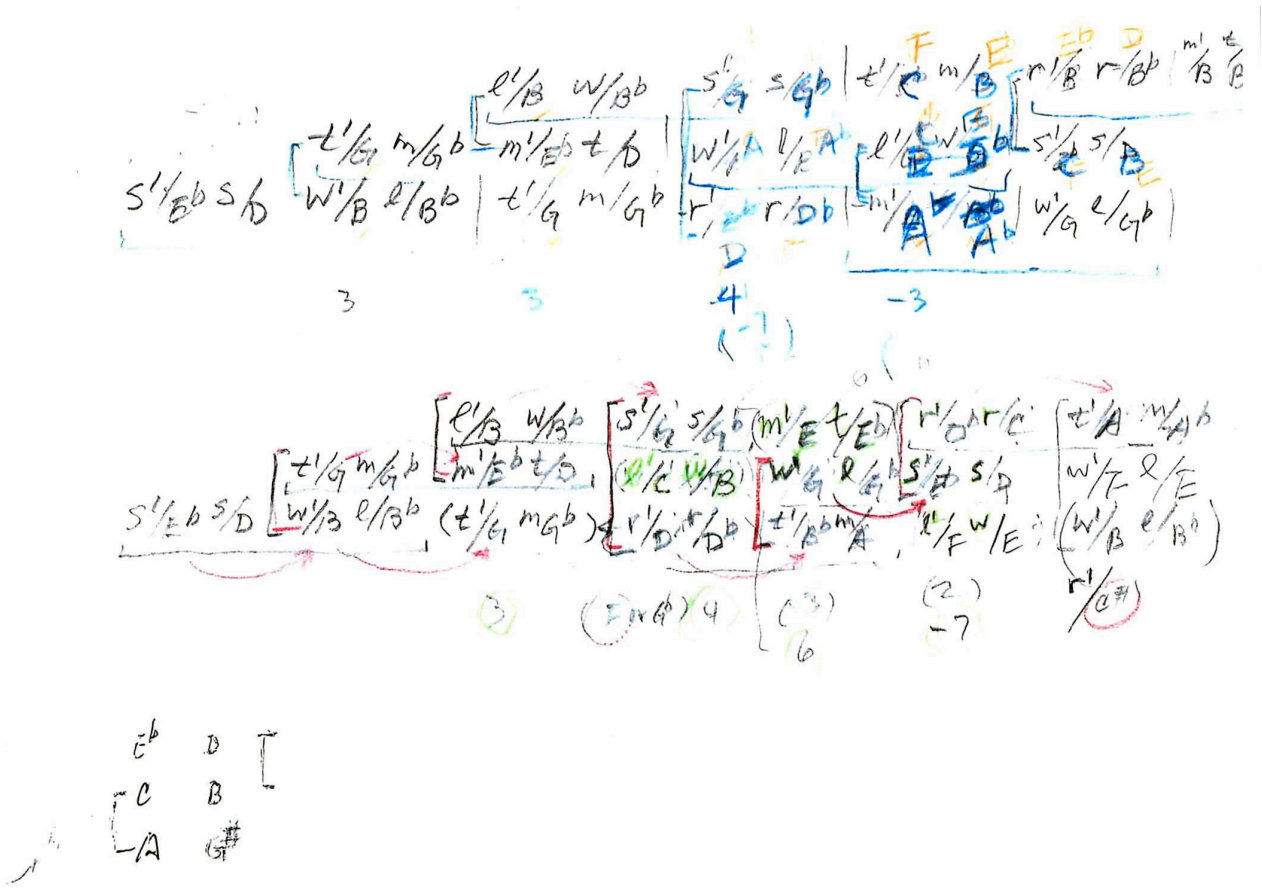
Chou Wen-chung's *Twilight Colors* manuscript reveals a fascinating discovery: the composition employs variable modes not only in terms of how they combine vertically (harmonic design) but also concerning their

Example No. 7 Chou Wen-chung. *Twilight Colors*. The manuscript. I-draft-p4

horizontal progression (sequential layout). From the figure seen in Example No. 8, it can be observed that the composer's arrangement of variable modes also incorporates the organisation of musical texture. Specifically, if the first two variable modes are realised as single-voice progressions, then the subsequent two variable modes involve two voices, while those following involve the layering of three voices.

In the horizontal connection of variable modes, the pairing reflects the relationship between the ascending and descending sequences. Specifically, the paired variable

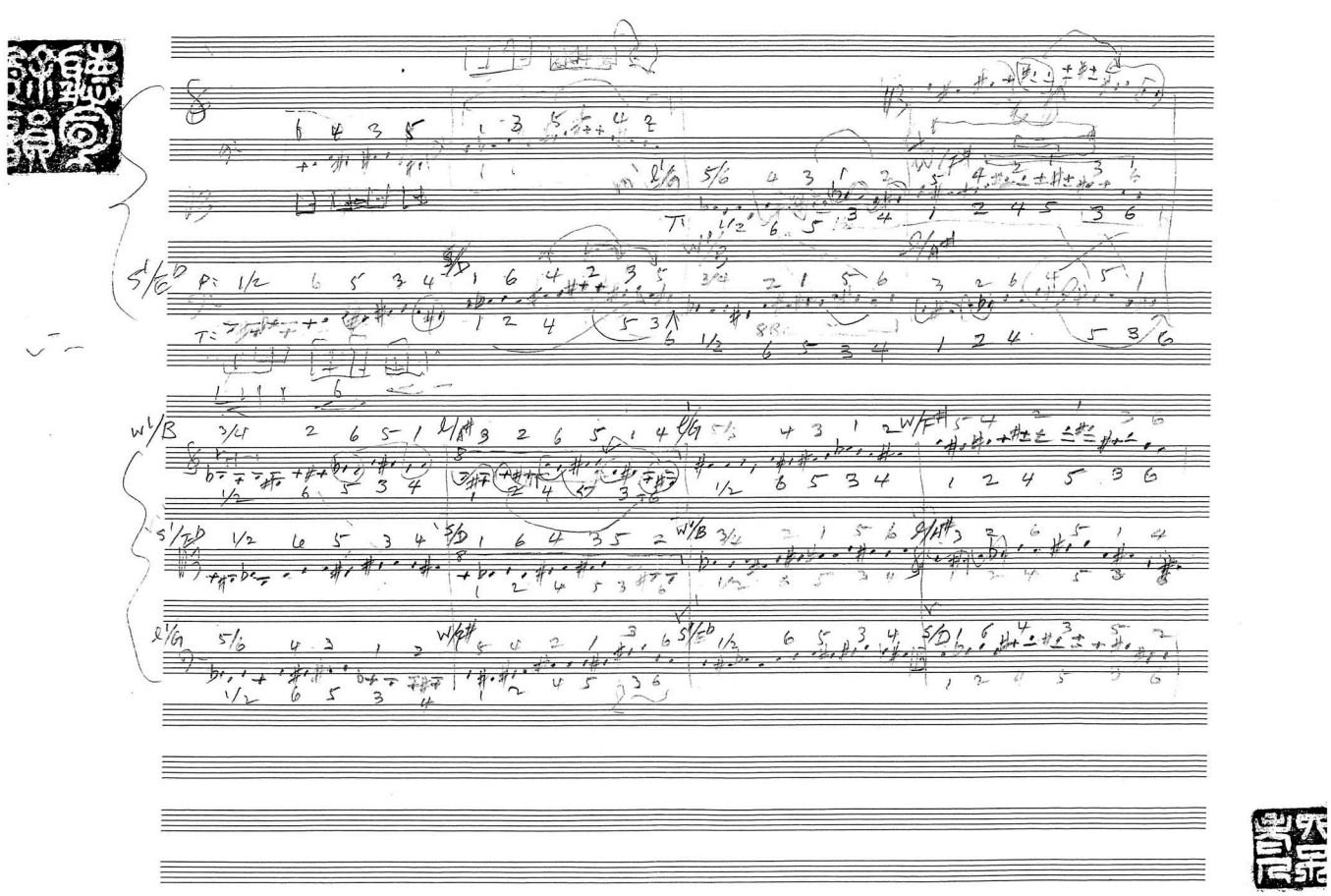
Example No. 8 Chou Wen-chung. *Twilight Colors*. The manuscript. I-planning-1



modes commonly use the design characteristic of a minor second difference in the initial pitches, a feature typical in the composer's later works. When two voices combine, their initial pitches form a major third relationship. In the case of three voices, intervallic cycles are employed: the first group demonstrates a major third cycle, the second group incorporates a perfect fifth cycle, the third group forms a minor third cycle, and the fourth group features either a major second or a minor seventh cycle. These intervallic cycles are denoted by Arabic numerals in the manuscript. The horizontal layout of the variable modes follows some identifiable patterns. For example, the starting notes of the first three groups of variable modes form a major third cycle. Subsequently, the arrangement of the variable modes continues to emphasise intervallic progressions of thirds as the central structural concept. The composer's variable mode writing includes pre-arranged vertical and horizontal structures, as well as supporting evidence from other manuscripts (Example No. 9).

From this manuscript, it can be seen that the combination of the third group of variable modes in the last line differs from that in the beginning of the previous manuscript. The arrangement of the third and fourth groups of variable modes in the final line of this manuscript continues to use combinations of starting pitches based on major thirds and augmented triads. In contrast to that, the previous manuscript employed a structure based on a cycle of fifths at this point.

Example No. 9 Chou Wen-chung. *Twilight Colors*. I-sketches-2



In other words, while the vertical arrangement of initial pitches in this manuscript still exhibits very clear characteristic features of variable modes, the previous manuscript begins to diverge from this arrangement from this point onwards. This demonstrates that the composer does not rigidly adhere to his musical system in his actual creative process. Specifically, in the vertical arrangement of the variable modes, augmented triad combinations are not consistently used throughout the piece. Instead, they gradually transition to other vertical pitch combinations based on the development of the composition. So, which of the variable mode layouts in the above diagrams is closer to the published score of the work?

By comparing the two drafts with the published score, we may observe that the variable mode layout in the earlier draft is closer to that of the final published score. Of course, there are significant differences between the variable mode layout in the published score and the preceding manuscript. For example, the variable mode marking for the pitch set in m. 15 in the published score should be m/G. However, in the above manuscript and the one that preceded it, the markings at this point are m/G♭ and W/F#, respectively. From this, it may be inferred that this manuscript predates the previous one in terms of the time of its creation, pertaining to an earlier stage of composition, which had not yet been finalised or was ultimately abandoned as a compositional option.

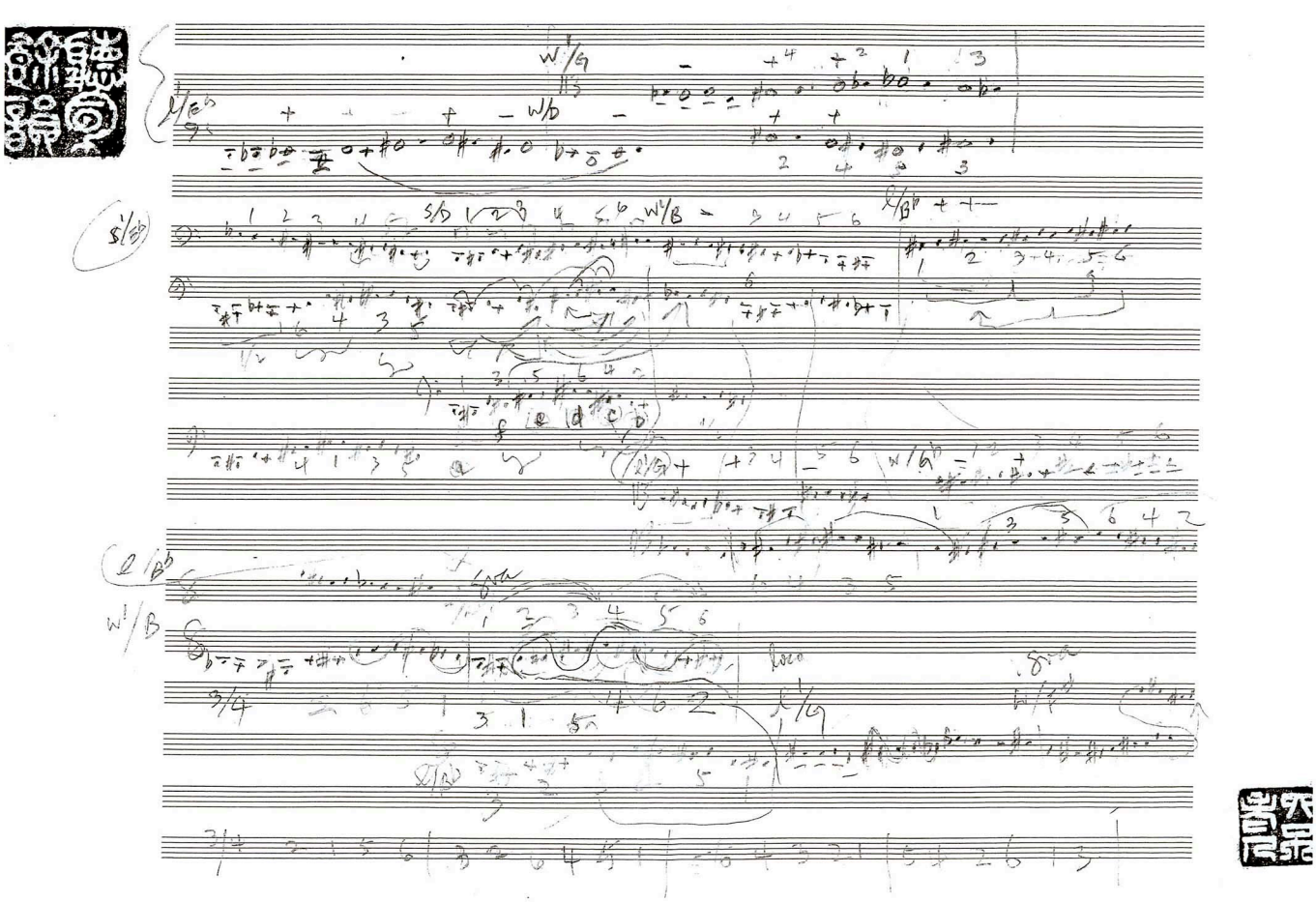
Other sketches also support the judgement that the previous manuscript served as the foundation for the final work, such as **I-draft-p3**. Although **I-planning-1** is merely a sketch of the variable mode design and not presented in the form of a musical score, the score of **I-draft-p3** essentially transforms the variable mode design of **I-planning-1** into a musical score. The variable mode design in **I-planning-1** consists of two lines, while the last two lines of **I-draft-p3** correspond to the two lines of variable mode design in **I-planning-1**, respectively. The second-to-last line of **I-draft-p3** was marked by the composer with an orange wavy line, indicating that this was an discarded writing scheme. This abandoned scheme corresponds to the variable mode design in the first line of **I-planning-1**. In other words, the second line of the variable mode design in **I-planning-1** is the pitch arrangement ultimately adopted by the composer. Additionally, from the close relationship between **I-draft-p3** and **I-planning-1**, it can be seen that these two sketches are close in time, or, in other words, **I-draft-p3** is the sketch that continues from **I-planning-1**.

The above manuscripts not only specify the layout of the variable modes but also display each variable mode in the form of a twelve-tone sequence. Notably, these variable modes are annotated with Arabic numerals above and below, reflecting the order of the note appearances. Careful observation of **I-sketches-2** reveals that the sequence of Arabic numerals below the variable modes does indeed correspond to the order of the half-tone scale formed by those modes. However, the sequence of numbers above the modes does not align with the ascending or descending sequence of the variable modes. Arranging the corresponding notes according to the given numbers forms another six-note ascending or descending sequence. The question of whether this represents a novel use of modulation explored by the composer in this work is worth further exploration. Or perhaps this manuscript, as it is still in its initial stage, contains markings that differ from the composer's final variable mode scheme. This is because, in the completed work, we also observe a number of markings of variable mode sequences; for example, the numerical markings on the treble clef from the last measure of the first line to the end of the second line align perfectly with the ascending

Feng mode constructed with Bb as the starting note. A closer examination of the note pairings and rhythmic arrangement in the treble clef from the last measure of the first line to the end of the second line in Example No. 4 reveals that among the six pitches outside the Feng-mode hexachord, three — B♭, E, and A♭ — serve as "filler tones" expanding the variable-mode hexachord into a nona-chord (9-note chord). Meanwhile, B, E♭, and G function as filler tones that further expand the nona-chord into a dodeca-chord (12-note chord). Notably, B, E♭, and G form an augmented triad, which is also referred to as the "secondary framework" — a structural layer existing outside the primary augmented triad framework of the Type II variable mode. From this it may also be seen that the arrangement of the pitch order in the manuscript of this work is a topic worth exploring.

The sketch on Example No. 10 appears to be closer to the early creative stages of the work. The third line of the staff represents the initial variable mode design of the piece, while the Arabic numeral markings above the score correspond completely to the sequence of the variable modes. The line immediately below the fourth line represents the composer's musical interpretation of the original variable mode, which reflects the sequence of note appearances in the published score. The second and third lines, most likely, provide the starting point of the composer's original work.

Example No. 10 Chou Wen-chung. *Twilight Colors*. I-sketches-1



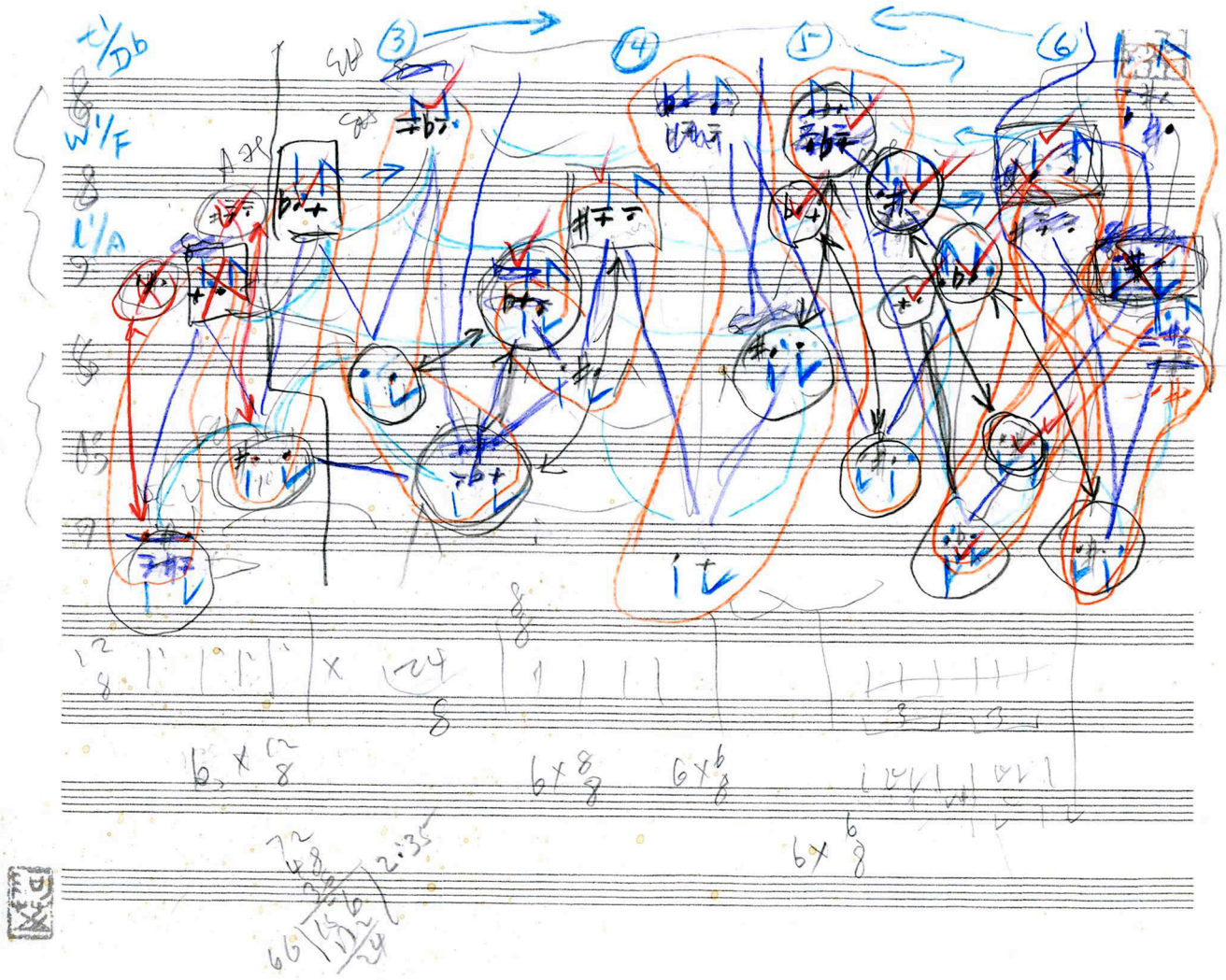
The hollow note heads indicate the six pitches of the variable mode, while the solid note heads represent the remaining six pitches after the first six. The presence of plus and minus signs corresponds to the inherent Yin (broken) and Yang (whole) lines within the variable mode. A slight inconsistency that appears here must be briefly noted: the first variable mode mark on the third line of the staff should be l' instead of e'.

The manuscript from Example No. 9 should follow the previous one, as the previous manuscript still included prototypes of the variable mode arranged in ascending or descending order of the chromatic scale, whereas the pitch organisation in this manuscript no longer relies on such prototypes. What is more noteworthy is that the pitch arrangement in the previous manuscript is closer to the published score, while the pitch arrangement in this manuscript deviates slightly from the published score.

Example No. 11 is the only sketch of the first movement containing six voices. From the sketch, it becomes apparent that the composer examined the texture of this section in terms of interweaving voices. Although the order of voice entrances and specific pitch arrangements differ from the actual score,

Example No. 11

Chou Wen-chung. *Twilight Colors*. I-draft-p1



this sketch indeed forms the musical foundation for mm. 31–47 of the score. The Arabic numerals on the first line of the score may be seen to basically correspond to the order of the notes of the variable mode marked in the upper left corner of the first line. The lower four lines of the score also include the rhythmic organisation of this segment, although this design does not entirely align with the metric arrangement in the final piece.

The sketch from Example No. 5 is relatively close to the first and second drafts (i.e., **I-2nd draft-p1** and **I-2nd draft-p1**) (Examples Nos. 3 and 4); however, some imitative textures have not been fully developed, and the rhythmic organisation is still represented by Arabic numerals 6, 7, and 8, rather than complete time signatures. From the perspective of musical completeness, the above manuscripts as well as the first and second drafts are all sketches that are close to the final score. From their comparison, the first and second manuscripts appear to be closer to the actual score of the work than this one.

A Reflection on Three Questions

From the conducted review of the manuscripts of this work, three questions arise:

1. What insights have been gained over and above the score?

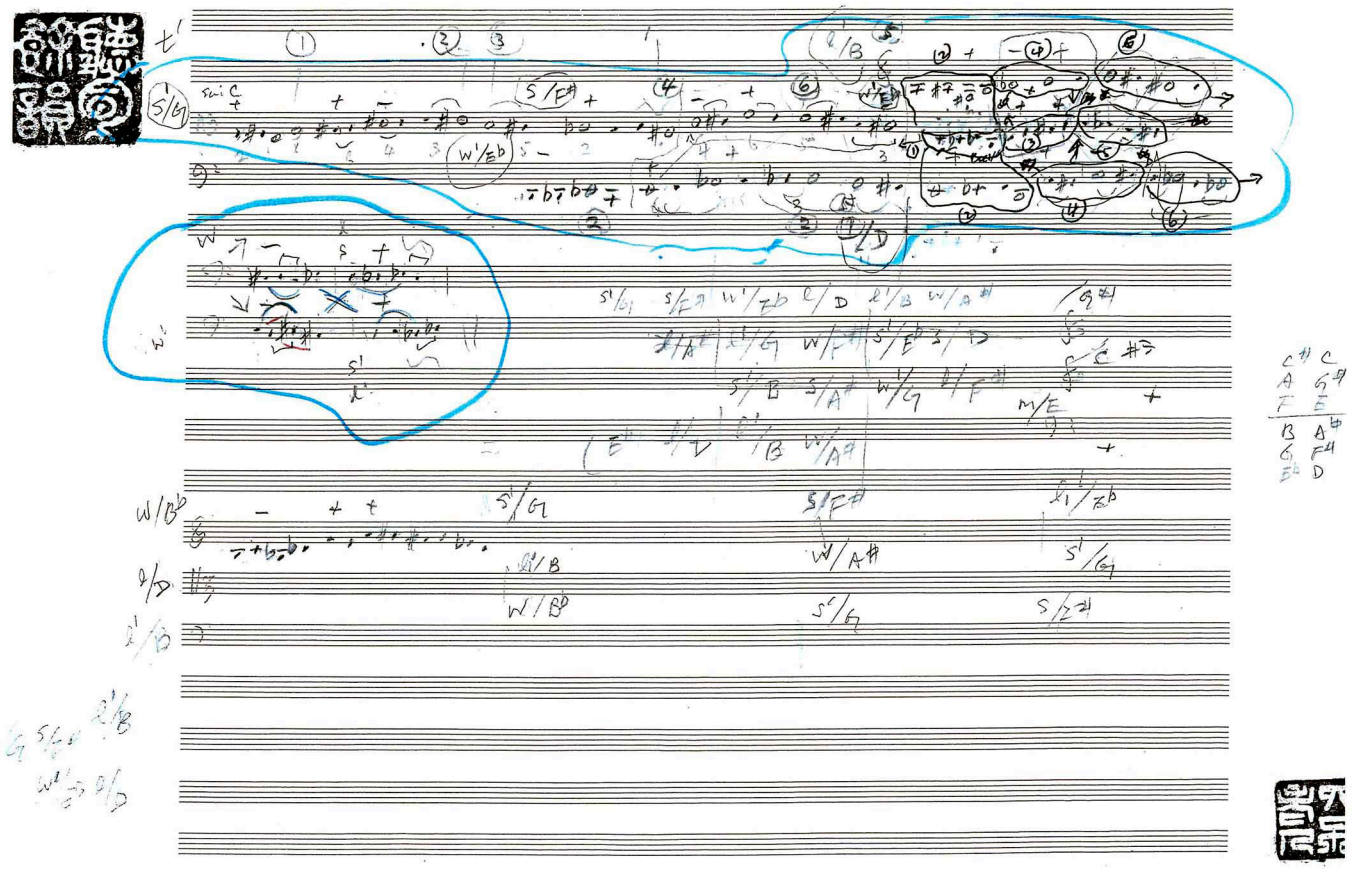
First, this composition is indeed written with the use of variable modes, with each movement employing a distinct form of these modes. For instance, the variable mode in the first movement is close to a twelve-tone structure, the third movement uses a nine-note series, while the fourth movement follows a twelve-tone arrangement. Second, the composition is not only organised using variable modes to structure pitch materials but also demonstrates the pre-conception of combining variable modes and designing their large-scale layout. Third, the variable modes are not the entirety of the pitch organisation in *Twilight Colors*. This work includes musical elements that go beyond the design of variable modes, involving additional compositional techniques and structures.

Regarding the variable modes in this work, a further expansion can be expressed as follows. Prior to carrying out the manuscript study, the present writer held the incorrect opinion that the variable modes in this work seemed to lack research value, because each voice in the first movement presented a twelve-tone row without repetition; consequently, it seemed reasonable to regard them as twelve-tone rows. Indeed, since the twelve-tone writing in the first movement exhibits clear set characteristics, or what could be referred to as set compatibility thinking, analysing the pitch organisation of this movement from the perspective of twelve-tone theory and set theory would seem a more direct and effective approach than relying on the concept of variable modes.

However, following an examination of the manuscript of the work, it has become clear that Chou Wen-chung indeed employed variable modes in the composition, as evidenced by the clear markings on the first page of the manuscript (e.g., the sequence marked as S'/E♭). However, since this marking is followed by a twelve-tone sequence in which each pitch appears only once, the variable mode in *Twilight Colors* seems to function as a symbolic representation. This usage differs from the deeper structural meanings of variable modes in Chou's earlier works such as *Cursive* and later works like *Windswept Peaks*. In this composition, Chou integrates the variable mode concept with twelve-tone techniques, suggesting a diminishing explicit organisational role for variable modes. Instead, they become a latent organising principle, while twelve-tone thinking assumes a more apparent role in the pitch organisation. However, a reversal appears on the following manuscript.

From the Example No. 12, it can be seen that the pitch organisation on the third line of this page corresponds to the viola part in m. 9

Example No. 12 Chou Wen-chung. *Twilight Colors*. The manuscript. I-studies



of the first movement of the score. The twelve pitches in the manuscript (Example No. 12) are mostly consistent with the score, with only a few changes in the order of the notes. If the twelve pitches are divided into six pairs, it is observed that four pitch pairs have their order reversed in the score as compared to the manuscript (e.g., the first pitch pair F–F# in the manuscript becomes F#–F in the score, the second pair E–G becomes G–E, and the third pair G#–A becomes A–G#). Meanwhile, two pitch pairs retain their order (e.g., the fourth pitch pair remains C#–C in both the manuscript and the score).

Chou Wen-chung marked this twelve-tone sequence in the manuscript as S'/G, which corresponds exactly to the hollow note heads of the first twelve pitches in the manuscript. We know that the trigram corresponding to S is "fire", as represented by the combination of the Yin and Yang lines as Yang-Yin-Yang. According to the earlier discussion, Yang divides the framework of a major third into a minor third, while Yin divides the same framework into two major seconds. Therefore, the downward "Fire" mode starting from G consists of the six pitches G–E–D#–C#–B–G# (Table 4a). The remaining six pitches are then filled in, following the descending chromatic scale to complete the twelve-tone aggregate.

The six notes in the "Fire" mode and the six filled-in notes are labelled with numbers (Table 4b), which correspond to the Arabic numerals below the third row in the above diagram (see I-studies). We then take the twelve pitches in the actual score and assign them with numbers: the numbers representing the fire mode are placed above, while those representing

Table 4. Chou Wen-chung. *Twilight Colors*. The manuscript. I-studies

a	S′/G :	G			E	#D		#C		B			#G
		1			2	3		4		5			6
b	S′/G :	G			E	#D		#C		B			#G
			#F	F			D		C		#A	A	
			1	2			3		4		5	6	

the remaining six pitches are placed below. Since the so-called variable mode six pitches and the filled six pitches appearing in the sequence 2–1–6–4–3–5 we can draw certain conclusion (see Table 5).

The pitch organisation in *Twilight Colors* indeed employs the compositional thinking and notation of variable modes, yet simultaneously reflects twelve-tone and pitch sequence thinking. Specifically, it incorporates a descending chromatic scale starting from G as a reference point, where both the variable modes and the inserted notes are arranged according to the same pitch sequence order. This synthesis illustrates Chou Wen-chung's late compositional philosophy of convergence, which merges Chinese culturally symbolic variable modes with the Western twelve-tone technique of the early 20th century. In other words, the variable modes endowed with a Chinese cultural identity and the most representative twelve-tone compositional technique in the West in the first half of the 20th century blend seamlessly and harmoniously in the pitch organisation of the first movement of this work. From a comparison of the viola part notation in mm. 10–14 of the score with the third line of the manuscript and Table 5, the logic behind the pitch organisation in the first movement, which integrates variable modes, tone rows, and twelve-tone techniques, becomes immediately clear.

2. Have the manuscript studies led to an improved understanding of the composer, his corresponding theories, and this musical composition?

First, the process has indeed enhanced our understanding of the composer's creative process. As mentioned above, the composer's creative process can be discerned from the series of manuscripts. The process involves first designing the variable mode, starting with pitch before rhythm and metre. The pitch thinking is primarily characterised by considerations of timbre or instrumentation, followed by texture. Second, it has enhanced our understanding of the composer's late-period variable mode designs. Third, it the study can be used to correct doubtful parts of the music score.

Here we may also expand on the creative process underlying this work. There are eleven manuscripts for the first movement, comprising two second drafts, two planning stages, two sketches, one study, and four drafts. Both the draft and the second draft are close to the final version. When comparing the draft, the second draft and the published score, we can find that the second draft is closer to the final product

Table 5. Chou Wen-chung. *Twilight Colors*. The manuscript. I-studies

		2	1	6		4			3	5	
F	#F	E	G	#G	A	#C	C	D	#D	B	#A
2	1				6		4	3			5

of the work, so in terms of chronology, the draft is earlier than the second draft. In the sketches, the presence of variable modes arranged in a form close to descending chromatic scales and the use of "+" and "–" symbols to indicate fundamental tones suggest that the sketches precede the planning phase. Additionally, the planning layouts align more closely with the final composition's variable mode structures, affirming the chronological precedence of sketches over planning. The only study contains both the design of the variable-mode layout and its musical realisation. However, this variable-mode layout and its musical realisation are further from the final composition compared to the two drafts and sketches. Therefore, in terms of chronology, we may speculate that the study came first, the sketches came second, and the planning stage came third, followed by the two versions of the draft. This indicates that the creative process of the first movement by Chou Wen-chung begins with the studies, followed by the sketches, then the planning, then the two drafts, and finally, of course, the completed work — that is, the published score. From the perspective of the musical parameters, Chou Wen-chung's compositional process for *Twilight Colors* begins with the layout of the variable modes and their presentation in the score. In the organisation of polyphonic music, the variable modes are first arranged vertically in a manner similar to columnar or harmonic structures. Subsequently, the rhythmic and textural arrangement of the constituent pitches of the modes is developed. Regarding the writing of the instrumental parts, the manuscripts primarily focus on the string parts first, and then the woodwind parts.

Therefore, if we were to make a brief summary of the writing process of the first movement of Chou Wen-chung's *Twilight Colors*, the organisation of pitch presents the first priority, while the layout of pitch also includes structural considerations. This shows that among the various elements of music creation, pitch organisation and structural arrangement are the first priority, followed by the intervention of parameters such as rhythm, beat, texture, and dynamics.

3. Has the process of manuscript study updated our previous analysis and judgment of this piece?

Before accessing the manuscript of the first movement, the present author had already analysed and summarised the structural organisation of this movement based on the score, especially focusing on the phenomenon of "sound aggregation"[5] (Table 6).

Table 6. Schematic Diagram of the Structure of the First Movement [4]

Structure	**Trisection**				
Passage	Introduction	A	B	A	Coda
Measures	1	2–30	31–51	52–92	93–112
Syntax	1	8+11+10	17 (5+7+5)+4	10(4+6)+20(7+6+7)+11	6+10+4
Aggregation Type		Line	Tower form + block form	Line	Line

[5] The concept of "sound aggregation" has two meanings: one is the explicit progression of voices from few to many and of intensity from weak to strong; the other is the clear purpose and sense of direction of the development of the invisible musical unit or paragraph, thus forming an obvious sense of cessation at the end of the musical unit or paragraph, as well as a cadence composed of melody, timbre and other factors. For related discussions, see: [4].

From the manuscript study of the work, new insights into the structure of this composition have been developed, especially in terms of gaining an improved understanding of the organisation of its variable modes.

If the variable modes are employed as the standard for phrasing, then it is not appropriate to regard m. 10 as the continuation (or subsequent phrase) based on the sound aggregation. From Example No. 5, it can be seen that the English horn motif inserted in m. 9 was added after the manuscript. Inconsistent alignments between the musical segment divisions and the variable mode changes can be observed at mm. 28 and 31. From the perspective of texture, m. 31 marks the beginning of a new passage; however, the variable mode associated with this passage starts at m. 28. In other words, m. 28 is the starting point of a new round of variable modes, while the pitch organisation in m. 31 (or more precisely, m. 33) and thereafter is a continuation of the variable mode starting from m. 28.

Conclusion: Concerning the Four Manuscripts

This article was commissioned by Professors Liang Lei and Luo Qin to provide a musical analysis of the works for the two sets of "Chou Wen-chung's Manuscript Collection (Collector's Edition)" prior to their publication. The two works planned for publication are *Gu Ying* and *Twilight Colors*. The "Collection of Manuscripts of Works" includes the original manuscripts and articles analysing the manuscripts of the two works. The present article presents an analysis of the manuscript of *Twilight Colors*. Professor Luo Qin sent me several manuscripts of his works (see the following four examples) along with the following proposal: "I will give you a few manuscripts of Chou Wen-chung's *Twilight Colors* for reference. If you can dig out some new insights from them, it will be very meaningful for the *Twilight Colors* Manuscript Collection".[6]

To be honest, when I first received the four manuscripts, although I spent some time trying to glean something from them, what I initially gained was very limited. So the first round of my analysis of *Twilight Colors* is based almost entirely on an analysis of the work's musical score. However, after Professor Luo Qin forwarded more manuscripts of his works to me, I was better able to understand the following four manuscripts.

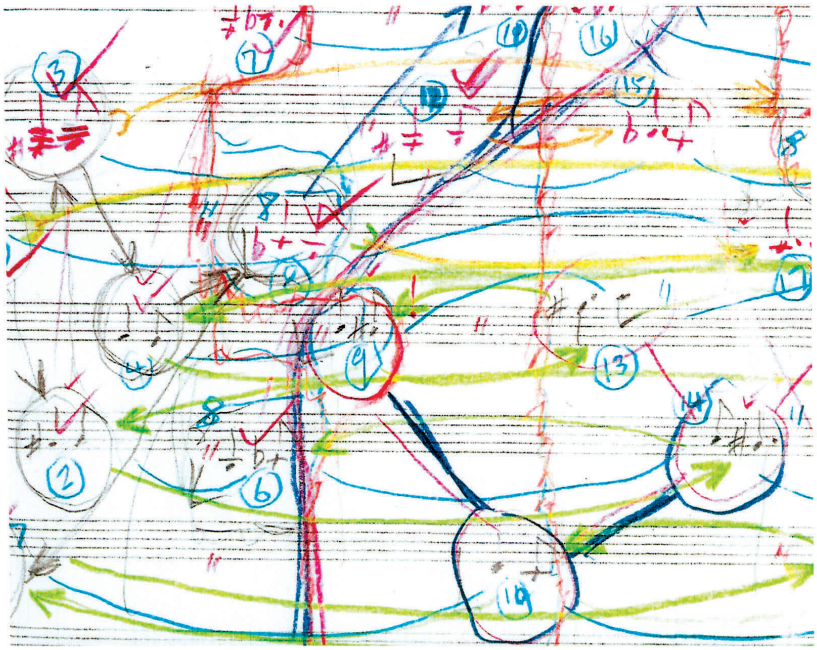
For example, manuscript from Example No. 13 corresponds to mm. 31–47 of the first movement of *Twilight Colors*. It not only presents the pitch organisation of each part, but also includes a texture design.

The sketch from Example No. 14 roughly corresponds to mm. 11–14 of the second movement, or the original design of the second major section of the work's second movement. As it may be observed from the picture, this sketch has planned the musical outline of these four measures, but there are some musical details that are not reflected in the manuscript, such as the parabolic dissonant chords in the string part in mm. 11–12.

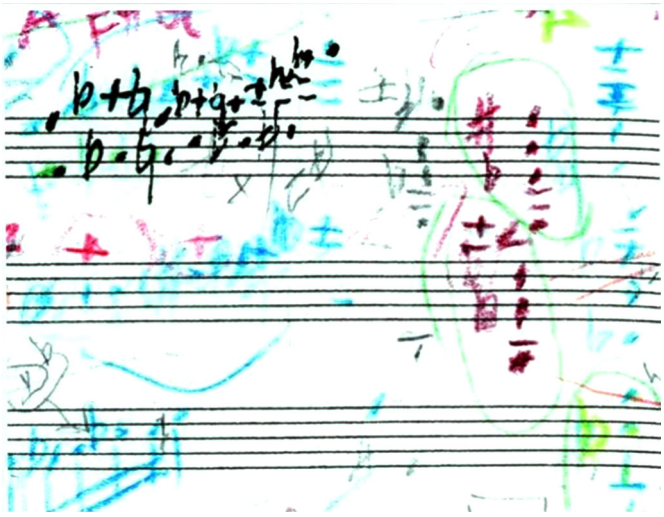
The sketch from Example No. 15 is a manuscript corresponding to the score of mm. 33–42 of the third movement of the work. It can be seen from this manuscript that it only contains the vertical superposition of pitch organisation; moreover, the distribution

[6] The four *Twilight Colors* manuscripts sent to me by Professor Luo Qin can be referenced in the edited volume by Liang Lei: *Confluence: Collected Essays on the Music of Chou Wen-chung*. Shanghai Conservatory of Music Press, 2013, front illustration of the directory [5].

Example No. 13 Chou Wen-chung. *Twilight Colors*. Fragment of the manuscript



Example No. 14 Chou Wen-chung. *Twilight Colors*. Fragment of the manuscript



Example No. 15 Chou Wen-chung. *Twilight Colors*. Fragment of the manuscript

of textures has not yet been carried out. In other words, the composer's creative process consists in first devising the pitch of each part, and then designing the texture. When combining the music score, we can also see that there are many additions besides the manuscript. For example, the three-part chords of the strings in mm. 29–33 were added after the manuscript.

While the music corresponding to the manuscript from Example No. 16 is basically the same as previously, some details are obviously different. First of all, there are

Example No. 16 Chou Wen-chung. *Twilight Colors*. Fragment of the manuscript

paragraph marks above the manuscript, which shows that the composer also took the structural arrangement of the work into consideration when designing the variable modes.

Let us examine the first line of music on this page of manuscript. There are circled Arabic numerals 3, 2, and 1, followed by three more circled Arabic numerals 2, 1, and 3. There is a single quotation mark or comma in the upper right corner of each of the three numbers. The Arabic numerals here correspond to the grouping order of the variable modes. The numerals that are circled without quotes represent ascending variable modes, while those circled with quotes represent descending variable modes. This illustrates that the variable mode design in this movement differs from the twelve-tone structure of the first movement; in its place, a nine-note series is used. From the above figure, we can also see that there are Arabic numerals present in the second and third rows of the music, and there are also three circled Arabic numerals and three quotation marks in Arabic numerals, but the combination of these Arabic numerals is different from that of the first row. Looking more closely, we can see that the three-tone series corresponding to the same Arabic numerals are also the same. In other words, the second and third rows are reordered combinations of the six tritones in the first row. The composer also connected these identical Arabic numerals with connecting lines to highlight the transition of the same three-note series between the three parts. In terms of verticality, the arrangement involves the vertical stacking of three three-note series that correspond to the three Arabic numerals. However, the pitch ranges of these series have been adjusted. This reveals that the pitch organisation in this section reflects an integrated thinking approach that combines both horizontal and vertical dimensions.

The present article represents my personal interpretation of Chou Wen-chung's *Twilight Colors* manuscript. Since I only received part of the manuscript, this interpretation may be biased or even erroneous. In 2024, the Shanghai Conservatory of Music Press officially published the manuscript of *Twilight Colors*. Therefore, interested colleagues may now conduct more in-depth research on the manuscript of this work. I hope that this manuscript study has facilitated a closer look at the creative process behind *Twilight Colors* along with the corresponding composition techniques, thereby gaining a deeper understanding of the work.

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Received: 11.03.2025
Revised: 07.04.2025
Accepted: 09.04.2025