

CHASING THE BUTTERFLY: ANALYSING THE PARALLELS OF
BUTTERFLY PORTRAYAL IN EDVARD GRIEG'S *SOMMERFUGL* AND
XIA LIANG'S *Cǎi dié xī huā*

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Abstract

Butterflies, belonging to the Rhopalocera suborder of lepidopterans, are known for their large, often brightly coloured wings that fold together when at rest and their distinctive, fluttering flight. Universally admired for their beauty, butterflies have inspired many composers to capture their essence in music. Notable compositions inspired by this natural beauty include Edvard Grieg's *Sommerfugl* (*Butterfly*), Debussy's *Les Papillons* (*The Butterflies*), and Xia Liang's *Cǎi dié xī huā* (*Colourful Butterflies Playing with Flowers*). This article explores the similarities between two (2) solo piano works, Grieg's *Schmetterling* and Liang's *Cǎi dié xī huā*, through a detailed music analysis. By applying the programme music framework used by Kregor and Zamani, the study highlights the harmonic, rhythmic, and expressive parallels in these pieces. Despite the composers' different cultural and geographical backgrounds, their musical depictions of butterflies show striking similarities, suggesting a universal appreciation for this delicate insect. The findings of this article offer valuable insights into programme music and provide a fresh perspective on character pieces that are often overlooked. While there are other piano works often associated with butterflies, such as Chopin's *Butterfly Etude* and Schumann's *Papillons* it was not the composers' intention (at least consciously) to depict butterflies through these works. This analysis enhances our theoretical understanding and enriches our appreciation of how composers from diverse backgrounds can share a common artistic vision.

Keywords: *butterflies, programme music, music analysis, character pieces, piano works*

INTRODUCTION

Insects and butterflies have long fascinated composers, inspiring a rich array of musical works that capture their beauty, behaviour, and movements. This section explores how Western classical music has depicted these creatures from the Renaissance to modern times. Early examples include Josquin Des Prez's *El Grillo* and Telemann's *Cricket Symphony*, which use certain musical techniques to mimic insect sounds. The tradition continues with pieces like Rimsky-Korsakov's *Flight of the Bumblebee* and Ravel's *Noctuelles*. The butterfly, in particular, has inspired notable piano compositions such as Edvard Grieg's *Sommerfugl* and Xia Liang's *Cǎi dié xī huā*. These works highlight the diverse ways composers have drawn inspiration from the natural world. This article will analyse these portrayals, integrating music theory and programme music analysis to explore the character pieces inspired by these delicate creatures.

Insects in Music

Insects have long captivated the imaginations of Western classical composers, serving as a source of inspiration for numerous musical works. They are often admired for their unique blend of natural beauty, intricate behaviour, and graceful movements. Composers have sought to capture these qualities in their music. One of the earliest known fascination with insects in music can be traced back to the Renaissance era through the work by Josquin Des Prez called *El Grillo (The Cricket)*. Deemed as one of his most popular works (Hund, 2006; Elders, 2021), the composer depicted this insect through the use of onomatopoeia and rhythmic play to depict a cricket's mannerism (McDonald, 2009). This fascination continues through George Philipp Telemann's *Cricket Symphony* in the Baroque period. In this orchestral work, Telemann portrays cricket in the composition through the use of lively, repetitive motifs and trills that mimic the rhythmic chirping of cricket together with the high-pitched staccato notes played by the strings that are particularly effective in creating the whimsical and naturalistic soundscape (Martin, 2018).

Other exemplary musical works that were insects inspired include Nikolai Rimsky-Korsakov's *Flight of the Bumblebee*, an orchestral interlude from his opera *The Tale of Tsar Saltan* that mimics the rapid, buzzing flight of a bumblebee through fast-paced, virtuosic passages (Metcalf, 2023), Maurice Ravel's *Noctuelles (Night Moths)* from *Miroirs (Mirrors)* for solo piano that evokes the fluttering of night moths through the use of highly chromatic harmony and dark sonority (Roberts, 2012), and Ernest Chausson's *Les Papillons (The Butterflies)* that portrays the beauty and agility of butterflies through its genuinely charming melody with alternating semiquavers between hands in the piano accompaniment (Johnson, 2001).

Butterfly in Piano Music, *Sommerfugl*, and *Cǎi dié xī huā*

The butterfly, a member of the Rhopalocera suborder of lepidopterans, is renowned for its broad, brightly coloured wings that flutter elegantly and fold together when at rest (Capinera, 2008). This winged insect has served as a source of inspiration for numerous composers in their creative endeavours. Notable piano compositions directly inspired by this exquisite creature include Edvard Grieg's *Sommerfugl* (*Butterfly*) from his *Lyric Pieces* for solo piano and Xia Liang's *Cǎi dié xī huā* (*Colourful Butterflies Playing with Flowers*) from *Scenes from Xishuangbanna* for solo piano. Additionally, there are piano works associated with butterflies, such as Frederic Chopin's *Butterfly Etude* and Robert Schumann's *Papillons*, where the influence of the butterfly is implied rather than explicitly referenced.

Sommerfugl is one of the musical works in Grieg's collection of works called *Lyric Pieces*. Written between 1867 and 1901, this collection contains 66 short pieces written for solo piano (Grieg, 1985). While many pieces from this collection were written during this Norwegian composer's time at his home in Troldhaugen, Norway, *Sommerfugl* was written during his stay in Copenhagen, Denmark. During his lifetime, the composer recorded this work on the piano in 1903 under the Gramophone and Typewriter Company (Slåttebrekk & Harrison, 2010). Volioti (2010) claims that the improvisatory character of this piece, which is made of undulating chromatic melody accompanied by a constant moving bass line, appears to prompt liberties with performance tempo across the 20th century (p.97). Volioti, when investigating 28 notable recordings on this piece, concluded that the lack of collective trends in these recordings further serves as a testament to individual styles and approaches to interpretation.

Cǎi dié xī huā comes from a five-piece suite for solo piano called *Gāngqín zǔqǔ bǎnnà fēngqíng* (literal translation: *Piano Suite: Banna Style*, contextual translation: *Piano Suite: Scenes from Xishuangbanna*), written in 1987. When composing this piano suite, this Yunnan composer was inspired by the musical idioms of the Dai ethnic of Xishuangbanna in the Yunnan province (Ji, 2016). Zhang (2019), when conducting a comprehensive analysis of this piano suite, found that this work contains the adaptation of Dai ethnic musical idioms and scenery from Xishuangbanna that are translated into music through the use of specific musical characteristics and harmonic materials that referenced Dai folk music and culture. *Cǎi dié xī huā* is the fourth piece in this piano suite. Zhuo (2018) depicted this piece as the beautiful scenery in the natural jungle of Xishuangbanna. Its toccata-like piano writing creates the emulation of this scenery through music.

Although other piano works are associated with butterflies, these references are often neither intentional nor by design. For instance, Chopin's *Etude in G-flat major Op. 25 No. 9* is commonly referred to as the "Butterfly Etude," despite Chopin not assigning this or any other title to the piece. The origin of the term "Butterfly Etude" remains unclear, and Chopin did not intend to depict any imagery or scenery in this work. This aligns with

Friedheim's (1916) perspective on the superfluous nature of programmatic titles assigned to Chopin's compositions by others, as Chopin's works are predominantly absolute in nature (Helmcke, 2013).

Another notable piano work often associated with butterflies is Schumann's *Papillons* Op. 2. Despite the literal translation of the title as "Butterflies," Schumann did not intend to reference this aspect of nature in his composition. Instead, Schumann (1832), as cited in Jensen (1998), clarified in a letter to Ludwig Rellstab that this piano suite was inspired by a scene from his favourite novel, *Flegeljahre* by Jean Paul Richter. Schumann wrote, "Bring to mind the last scene in *Flegeljahre* – the masked ball... Often I turned over the last page, for the end to me actually a new beginning... I found myself at the piano, and thus, one Papillon after another was created."

While there may be other solo piano pieces directly associated with butterflies, this article focuses on two representative works that are highly regarded among performers and scholars in both the West and the East. Grieg's *Sommerfugl* has garnered significant scholarly attention in recent years, with studies by Volioti (2010, 2019), Mattes (2020), and Rehding (2021), and has been recorded by numerous pianists, as noted by Volioti (2010). Similarly, Liang's *Cǎi dié xī huā* has received comparable academic interest, with research by Gao (2019), Li and Fu (2022), and Li and Liu (2022). This piece has also become a standard in the Chinese solo piano repertoire, making its performance a staple in China (Liang, 2024).

This article aims to analyse the parallels in the portrayal of butterflies in the aforementioned solo piano works. Utilising the programme music framework as outlined by Kregor (2015) and adapted by Zamani (2023), the analysis will integrate music theory as described by Kostka and Santa (2018) and Kostka and Almén (2024) with programme music analysis to elucidate these character pieces. The discussion will begin with an overview of the programme music framework, presenting examples from the music literature. It will then proceed to examine previous significant studies on programme music and character pieces, with a particular emphasis on solo piano literature to align with the subjects of this investigation.

LITERATURE REVIEW

Programme music, which aims to evoke images, stories, or scenes, has a rich history in piano literature. This genre contrasts with absolute music, which focuses purely on musical form and structure. Programme music often draws inspiration from literature, nature, or visual arts, creating a vivid narrative or pictorial experience for the listener (Miklaszewska, 2019). The roots of programme music in keyboard literature can be traced back to the Baroque era, with works written for harpsichord (a predecessor of piano) by composers such as Jean Philippe Rameau with *La Poule* (*The Hen*), *Les Cyclopes* (*The Cyclopes*), and *Les Sauvages* (*The Savages*) and François Couperin with *Le Tic-toc Choc*

(mimicking the sound of ticking clock), *Les Bergeries (The Shepherds)*, and *Les Barricades Mystérieuses (The Mysterious Barricades)*. The Romantic era saw a significant rise in the popularity of programme music, with composers using the piano to tell stories and paint pictures, with composers such as Franz Liszt, Robert Schumann, and Edvard Grieg incorporating certain imageries in some of their most prominent and substantial piano works.

Before delving into a broader overview of programme music, it is essential to define the concept. Programme music is instrumental compositions narrating a story or depicting a scene, idea, or event (Kuiper, 2024). This genre often incorporates a narrative element, aiming to evoke specific images or emotions in the listener. According to Kregor (2015), programme music can be categorised into four types: (i) character piece, (ii) programmatic symphony, (iii) symphonic poem, and (iv) tone painting (p. 23). These categories can include entire symphonies, concertos, or suites. Notable examples of programme music include Hector Berlioz's *Symphonie Fantastique* and Richard Strauss's *Don Quixote*. Programme music frequently features descriptive titles and may include written descriptions or programme notes that elucidate the story or scene being portrayed (Kamien & Kamien, 2021).

Character piece is the smallest form of programme music. It is characterised by short, single-movement works that express a particular mood, character, or scene (Brewer, 2013). They focus more on capturing a specific emotion or atmosphere than telling a detailed story (Kregor, 2015). Typically shorter and more intimate than other types of programme music, character pieces are often found in collections and are usually written for solo instruments, especially the piano. These pieces often have evocative titles that suggest the mood or character they aim to portray, such as Schumann's *Carnaval*, Liszt's *Les jeux d'eaux a la Villa d'Este*, and Grieg's *Sommerfugl*.

There have been only a handful of notable studies on programme music and character pieces recently. The notable studies on programme music were by Kregor (2015) and Antović et al. (2016). Kregor, in his extensive writing on programme music, provides a comprehensive exploration of programme music, examining its ideas and repertoire across various cultures and historical periods, where Kregor delves into both well-known and lesser-known pieces by 19th and 20th-century composers, situating programme music within the intellectual debates of its time. Kregor discusses the criticism of prominent figures like A.B. Marx and Hanslick, offering detailed case studies on themes such as battle music, Shakespeare settings, and Goethe's *Faust*. Kregor's work highlights the evolution and significance of programme music, emphasising its role in conveying extra-musical narratives and emotions. By analysing the compositional techniques and thematic choices of various composers, Kregor provides valuable insights into how music can depict stories and scenes. This scholarly study enriches the theoretical framework

surrounding programme music and contributes to a deeper appreciation of character pieces and their place in the broader context of music history.

Antović et al. (2016) explore how extramusical meaning is constructed in programme music. The authors tested three (3) hypotheses: (i) that some musical excerpts have an inherent structure facilitating interpretation aligned with the composer's intentions, (ii) that onomatopoeia, or musical imitation of natural sounds, is a frequent subclass of this inherent structure, and (iii) that providing the title of the piece further aids in the correct interpretation of the intended meaning. The study involved 201 students given six musical stimuli and asked to describe the extramusical meaning. The results showed no significant difference in the number of conformant descriptions between inherent and arbitrary examples, a negligible number of onomatopoeic descriptions, and a strong influence of misleading but inaccurate suggestions. These findings suggest that while inherent musical structures and titles can guide interpretation, external suggestions can significantly alter perceived meaning, highlighting the complex interplay between music and extramusical associations.

On character pieces, the notable recent studies were by Brewer (2013), Kregor (2015), and Zamani (2023). Brewer (2013) provides an in-depth analysis of three sets of character pieces composed by Edward MacDowell during the last decade of his career: *Woodland Sketches, Op. 51, Fireside Tales, Op. 61, and New England Idyls, Op. 62*. Brewer examines how MacDowell's life experiences, music education, and the philosophical movements of his time, such as Romanticism, Impressionism, Nationalism, and Transcendentalism, influenced his compositional style. She highlights the blend of Romantic and Impressionistic elements in these works, reflecting MacDowell's unique musical voice and his philosophy of music. Brewer's performance guide offers practical insights for musicians, focusing on interpretative strategies and technical considerations for performing these character pieces. By providing a detailed overview of MacDowell's biography and the cultural context in which he composed, Brewer's work enhances the understanding of his music and its place in American musical history. Her analysis underscores the importance of contextual knowledge in informing performance decisions, making this dissertation a valuable resource for performers and scholars alike.

Kregor (2015), on character pieces, states that although topics and character pieces can offer valuable interpretive guidance for performers, listeners, or analysts, their mere presence does not automatically grant a work programmatic status. A substantial amount of thematic, characteristic, and additional contextual and extramusical elements must be present to achieve this designation. Kregor illustrates this concept by referencing Henselt's *Étude fantastique*. Henselt's twelve studies present a complex case, as they incorporate various musical topics while their poetic titles add layer of characteristic meaning. The sixth and most renowned piece, *Si oiseau étais, à toi je volerais*, exemplifies this. From a topical standpoint, the cascading double-stops evoke a fairy-tale-like quality, further emphasised by the initial performance instruction, *con leggerezza quasi zeffiroso*

(with a wind-like levity). However, the *étude's* title serves as a poignant reminder that something prevents the poet from immediately flying into his lover's arms, infusing the piece with melancholy. Despite the occasional lack of synchronisation between the topical and characteristic elements, they are not necessarily irreconcilable (p.33).

Zamani (2023) adopted the programme music framework by Kregor (2015) when exploring *Pepatah Episodes* by Razak Abdul Aziz. The study investigates the chosen proverbs and their musical portrayals, revealing that the composer uses figurative language to evoke specific images and emotions. The analysis shows that the movements in *Pepatah Episodes* depict imageries from the proverbs, their meanings, or both. *Pepatah Episodes* exemplifies how programme music can transcend cultural boundaries and incorporate diverse narrative techniques. Kregor (2015) emphasises the importance of thematic development and the use of extra-musical material to convey narratives. This musical work by Razak Abdul Aziz aligns with this by using proverbs to guide the musical narrative, demonstrating how programme music can effectively blend literary and musical elements to create a rich, multi-layered artistic experience.

In summary, the exploration of programme music and character pieces reveals a rich tapestry of compositional techniques and thematic developments that transcend cultural and historical boundaries. From the Baroque era's harpsichord works to the Romantic era's vivid piano narratives, programme music has continually evolved, drawing inspiration from literature, nature, and visual arts to create immersive auditory experiences. Notable studies by Kregor and Antović et al. provide comprehensive insights into the genre, highlighting its role in conveying extra-musical narratives and emotions. Brewer's analysis of MacDowell's character pieces and Zamani's study of Razak Abdul Aziz's *Pepatah Episodes* further illustrate the genre's versatility and depth. These works underscore the importance of contextual and extramusical elements in achieving programmatic status, enriching our understanding of how music can depict stories and scenes. This body of research enhances the theoretical framework surrounding programme music and offers valuable interpretive guidance for performers, listeners, and scholars.

THEORETICAL FRAMEWORK

This paper aims to examine the parallels in the depiction of butterflies in Grieg's *Sommerfugl* and Liang's *Cǎi dié xī huā*. This objective is achieved by establishing the correlation between the selected works and their respective programmes through a systematic music-theoretical analysis from three perspectives: (i) pitch organisation, (ii) metric organisation, and (iii) musical dynamics. This analysis adapts tonal and post-tonal music theory as outlined by Kostka and Almén (2024) and Kostka and Santa (2018). According to Beard and Gloag (2005, p. 9), music analysis results from the interplay

between the music itself, music theory, aesthetics, and history. However, the analysis must uncover insights beyond the sonic surface to transcend mere mechanical conversions of musical notation into written words (Parker & Abate, 1989, pp. 1-2). Therefore, this analysis will also incorporate the programme music framework proposed by Kregor (2015).

This approach combines two methodologies: the music-theoretical analysis used by Zamani et al. (2023), which follows the frameworks of Kostka and Santa (2018) and Kostka et al. (2013) (an earlier edition of Kostka and Almén), and the programme music analysis employed by Zamani (2023), which adapts Kregor (2015). The integrated framework will be used to investigate the selected pieces, aiming to discover how these compositions portray butterflies through the aforementioned musical elements.

METHODOLOGY

To investigate the parallels in butterfly portrayal in Grieg's *Sommerfugl* and Liang's *Cǎi dié xī huā*, this research adopts these steps in the methodology:

- (i) Selection of works involving identifying the reliable editions of the scores of Grieg's *Sommerfugl* and Liang's *Cǎi dié xī huā*.
- (ii) Music theoretical analysis that focuses on pitch organisation (encompassing harmonic analysis, melodic and harmonic materials, and melodic decorations), metric organisation (giving great emphasis on tempo indication, note values, musical pulses, and rhythmic counterpoints) and musical dynamic (discussing the dynamic range in terms of musical amplitude and how it supports the first two (2) perspectives) tonal and post-tonal music theory frameworks as outlined by Kostka and Almén (2024) and Kostka and Santa (2018).
- (iii) Applying the programme music framework proposed by Kregor (2015) to contextualise the musical elements within the narrative of descriptive intent of the pieces.
- (iv) Comparative analysis by comparing the findings from the music-theoretical analysis and programme music framework to identify similarities and differences in how butterflies are portrayed in both works.
- (v) Synthesise the result to conclude the similarities and differences of techniques used in the musical depiction of butterflies.

This methodology ensures a comprehensive understanding of the musical portrayal of butterflies, combining rigorous theoretical analysis with contextual interpretation.

ANALYSIS

Edvard Grieg's *Sommerfugl*

Pitch organisation

As chromaticism is the main harmonic innovation of the Romantic era, this element could be found in this composition. Grieg integrated this innovation by incorporating an ascending chromatic scale as a melodic fragment connecting one chord to another, as shown by the blue box in Figure 1. This incorporation suggests the mannerism of a butterfly, nimbly flying in its full radiance.



Figure 1: Incorporating ascending chromatic scale in the melody

The use of upper auxiliary notes that are presented in monads, dyads or triads as melodic decorations also emulates the graceful movements of a butterfly, fluttering its wings across the field. Figure 2 illustrates the use of such auxiliary notes (marked by blue circles).

Musical score for Edvard Grieg's *Sommerfugl*, showing two systems. The first system is in treble and bass clefs, with a key signature of two sharps and a common time signature. The melody in the treble clef features several upper auxiliary notes (monads, dyads, and triads) marked with blue circles. The bass clef part features a series of chords with a 'Ped.' (pedal) marking and a '2' indicating a pair of notes. The dynamic marking 'f' (forte) is present. The second system is in treble and bass clefs, with a key signature of two sharps and a common time signature. The melody in the treble clef features several upper auxiliary notes (monads, dyads, and triads) marked with blue circles. The bass clef part features a series of chords with a 'Ped.' (pedal) marking and a '1' indicating a single note. The dynamic marking 'p' (piano) is present.

Figure 2: The use of upper auxiliary notes in monads, dyads, and triads

Besides these strategies, Grieg also incorporated a few elements from the chromatic harmony of the Romantic era. Among these chromatic harmony, the use of common-tone diminished seventh chords could be found in the piece. Figure 3 illustrates the the use of this chromatic chord (marked in blue).



Figure 3: The use of common-tone diminished seventh chords

The work could also include the secondary diminished seventh chord, upper tertian chord, and median relation. As shown in Figure 4, the secondary diminished seventh chord (marked in blue), upper tertian chord B^{b9} (marked in red), and median relation where the tonal centre shifts from E to G, creating a movement of third (marked in green), are utilised one after another, creating the colouristic effect that is often associated with chromaticism which also correlates with the vividness of a butterfly.

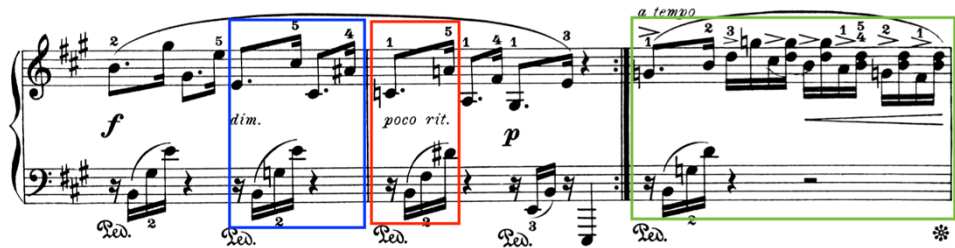


Figure 4: The use of secondary diminished seventh (marked in blue), upper tertian chord (marked in red), and median relation (marked in green)

Metric Organisation

In *Sommerfugl*, the pervasive use of semiquavers effectively emulates the fluttering movements of a butterfly. As illustrated in Figure 5, the opening bars of the piece are marked with the tempo indication *Allegro grazioso* (lively, gracefully), which suggests a brisk tempo and a graceful execution. This tempo, combined with the semiquaver figurations, plays a crucial role in the metrical portrayal of a butterfly, enhancing the overall musical depiction.

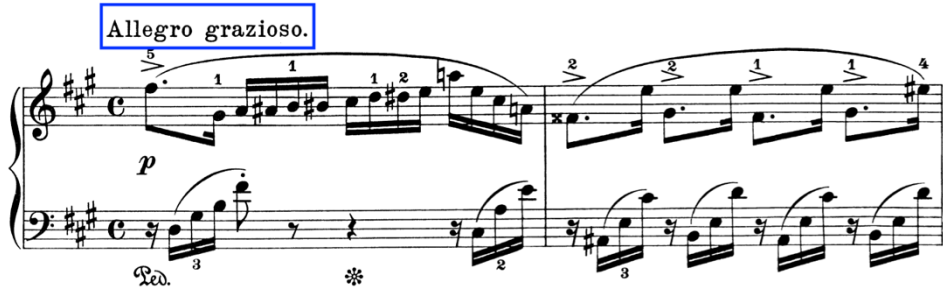


Figure 5: The opening bars of *Sommerfugl*

The composer employs a technique involving the omission of bass notes on downbeats, which generates a fluttering auditory effect, mimicking the flight of a butterfly. This technique also captures the graceful movements of a butterfly as it lands on unstable surfaces such as leaves, flowers, and grass. This method is applied consistently throughout the piano piece. Figure 6 illustrates the application of this technique, highlighted by blue circles.



Figure 6: The absence of bass notes on downbeats

Musical Dynamic

The general dynamic of this piece is soft, although there are a few instances where loud-sounding dynamics could be observed. The piece begins with soft dynamic *p* (soft) with accents on dotted quavers on the right hand (exemplified in Figure 7). The combination of accented notes and soft dynamics creates the effect of fluttering wings of a butterfly that flies in a certain pattern.



Figure 7: Soft dynamic and accents on right-hand dotted quavers

As previously noted, there are several instances where the dynamics increase in volume. Figure 8 provides an example of this dynamic surge, which occurs towards the conclusion of the piece. From a programmatic perspective, this could be interpreted as the butterfly flying towards the observer, possibly fluttering its wings in close proximity (perhaps, too close) to the observer.



Figure 8: The dynamic spike towards the end of the piece

The piece ends with soft dynamics (from *p* gradually decreasing to *pp*), signalling the butterfly moving further away from the observer (Figure 9).



Figure 9: Soft dynamics at the end of Sommerfugl

Xia Liang's *Cǎi dié xī huā*

Pitch organisation

This composition prominently features the use of fourth intervals, which belongs to the extended chromaticism harmonic vocabulary. The first four (4) bars demonstrate the use

of this harmonic device, where the interplay of fourths between both hands could be seen (right hand: B6 and E7, left hand: A#6 and D#7), introducing the harmonic language to the listeners (Figure 10).



Figure 10: The use of fourths in the opening bars

As the stack of fourths would naturally lead to the use of quartal harmony, this harmonic device is also ubiquitous throughout the composition. An example of the use of this harmony could be seen in bars 24-28, where quartal harmony is employed with the left hand articulating the interval of a fourth between G5 and C6 and the right hand articulating Eb5 and Ab5, as exemplified in Figure 11. These deliberate intervallic choices significantly contribute to the composition's overall sound and structure, imparting a distinctive character and enhancing its harmonic richness.

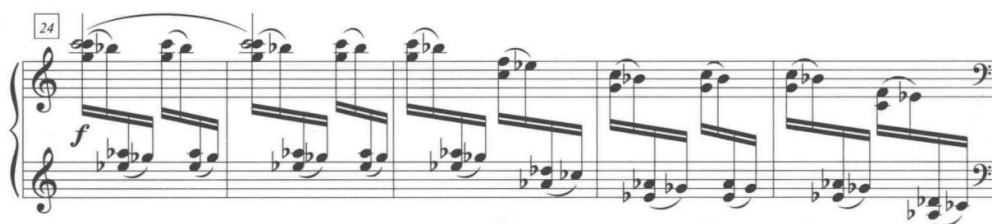


Figure 11: A passage with the use of quartal harmony

The stack of 4ths in dyads also plays a role as the auxiliary notes, providing direction to the long-tone melody, as also demonstrated in bars 24-25 in Figure 11. These auxiliary notes eventually take over the music and become the main melody (bar 26 onwards, as shown in Figure 11).

The use of chromaticism could also be found within this piece. An exemplary passage could be found towards the end of the work, as shown in Figure XX. In this passage, Liang approached chromaticism by combining two (2) pentatonic scales, one semitone apart (right hand – F pentatonic, left hand – F# pentatonic). The F pentatonic on the right hand (marked with a red box in Figure 12) consists of F – G – A – C – D, while

F# pentatonic on the left hand (marked with a blue box in Figure 12) consists of F# – G# – A# – C# – D#. These scales are presented in fourths, with each occurrence having two (2) members of their respective scale in ascending manner.

The interplay between these pentatonic scales is repeated twice more, with each repetition ascending an octave higher, before alternating between G – C and G# – C# at a high register, creating a sense of furthering away of the butterfly and enhancing the overall texture of the piece, adding interest and complexity to the musical experience.

The image shows a musical score for piano, measures 69-74. The score is written for two staves: the right hand (treble clef) and the left hand (bass clef). The key signature has one sharp (F#). The time signature is not explicitly shown but appears to be 4/4. The score is divided into two systems. The first system starts at measure 69 and ends at measure 73. The second system starts at measure 74 and ends at measure 78. A red box highlights the right-hand melody in measures 69-71, and a blue box highlights the left-hand accompaniment in measures 69-71. The left-hand accompaniment consists of a pentatonic scale in fourths. The right-hand melody is a chromatic line. The score includes dynamic markings: *mf* at the beginning, *pp* at the end of the first system, and *pppp* at the end of the second system. Performance instructions include *poco a poco* and *rit.*

Figure 12: An example of a passage of chromaticism

Metric Organisation

Throughout the composition, there is a pervasive use of perpetual semiquavers, which effectively emulate the characteristics of the *toccata* (a musical composition usually for keyboard in freestyle and characterised by full chords, rapid runs, and high harmonies) (Merriam-Webster, 2024). As illustrated in Figure 13, the indication *Allegro agilmente* (lively, agile) suggests a brisk and spirited tempo. The speed utilised for this music enhances the semiquaver figurations and contributes significantly to the musical portrayal of a butterfly.



Figure 13: The opening bars of *Cǎi dié xī huā*

According to Liang's remarks in Wu (2022), certain composition segments have been devised with distinctive rhythmic counterpoints, resulting in a multi-dimensional auditory experience. Furthermore, this composition is imbued with a pronounced contemporary essence. A significant rhythmic alteration is evident in Figure 14, spanning bars 33 to 38. The accompaniment features a unique arrangement of sixteenth notes, forming a discernible rhythmic configuration that aligns with a 3/8 meter. This rhythmic division enhances the composition's complexity and sophistication. Additionally, the right-hand segment in 2/4 meter introduces a polymeter effect, enriching the rhythmic texture of the piece. This interplay of contrasting rhythmic patterns amplifies the composition's overall sonic richness and musical allure, portraying the butterfly's flight from one flower to another that is graceful yet random.



Figure 14: Distinctive rhythmic counterpoints

Musical Dynamic

As butterflies are perceived as delicate and nimble, this piece incorporated dynamic markings that are somewhat soft and light. It could be observed that the piece begins with

pp (very soft) as shown in Figure 15 above and generally stays within the soft range throughout the first quarter of the piece (with the loudest being *mf*).



Figure 15: The loudest passage in the first section

Despite being light enough to depict butterflies through music, it could also be found that the composer incorporated *f* (loud) in this work (Figure 16). Programmatically, this is to emulate the brilliance and the physicality of these magnificent creatures flying and hopping from flower to flower. It may also be perceived as the butterfly flying towards the observer.



Figure 16: The brilliant passage emulates the flight of a butterfly

Ultimately, the piece ends with very soft dynamics (from *pp* gradually decreasing to *pppp*), with the notes being at the upper end of the piano register and narrowing its pitch range, as illustrated in Figure 17. This indicates to the audience that the butterfly is now departing and moving further away from the observer.



Figure 17: very soft dynamics at the end of the piece

FINDINGS

The analysis of pitch organisation, metric organisation, and musical dynamics in Grieg's *Sommerfugl* and Liang's *Cǎi dié xī huā* found that there are significant parallels between these works. Table 1 shows a summary of these parallels:

Table 1: Comparison between *Sommerfugl* and *Cǎi dié xī huā*

	<i>Grieg's Sommerfugl</i>	<i>Liang's Cǎi dié xī huā</i>
Pitch organisation	use of chromaticism use of ascending chromatic e use of upper auxiliary notes dyads, triads, and triads	use of extended chromaticism use of ascending chromatic ic movement use of 4ths as auxiliary notes dyads
Metric organisation	minent use of semiquavers ission of bass notes on ynbeats ely and graceful	minent use of semiquavers inctive rhythmic counterpoint ely and agile
Musical dynamic	erally soft with a short spike ynamic at certain bars ins and ends with soft amics	erally soft with a short spike ynamic at certain bars ins and ends with soft amics

Based on the data presented in Table 1, it is evident that both composers have employed remarkably similar compositional techniques to depict butterflies in their works. This finding is particularly noteworthy given that the composers and their respective works originate from distinct geographical locations and historical periods.

DISCUSSION

Edvard Grieg was a Norwegian composer who lived in 19th-century Europe, while Xia Liang is a living Yunnanese composer who was still actively composing music in China when this article was written. Their interpretation and characterisation of the butterfly in their musical works are similar yet individual at the same time. Grieg and Liang displayed their unique musical style, with the earlier integrating the harmonic language of the Romantic era while the latter incorporated 20th-century harmonic language. Despite the difference in the harmonic language due to the musical era each lived/s in, both harmonic languages correspond to the elements of chromaticism of their respective musical era. As chromaticism is intended to offer more colours in the music, it is a suitable tool to portray butterflies' vibrant and iridescent hue and chromaticity.

The metric organisation strategies utilised in both compositions exhibit notable parallels. Grieg's technique of omitting bass notes on downbeats is analogous to the rhythmic counterpoint employed in Liang's work. These strategies effectively achieve the intended portrayal of the delicate movements of butterflies manoeuvring around leaves and flowers. Additionally, the musical dynamics in both pieces are comparable, illustrating various scenes of butterfly flights. The music intensifies as the butterfly approaches the observer and diminishes as it flies away.

These works' pronounced similarities in pitch organisation, metric structure, and musical dynamics are indisputable. There are a few possible reasons for this:

- (i) Chromaticism has a universal appeal, which emphasises adding colour and complexity to music. This approach is particularly effective in depicting butterflies' vibrant and iridescent qualities, making it a suitable choice regardless of the era or region.
- (ii) The composers shared a common artistic goal in portraying butterflies through music. Despite their different backgrounds, both composers aimed to capture butterflies' delicate and dynamic movements. This common artistic goal likely led them to adopt similar compositional techniques, such as the omission of bass notes on downbeats and rhythmic counterpoint, to achieve the desired effect.
- (iii) The metric organisation strategies in both compositions, such as rhythmic techniques used to portray butterfly movements, show notable parallels. These strategies effectively convey butterflies' delicate and fluttering nature, leading to similar musical expressions.
- (iv) Both composers employed musical dynamics to illustrate various scenes of butterfly flights. The intensification of music as the butterfly approaches and its diminishment as it flies away are techniques that transcend cultural and temporal boundaries, resulting in similar dynamic patterns.

These factors collectively contribute to the remarkable similarities observed in their works, highlighting how certain compositional techniques can transcend time and place to achieve similar artistic expressions.

Implication towards studies on programme music

The insights gained from the comparative analysis of Grieg's and Liang's works have several implications for research on programme music and character pieces. They are:

- (i) **Cross-cultural universality:** The pronounced similarities in compositional techniques suggest that certain musical strategies, such as chromaticism and specific metric organisations, have a universal appeal and effectiveness in depicting programmatic elements like the delicate movements of butterflies. This

- universality can inform future research on how different cultures approach programme music.
- (ii) **Evolution of compositional techniques:** The analysis highlights how composers from different eras and regions can independently arrive at similar solutions to musical problems. This suggests that certain compositional techniques may evolve in parallel across different musical traditions, providing a rich area for further study on the evolution and transmission of musical ideas.
 - (iii) **Enhanced understanding of programme music:** By examining the specific techniques used by Grieg and Liang, researchers can gain deeper insights into how music can be used to tell stories and depict scenes. This can contribute to a broader understanding of the mechanisms and effectiveness of programme music, enriching the theoretical framework surrounding this genre.
 - (iv) **Character pieces analysis:** The findings underscore the importance of detailed musical analysis in understanding character pieces. The similarities in pitch organisation, metric structure, and dynamics between Grieg's and Liang's works demonstrate how these elements can be manipulated to achieve specific programmatic effects, offering valuable examples for the study of character pieces.
 - (v) **Interdisciplinary research:** The comparative analysis encourages future interdisciplinary research, combining musicology with cultural studies, history, and possibly psychology, to explore how different contexts influence musical composition and reception. This holistic approach can lead to a more nuanced understanding of programme music and its impact.

Overall, these insights and conclusions contribute significantly to the field of programme music, offering new perspectives and methodologies for analysing and understanding how music can convey narrative and character.

CONCLUSION

This research investigated the parallels between Grieg's and Liang's versions of butterflies in music. The research findings may have opened various possible future research trajectories. One possible direction would be future studies on musical depictions of nature that investigate how composers from diverse cultural and historical backgrounds portray natural elements such as animals, landscapes, and weather phenomena in their music. Additionally, research should explore how environmental contexts and ecological factors influence composers' thematic choices and compositional techniques. Another possible direction would be exploring other character pieces that involve conducting comparative studies across different cultures to understand how

cultural contexts shape musical characterisation and tracing the development of character pieces through various musical periods to identify key changes and continuities in compositional approaches.

Ultimately, this research presents a variety of potential future research directions. It is incumbent upon readers and researchers to recognise the academic contributions to programme music and character piece research as enriching the field of music academia.

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