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Musical Idiom and Cultural Expression: Harmony, Timbre, and Gesture

In Qigang Chen's *Wu Xing*

by

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ABSTRACT OF THE DISSERTATION

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How should a listener perceive a musical idea as an expression of a broader philosophical concepts? Musical scholarship often focuses primarily on either the historical context of a musical work or the musical concepts of the piece itself. However, it is my contention that musical scholarship can be enhanced by the convergence of both frameworks to heighten one's understanding of a piece of music. This dissertation aims to focus on a piece of music through both philosophical and technical prisms. With Qigang Chen's orchestra suite *Wu Xing* as the musical medium to support this manner of inquiry, I aim to provide listeners the technical evidence to support the philosophical meaning behind the music. This dissertation will draw upon the scholarship of both Chen's formative experiences and musical techniques while incorporating the tenets of ancient Wuxing principles to provide a multidimensional system in which to understand the relationship between the Wuxing theory and Chen's musical choices within the piece. I assert that there are new and creative ways of perceiving the different characters present

within the music based on the concepts of the Wuxing theory. Moreover, my analysis aims to explore Chen's harmonic, gestural and timbral techniques by exploring their associations with symbolic properties that I believe Chen adheres to throughout the piece.

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Chapter 1: Introduction and Literature Review

What differentiates composed music from mere sounds is that composed music often contains meanings that express a composer's outlook of and relation to the world. In this dissertation, I explore how the Chinese theory of Wuxing inspired both the structure and spiritual content of one composer's work: Qigang Chen's orchestra suite, *Wu Xing*. This composition sonically depicts the five, distinct elements of the ancient Wuxing theory - Water, Wood, Fire, Earth, Metal - with great accuracy and emotional detail. This piece's skillful employment of numerous innovative techniques is worthy of further analysis and exploration. For example, how does Chen merge and contrast sounds of each element of Wuxing to express its overall philosophical message? How is Chen able to create a vivid sonic picture of each element of Wuxing in the first place? And, perhaps, most importantly, how is Chen able to provide a contemporary style to a piece that more than honors the traditions of Chinese philosophy? This dissertation aims to create an approach in which to answer these questions and many more.

The dissertation provides an in-depth analysis of the unique musical rhetorics, metaphors, and symbols in Chen's *Wu Xing* by focusing on his use of harmony, gesture, and timbre. In the first Chapter, I provide a review of current scholarship on Qigang Chen in three categories: biographies of his life, his musical approaches and his musical works in context. In turn, Chapter One also seeks to highlight the lack of comprehensive analysis that unearth the philosophical, naturalistic and expressive characteristics of *Wu Xing* through such compositional techniques as harmony, timbre, and gesture. In Chapters

Two and Three, I discuss Qigang Chen's life and career path as it pertains to his relationship with the Wuxing theory as well as the orchestra suite *Wu Xing*. Chapters Four through Eight present a detailed analysis of each movement in *Wu Xing*. In order to provide an explanation of the vivid musical characteristics in each of these Movements, I devise images and symbolic properties from my own listening of the work. In the Conclusion, I explain how these Movements promote the generative and cyclical nature of the Wuxing theory through the use of shared rhythmic or sound figures. By providing a comprehensive and thorough examination of Qigang Chen's life, the philosophies governing the Wuxing theory, and the *Wu Xing* orchestra suite, I hope to further the critical understanding of this masterpiece from both musical and cultural perspectives.

Literature Review

There are many articles about Qigang Chen. These articles can be categorized into three types: 1) Chen's biographical studies 2) Chen's compositional approach and 3) Chen's work in context. In this section, I will represent articles and research in each category in order to provide a general background of my analysis of the orchestra suite *Wu Xing*.

1) Chen's biographical studies:

Nancy Yunhwa Rao

Musicologist and music theorist Nancy Yunhwa Rao's 2009 *Works of Tan Dun, Chen Qigang, Zhou Long, Bright Sheng, Chen Yi, and Lei Liang* provides a comprehensive list of where and in what manner six of Qigang Chen's compositions were performed overseas in the year 2009. She also discusses how Qigang Chen's fame expanded in the U.S. beginning in 2009 due to the contract he signed with the notable British publisher Boosey & Hawkes. Furthermore, she goes on to discuss Chen's piano concerto *Er Huang*, his first to be published by Boosey & Hawkes, and in so doing, expresses its distinct nature: "Even though Qigang Chen draws inspiration from the traditional tune 'Er Huang' in this concerto, this work should not be perceived as an adaptation of a traditional melody. It is composed of nostalgic fragments of familiar tunes and sounds from Beijing opera."¹ Rao proceeds to analyze this composition and discuss its musical form, gesture, harmony, and timbre in the context of Chen's childhood affinity for the musical approaches and compositional styles found in the Beijing Opera. By carefully deconstructing the technical and cultural facets of *Er Huang* through these many prisms, Rao unveils how Qigang Chen's early musical influences merge with the modern compositional techniques he later learned to create his own music language. As Chen is quoted as stating in the article, "the Beijing Opera's material in *Er Huang* are all from my memory of my family and social life from childhood."²

¹ Nancy Yunhwa Rao, 海外华人作曲家音乐创作、演出及出版述评 [*Works of Tan Dun, Chen Qigang, Zhou Long, Bright Sheng, Chen Yi, and Lei Liang*] (Shanghai: Shanghai Music Conservatory Press, 2009), 153.

² Rao, *Composition*, 154.

Xiang Jin

Composer, conductor, and music educator Jin Xiang's 2003 article "The Scent of *Iris Dévoilée* From China to the Overseas; The Sound of *Wu Xing* From Ancient to the Present" explores Qigang Chen's primary influences, including his family background, enlightening relationship as Maestro Messiaen's last student, and experiences amidst the Cultural Revolution, as well as the compelling musical components featured in two of Chen's seminal works: *Wu Xing* and *Iris Dévoilée*. In his rendering of Chen's relationship with Olivier Messiaen, Jin discusses how Messiaen encouraged Chen to discover his own musical voice: "If one day I hear a piece of music and know you wrote it without someone telling me, then you have succeeded!"³

Later, in his section about *Wu Xing* and *Iris Dévoilée*, Jin identifies Chen's use of a special compositional method in each element of *Wu Xing* to explain how Chen intentionally creates vividly connotative sounds to mimic the physical properties of each element.

Jin's article serves as a useful resource in understanding how Qigang Chen's family, teacher and society informed his musical tastes and forged his approach to music. However, in Jin's analysis of *Wu Xing*, he does not provide a holistic and thoroughly detailed analysis of the composition but rather introduces mere components of each.

³ Xiang Jin, "《蝶恋花》开香飘中外, 铿锵《五行》声透古今 [The Scent of *Iris Dévoilée* From China to the Overseas; The Sound of *Wu Xing* From Ancient to the Present]," in *Dangdai Yinyuejia/Contemporary Musicians* 441, no. 1 (January 2003): 2.

2) Chen's compositional approach

Nancy Yunhwa Rao

Nancy Yunhwa Rao's 2002 article "Hearing Pentatonicism Through Serialism: Integrating Different Traditions in Chinese Contemporary Music" provides an in-depth analysis of pentatonic 12-tone series utilized by both Qigang Chen and his former teacher, Luo Zhongrong.⁴

In the section focusing on Luo Zhongrong's conception of harmony, Rao introduces and articulates the relationship of pentatonic modes within the greater context of Luo's 12-tone matrix. Moreover, Rao explains how pentatonic trichords and tetrachords within this serialized matrix are intentionally selected to produce harmonic shifts of varying colors within this system. In the chapter concerning Qigang Chen, Rao provides a detailed harmonic analysis of Chen's compositions *Extase II* and *Poème Lyrique II* to demonstrate his varying applications of tetrachords from the total chromatic. This chapter shows how Chen was influenced by Luo's concept of the pentatonic 12-tone system yet modified and adapted this conception to create his own inimitable musical language.

⁴ Nancy Yunhwa Rao, "Hearing Pentatonicism Through Serialism: Integrating Different Traditions in Chinese Contemporary Music," *Perspectives of New Music* 40, no. 2 (Summer 2002): 190-231.

Lien Hsien-sheng

Composer and musicologist Lien Hsi-sheng's 2006 article "The Return and Omnipresence of Pentatonicism - Ancient Tones and Modern Echoes in the Works of Tôru Takemitsu and Qigang Chen" introduces examples of how Qigang Chen as well as Japanese composer Takemitsu blend the pentatonic system with various western harmonic systems in their respective compositions.

In this article, Lien introduces a modern harmonic system created by Qigang Chen's former teacher, Luo Zhongrong, the father of Chinese modern music. Lien uses Luo's composition *She Jiang Cai Fu Rong* as an example to explain how Luo merges two pentatonic scales - E Gong (i.e. the pentatonic scale starting on E) with an A pitch and Eb Gong with a D pitch - to form a 12-tone series.⁵ Moreover, he also explains how Chen uses this concept in his composition *Yi*.

The article also introduces how other Japanese and Korean avant-garde composers were influenced by various western harmonic systems and mixed these systems with traditional Asian music materials. Lien's article provides a helpful foundation for the understanding of how modern Asian composers develop and utilize the pentatonic system in different ways.

⁵ Hsien-Sheng Lien, "The Return and Omnipresence of Pentatonicism - Ancient tones and modern echoes in the works of Tôru Takemitsu and Qigang Chen," *Guandu Music Journal* 95, no.5 (December 2016): 51-76.

Jing Xu

Music educator Jing Xu's 2017 article "Contrast, Heterophony and Polyphony's Approach in Qigang Chen's Concertos" discusses Chen's polyphonic approach in his music by analyzing Chen's piano concerto *Er Huang*, trumpet concerto *Joie Éternelle*, and oboe concerto *Extase*. More specifically, Xu presents Chen's polyphonic approach by analyzing the following three aspects in each concerto: 1) the polyphony between the solo instruments and the orchestra 2) the polyphony between different instrumental sections within the orchestra and 3) the polyphony for the solo instrument (piano).⁶ These examples provide a clear representation of Qigang Chen's polyphonic approach in these compositions; yet, this article fails to consider how other musical techniques in addition to polyphony are utilized to create the multidimensional musical tapestry of these works.

Shenglin Jiang

Composer Shenglin Jiang's 2019 article "The Color of *Wu Xing*, the Logic of *Wu Xing*" discusses how the timbral elements throughout Chen's *Wu Xing* provide important cues for the form of each movement.⁷ While Jiang provides creative ways to perceive the structure of *Wu Xing* by focusing on the variety and scope of timbral considerations

⁶ Jing Xu, "对比、支声及综合复调技法在陈其钢协奏曲中的运用 [Contrast, Heterophony and Polyphony's Approach in Qigang Chen's Concertos]," in *Dazhong Wenyi/The Public Art* 610 no. 7 (July 2017): 145-146

⁷ Shenglin Jiang, "色彩的五行, 逻辑的五行 [The Color of *Wu Xing*, the Logic of *Wu Xing*]," in *Xinghai Yinyue Xueyuan Xuebao/Journal of Xinghai Conservatory of Music* 110 no. 2 (June 2009): 54-62.

throughout the piece, his carefully crafted analysis does not thoroughly delve into its many other musical characteristics, thereby depriving his audience of a more comprehensive understanding of *Wu Xing*.

Jiang Li

Music theorist Jiang Li's 2011 article "The Timbre Construction and Instrumentation of Water Movement in Qigang Chen's *Wu Xing*" discusses the form and orchestration of the "Water" movement of *Wu Xing*. It provides a detailed analysis of how Qigang Chen intentionally merges and juxtaposes instruments of different timbres to create various sound effects throughout the movement.⁸ While Li is able to effectively explain how Chen is able to produce these sound effects, he does not explain these sound effects within the helpful context of the properties of water they are meant to convey. Moreover, he neglects to fully engage in the harmonic complexities found in this movement.

Weiwei Duan

Weiwei Duan's 2006 article "Qigang Chen's Orchestral Suite *Wu Xing*'s Sonic Structure" identifies the most prominent musical feature in each movement and how that

⁸ Jiang Li, "陈其钢《五行》之《水》的音色结构与配器特点 [The Timbre Construction and Instrumentation of Water Movement in Qigang Chen's *Wu Xing*]," in *Jiefangjun Yishu Xueyuan Xuebao/Journal of PLA Academy of Art* 2011, no. 3 (March 2011): 80-83.

feature is meant to correspond to the physical element in *Wu Xing*. Moreover, Duan is able to thoughtfully integrate into her analysis the musical aspects of gesture and orchestration when assigning these features.⁹ However, Duan's article only focuses on the singular prominent musical feature of each movement instead of providing a holistic representation of all the features found in each movement.

3) Chen's work in context.

Li Shu

Musicologist Shu Li's 2009 article "On the pursuit of 'nationality' in the works of contemporary Chinese composers" discusses the influential class of composers from the "Class of 1987" and their compositional similarities.¹⁰ More specifically, Li outlines how this esteemed generation all use Western compositional techniques, albeit in different approaches, to express elements of traditional Chinese culture. The author uses many examples to thoughtfully demonstrate this point, including Ye Xiaogang's *Skyline*, Qigang Chen's *Iris Dévoilée* and many others.

The article introduces Qigang Chen's educational and social milieu to understand his significance among his contemporaries. This in-depth analysis of the musical and

⁹ Weiwei Duan, "陈其钢管弦乐组曲《五行》的音响结构 [Qigang Chen's Orchestral Suite *Wu Xing*'s Sonic Structure]," in *Nantong Daxue Xuebao/Journal of Nantong University* 2006, no. 6 (November 2006): 116-120.

¹⁰ Li Shu, "浅论中国当代作曲家在作品中对'民族性'的追求 [On the pursuit of 'nationality' in the works of contemporary Chinese composers]," in *Zhongguo Yinyue/Chinese Music* 2010, no. 3 (May 2010): 245-247.

social traditions through which he was steeped helps provide readers an understanding of how he arrived at his distinct musical style.

Edward Green

Composer and musicologist Edward Green's 2007 article "China and the West—The Birth of a New Music" provides a discussion of how the acclaimed "Class of 1987" achieved success during a special period in China's history. Green focuses on how the Cultural Revolution informed and motivated these composers. Moreover, he explains how various musical, social and political factors inspired the creation of jazz in the United States and compares that phenomenon with how the introduction of Western music post-Cultural Revolution inspired this esteemed list of Chinese composers.¹¹

These articles and analyses discuss Qigang Chen's life and music from a diverse array of perspectives. The articles that specifically focus on his compositional techniques explore in varying detail his harmonic systems and derivations, his use of polyphony, and his approaches to timbre and gesture in many of his works. Moreover, there are several articles that extrapolate upon individual musical techniques Chen employs in the composition *Wu Xing*, such as his choice of timbre or gesture. After reviewing the

¹¹ Edward Green, "China and the West-The Birth of a New Music." *Contemporary Music Review* 26, no.5 (December 2007): 493-499.

scholarship that currently exists on both Qigang Chen and *Wu Xing*, I arrived at the conclusion that there is a dearth of comprehensive analysis that can provide an interpretation of the philosophical, naturalistic and expressive characteristics of this composition through his use of timbre, harmony, and gesture. These three aspects of *Wu Xing* are very important as Chen incorporated a vast amount of distinctive musical characters. Therefore a thorough analysis of each aspect as well as their interplay would greatly enhance our understanding and appreciation of this work.

In the composition *Wu Xing*, each movement represents an element, which is Water, Wood, Fire, Earth, and Metal. On average they are rather brief, each about two minutes in length. Within these movements, like short vignettes, the composer creates rich atmospheres featuring various musical characters that accentuate, contrast, inform and enrich each other. In this dissertation, I plan to discuss Chen's development and merging of harmonic, gestural, and timbral concepts to elucidate on each element's implicit imagery and musical connections through the prism of the Wuxing theory. In order to provide a thorough understanding of the musical characteristics of each element as well as the composer's technical approaches therein, I will use carefully selected images to represent the natural and spiritual characteristics of each element in the composition. I base my selection of images on both Chen's music and on my understanding of Wuxing theory. In other words, they represent my interpretation of this work. More specifically, I plan on describing the varying musical qualities of each movement with imagery and, in so doing, will explain the harmonic, gestural and timbral techniques he employs to formulate these images. For example, I discern five distinct musical characters in the Metal movement, each connecting to different types or

characteristics of the metal element. Some of these characteristics are glossy and harsh, others pure and elegant; yet all are fundamentally associated with metal. I link these music characters to different properties or “images” of metal. The pure and elegant sound character, for example, shares many of the properties of silver, whereas the glossy and harsh sound qualities represent the properties of copper. This imagery-based analytical approach is applied to my interpretation of each of *Wu Xing*’s five movements. And as I engage in this technical analysis, I also plan on describing how the properties of each element conform to the elemental conception of Wuxing theory.

Chapter 2: Qigang Chen: Personal and Historical Context

On February 10th, 2018, the Orchestre de Paris and Paris Philharmonic Hall jointly held a “retrospective exhibition” honoring Qigang Chen, which included two concerts and a lecture. The first concert’s program featured compositions by Qigang Chen, Claude Debussy, Maurice Ravel and Oliver Messiaen; the second concert consisted of Qigang Chen’s *Wu Xing* and *Reflet d’un temps disparu* as well as Bela Bartok’s *The Miraculous Mandarin*. The selections were chosen by the creative committee of the Paris Philharmonic and were meant to present a comprehensive and unadulterated collection of Qigang Chen’s compositions to a Western audience. The lecture was even hosted by the acclaimed Director of the Paris Philharmonic, Emmanuel Hondré - an honor bestowed upon only the most important and influential of guests.¹² Perhaps even more impressive was the fact that this honor would be awarded to a composer of Chinese upbringing, a rarity in the history of the Paris Philharmonic. The careful arrangement of the concert program as well as the use of this distinguished lecturer provided tacit recognition of Chen’s status among the world’s greatest composers. Paris’s most prestigious national daily newspaper, *Le Figaro*, characterized Chen as “the king of Chinese contemporary music.”¹³ Chen had reached the pinnacle of the music world and had achieved this feat through his own, inimitable path.

¹² “Qigang Chen’s ‘retrospective exhibition’ in Paris: He belongs to China, He Also Belongs To The Whole World.” *Pengpai News*, accessed February 12, 2018, http://m.thepaper.cn/yidian_promDetail.jsp?contid=1995542&from=yidian.

¹³ Thierry Hilleriteau, “Qigang Chen, l’empereur de la Chine musicale contemporaine,” *Le Figaro*, February 4, 2018, 29.

Qigang Chen was born in 1951 to a scholarly and artistic family in Shanghai. His father was a famous traditional Chinese painter and one of the founders of the Central Academy of Fine Arts in Beijing; Chen's mother, a pianist and educator. Chen's father exposed him to traditional Chinese theater and signed him up for vocal lessons in the hopes he would become a Chinese Opera actor. However, Chen's interest in clarinet performance and composition became stronger than his desire to sing and perform in the Chinese theater.¹⁴

In 1977, Chen began to study composition with the esteemed Chinese composer Luo Zhongrong at the Central Conservatory of Music. Born in 1924, Luo was widely considered the father of Chinese modern music for his many contributions to modern Chinese compositional techniques.¹⁵ Luo was particularly fascinated by the rhythm and timbre serialism in Western music and Chinese ritual percussion music.¹⁶ In 1940, Luo started to study with Tan Xiaolin, a student of Hindemith's as well as the Mandarin translator of several important Western music books, including Hindemith's *Craft of Musical Composition*¹⁷ and *A Concentrated Course in Traditional Harmony*¹⁸ as well as Allen Forte's *The Structure of Atonal Music*¹⁹ and George Perle's *Serial Composition and Atonality*.²⁰ Luo later discovered a new serialism style of blending pentatonic scales to create a pentatonic 12-tone series, a harmonic system that would prove to be quite

¹⁴ Pengcheng Li, "陈其钢访谈录 [Interview with Qigang Chen]," accessed January 13, 2019, http://www.sohu.com/a/288657158_304932

¹⁵ Rao, "Hearing Pentatonicism," 193-204.

¹⁶ Frank Kouwenhoven, "Luo Zhongrong," Grove Music Online, accessed January 20, 2001, <https://www.oxfordmusiconline.com/grovemusic/view/10.1093/gmo/9781561592630.001.0001/omo-9781561592630-e-0000049474>

¹⁷ Paul Hindemith, *The Craft of Musical Composition* (New York: Schott Music Corp., 1970).

¹⁸ Paul Hindemith, *A Concentrated Course in Traditional Harmony* (New York: Associated Music Publishers, 1994).

¹⁹ Allen Forte, *The Structure of Atonal Music* (New Haven: Yale University Press, 1973).

²⁰ George Perle, *Serial Composition and Atonality* (Berkeley: University of California Press, 1991).

influential in the history of modern Chinese music.²¹ Luo's representative works include *The land is beautiful beyond the mountain* (1947), First symphony (1959), *Qin Yun* (1993), and Third String Quartet (1996).²² Luo's music and compositional concepts heavily influenced Chen during his formative years as an undergraduate composition student at the Central Conservatory of Music in Beijing.

During Chen's sophomore year at the Central Conservatory of Music, he composed *Chen Ge*, a chamber composition in ternary form for clarinet and piano. In the composition, Chen used both the pentatonic / Yayue (heptatonic) scales and the Western (major/minor) scale. *Chen Ge* is one of Chen's earliest compositions. It embodies his native musical language and Chinese cultural influences, yet is also reflective of his close study to Western classical music, including Luo, Hindemith, and Schoenberg. After five years of studying at the Central Conservatory of Music, Chen won a postgraduate award in 1983 from the Ministry of Education of China, which gave him the opportunity to travel to France and become the last student of Oliver Messiaen from 1984-1988.²³

During his time in France, Chen was exposed to new and exciting musical concepts. Through his studies with Oliver Messiaen, Chen was able to broaden his understanding of western music techniques and was particularly influenced by French composers such as Debussy, Faure, and Messiaen. Moreover, Chen was able to transcend the more traditional western compositional techniques he had previously learned in China by engaging with innovative compositional approaches to harmony, timbre and other

²¹ Rao, "Hearing Pentatonicism," 193-204

²² Rao, "Hearing Pentatonicism," 193-200

²³ Xiang Jin, "*Iris Dévoilée*," *Contemporary Musicians* 441, no. 1 (January 2003): 2.

aspects. Messiaen especially encouraged Chen to discover his own musical voice: “I hope to gradually see a little more of your own creation in what you write, something personal, something that no one else has written.” Based on Messiaen’s guidance, Chen continued to explore ways in which to express traditional Chinese musical elements through modern compositional concepts. For example, in his chamber work for flute and harp, *Le Souvenir* (1985), Chen added a microtone to an incomplete descending pentatonic scale, which is C-Bb-G(-1/4 lower)-F to depict the melancholy mood found in traditional Chinese literature. Along with the theme’s development, Chen inserted chromatic scales and “Messiaen truncated mode 2 (pitch-class set [0,1,4,6,7,10])” into the music, and applied special performance techniques, such as glissando, microtone, and echo, to create an ethereal Chinese artistic conception. In his later chamber music for baritone and chamber ensemble, *Poème Lyrique* (1990–91), Chen employed the vocal technique used by the Beijing Opera to replace the effect of recitation. This style became an important source of his later vocal writing.²⁴

After honing these innovative techniques and further establishing his compositional voice, Chen went on to distinguish himself as one of the preeminent composers of his generation. Internationally, Chen received numerous distinctions and awards. He became Composer-in-Residence at the Orchestre Philharmonique de Strasbourg from 2004 to 2006.²⁵ In 2005 Qigang Chen was awarded the Grand Prix de la Musique Symphonique by SACEM in recognition of his career achievements,²⁶ and in

²⁴ Rao, “Hearing Pentatonicism,” 204

²⁵ “Qigang Chen” Boosey & Hawkes, last modified November 1, 2017, http://www.boosey.com/pages/cr/composer/composer_main?composerid=18650&ttype=BIOGRAPHY

²⁶ “Qigang Chen,” Gerard Billaudot Editeur, last modified January 15, 2019, <https://www.billaudot.com/en/composer.php?p=Qigang&n=Chen>

2013 he was decorated with the prestigious “Chevalier de l'Ordre des arts et des lettres” by the French government.²⁷ In China, Chen also was praised in many forms for his contributions to music. Chen was elected ‘World’s Best Classical Musician in the Chinese Language’ by the Chinese press in 2004 and 2012.²⁸ In 2008 he acted as Musical Director for the Opening Ceremony of the Beijing Olympics.²⁹ And in 2014, Chen won the Golden Horse Award for Best Original Film Score for the movie *Coming Home*.³⁰

Messiaen has described Chen’s compositions as “show[ing] real inventiveness, very great talent and total assimilation of Chinese thinking with European musical concepts.”³¹ Moreover, Qigang Chen’s diverse array of compositions is broad in scope as he has written works for many different settings and with many different instrumentations, including chamber music, orchestral music, instrumental and electronic music, music for ballet, and music for film. I will provide (below) a chronological list of Qigang Chen’s seminal compositions to demonstrate the many different ways he expands on traditional Chinese materials, including music and poetry, by using modern compositional approaches.

Reflet d’Un Temps Disparu (1996)

²⁷ Patricia Price, “Shanghai Symphony Orchestra Celebrates 140th Anniversary with World Tour Beginning With Debuts at Wolf Trap and Ravinia,” *Musical America*, July 11, 2019, <https://www.musicalamerica.com/news/newsstory.cfm?archived=0&storyID=43124&categoryID=5>

²⁸ Gerard Billaudot Editeur, “Qigang Chen.”

²⁹ Chiao-Ting Feng, “InnovationL Chinese Folk Music Influence in Contemporary Clarinet Repertoire” (D.M.A. diss., Arizona State University, 2013), 15.

³⁰ Jenny W. Hsu, “China’s ‘Blind Massage’ Wins Big At Golden Horse Awards,” *The Wall Street Journal*, November 23, 2014, <https://blogs.wsj.com/chinarealtime/2014/11/23/chinas-blind-massage-wins-big-at-golden-horse-awards/>

³¹ Boosey & Hawkes, “Qigang Chen”

Reflet d'Un Temps Disparu is a concerto for cello and orchestra that was written in 1996. Commissioned by Radio France and premiered in April 1998 at the Theater des Champs-Élysées in Paris, the piece was performed by Yo-Yo Ma and the Orchestre National de France under the conducting of Charles Dutoit. This composition expresses Chen's nostalgia and has commented that the title refers to "the past time, could be the childhood, love, career, and life."³² In this composition, he uses the overtones of a very famous Chinese melody, "*Mei Hua San Nong*," and develops this main thematic melody throughout the entire piece by mixing it with different harmonies, polyphonic lines, gestures and orchestrations.³³ Moreover, the cello plays extension techniques mimicking the timbre and sound of guqin, a traditional Chinese instrument.³⁴ Although the cello is never meant to fully capture the sound of this traditional instrument, Chen is masterfully able to use the more modern instrument to evoke the traditional sound. Thus, this composition demonstrates Qigang Chen's ability to imbue new life into an old Chinese theme as a way of reflecting on his past.

Iris Dévoilée

Iris Dévoilée is a suite written in 2001 for a grand orchestra, three female voices and three traditional Chinese instruments - erhu, guzheng, pipa. Premiering in February of 2002, the suite was commissioned by the Koussevitzky Foundation and Radio France

³² Yang Sun, "余音绕梁的乐章 [The Endless Movement]," in *Liaoning Jiaoyu Xingzheng Xueyuan Xuebao/Journal of Liaoning Educational Administration Institute* 28, no. 1 (January 2011): 104.

³³ Liwen Ding, "在巴黎音乐殿堂奏响的新乐章 [The New Sound From Paris]," in *Renmin Yinyue/People's Music* 96, no. 2 (June 1998): 31.

³⁴ Yang, "The Endless," 105.

for the Festival Presences of Radio Frances. It was the first vocal composition Qigang Chen had written, and this unique characteristic of the piece guided his work. Chen has characterized the work as such: “This composition describes the female’s world from nine different aspects to observe and express the charm of women.”³⁵ This composition contains nine movements, each of which represents what he perceives to be distinct characteristics of women: Ingenious, Chaste, Libertine, Sensitive, Tender, Jealous, Melancholic, Hysterical, and Voluptuous. The three Chinese traditional instruments - erhu, guzheng, pipa - are frequently used throughout the composition to express the purity and tenderness of women.³⁶ Furthermore, the music juxtaposes qingyi, a feminine musical characteristic prevalent in Chinese Beijing Opera, and Bel Canto, a Western vocal style of the high register, to create a dialogue between Chinese and Western feminine voices. By featuring these different vocal and instrumental elements from China and the West, Chen is able to vividly depict what he deems to be the essential characteristics of women through his unique music language.

Er Huang

The piano concerto *Er Huang* was composed in 2009 and was the first composition to be published by the prestigious British firm H&W. This composition was commissioned by and premiered at Carnegie Hall on October 22nd, 2009. It was performed by Chinese pianist Lang Lang and the Juilliard Orchestra under the conducting

³⁵ Nan Ou, “中国现代音乐与《蝶恋花》 [Chinese Contemporary Music and *Iris Devoilee*],” in *Zuojiazoulang/Writer Magazine* 121, no. 6 (January 2010): 1.

³⁶ Xuan He, “被凝视的花朵 [Flowers are Gazed Upon],” in *Zhongyang Yinyue Xueyuan Xuebao/Journal of the Central Conservatory of Music* 2018, no. 3 (June 2018): 109

of Michael Thilson Thomas.³⁷ This is the first time that Chen wrote a piano concerto. The main theme of *Er Huang* was taken from a short transitional fragment found in Beijing Opera, and was originally played by a jinghu, a traditional Chinese string instrument.³⁸ This theme frequently reappears in different pentatonic modes and contrasting harmonic colors. The first part of the piece connotes the same musical atmosphere prevalent in the Beijing Opera, whereas the second part of the concerto evokes Western Romanticism. Moreover, Qigang Chen uses a pentatonic minor seventh chord as a common harmonic color through which he switches between contrasting pentatonic modes. Deeply steeped in the tradition of the Beijing Opera, Chen uses his familiarity with its musical materials as the tool to explore his interest in both the eastern and western musical aesthetics. As Chen has commented in the past, “properly using Chinese traditional music materials has gradually become my own way of expressing myself and my views of the world.”³⁹

Luan Tan

Luan Tan was composed for an orchestra in 2015, and was commissioned by the Hong Kong Philharmonic, Radio France and the Royal Liverpool Philharmonic. First premiered in April of 2015 at the Hong Kong Cultural Center, the composition was performed by the Hong Kong Philharmonic Orchestra under the conducting of Xian

³⁷ Rao, *Works of Tan Dun, Chen Qigang* 152.

³⁸ Jing Xu, “钢琴协奏曲《二黄》创作赏析[Piano Concerto *Er Huang*’s theoretical analysis],” in *Dazhong Wenyi/People’s Art* 179, no. 2 (February 2018): 151

³⁹ Rao, *Works of Tandun, Chen Qigang*, 152-156.

Zhang.⁴⁰ This composition was written at a particularly sensitive point in his life as it was the very first piece he composed after the death of his son. As Chen said: “*Luan Tan* is very energetic and happy, like my son’s personality, and I felt that my son and I coexisted in this music. The music is positive, energetic and full of vitality.”⁴¹ *Luan Tan* was inspired by a vocal style called “Luan Tan” found in Chinese traditional theater.⁴² Qigang Chen draws upon the timbral and rhythmic elements of this Luan Tan style, yet places it in a new musical context and develops it through a variety of compositional techniques. Instead of using the longer melodic figures and charming harmonies prevalent in his previous compositions, Chen adopts a brand new approach in this piece that features multiple percussion instruments playing varied rhythmic patterns as the driving force to express its overarching positive and bright energy. This musical divergence represents a breakthrough for Chen, demonstrating his ability to utilize different musical expressions and approaches to convey deep-seated emotions.

Jiang Cheng Zi

Jiang Cheng Zi was written in 2017 for a solo vocalist, chorus and orchestra. It was commissioned by the NCPA Orchestra, Vale of Glamorgan Festival, Sydney Symphony Orchestra and BBC Radio 3. It premiered in March of 2018 in Beijing by the

⁴⁰ “陈其钢新作《乱弹》世界首演[The Premiere of Chen Qigang’s *Luan Tan*],” Hong Kong Philharmonic, accessed March 17, 2015, <https://www.hkphil.org/sc/press-release/hk-phil-and-zhang-xian-s-roman-festivals-17-18-apr-world-premiere-of-chen-qigang-s-new-work-luan-tan>

⁴¹ “陈其钢-乱弹 [Qigang Chen’s *Luan Tan*],” accessed June 1, 2015, <https://www.sin80.com/work/chen-qigang-luan-tan>

⁴² Meimei Zhu, “论陈其钢音乐新作品《乱弹》中的音乐创作[The Musical Creation in Qigang Chen’s *Luan Tan*],” in *Zhongwai Yinyue Pinglun/Chinese and Foreign Music Review* 214, no. 5 (May 2016): 45.

NCPA Orchestra under the conducting of Alexandre Bloch, with Meng Meng as the featured vocalist.⁴³ This composition was inspired by ancient Chinese poet Su Shi's poem "Jiang Cheng Zi," a heartfelt ode by Su for his late wife. As Qigang Chen said: "*Jiang Cheng Zi* is the kind of music that is sung repeatedly in life as you contemplate loss eternally during quiet nights. I like Su Shi's work very much. And at the same time, my own life experiences help me understand the profound meaning of this poem and the mentality of the author. During the creation of this piece, I was able to express my feelings deeply, sincerely and truly, which is my only pursuit and principle in music."⁴⁴ Chen explores new and innovative vocal techniques in this composition. For instance, he challenges the singers of this piece by having the two groups of vocalists create a sound effect that mimics string instruments when playing without stops.⁴⁵ Moreover, Chen mixes this unique vocal style with complicated harmonic colors and expressions to express contrasting and interweaving soundscapes. After the world premiere of *Jiang Cheng Zi*, BBC World Service commentator Stephen Walsh stated the piece was "pioneering tonal music" and praised Chen for "absorbing and taming postwar modernism in a richer tonal sense and reinterpreting it as a continuation of history, even if it had been abandoned."⁴⁶ He added that "Chen Qigang has a strong sense of large-scale works and a perfect grasp of musical connection...The interweaving of slow and fast music and the management of climax are handled with great skill, while the complex and

⁴³ Lu Wen, "陈其钢《江城子》将迎世界首演 [Coming Premier of Qigang Chen's *Jiang Cheng Zi*]," in *Renming Wang/ People's Magazine*, March 01, 2018, <http://culture.people.com.cn/n1/2018/0301/c1013-29841504.html>

⁴⁴ "陈其钢首部交响合唱专辑《江城子》首发 [The first release of Qigang Chen's Album *Jiang Cheng Zi*]," Chinese National Centre for the Performing Arts, accessed March 15, 2019, http://www.chncpa.org/zxdt_331/zxdtlm/yczx_332/201903/t20190316_199962.shtml

⁴⁵ Ibid.

⁴⁶ Ibid.

rich texture structure never loses the direction of the harmony.”⁴⁷ John Metcalf, Director of the Cardiff Festival, compared *Jiang Cheng Zi* to Arnold Schoenberg's *Pierrot Lunaire* as representing “a milestone in the discovery and use of the human voice.”⁴⁸ His first work to feature choirs, *Jiang Cheng Zi* not only shows Chen’s contribution to innovating vocal techniques, but also demonstrates his broad knowledge of Chinese traditional source materials as well as his ability to use those materials to inform his musical language.

In addition to this aforementioned diverse collection of musical compositions, Qigang Chen’s composed his composition *Wu Xing* (1999) earlier in his career, his most representative body of work which would serve as a bellwether for his interest in combining traditional Chinese cultural ideas with modern musical approaches to create his own, inimitable means of expression. *Wu Xing* not only demonstrates his exquisite mastery of composition, but also reflects the aesthetic relationship he cultivates between his musical expression and observance of profound ancient Chinese philosophies - in this case, the Wuxing Theory. In the following chapter, I will provide a synopsis of how Chen’s *Wu Xing* came to be, characterize its critical reception, and explain the philosophical principles of Wuxing that inspired the work.

⁴⁷ Ibid.

⁴⁸ Ibid.

Chapter 3: Qigang Chen's *Wu Xing*

1951. First recorded at Studio 103 of Radio France, the composition was played by the Orchestre National de France and conducted under Didier Benetti in 1999. In 2001, the BBC selected *Wu Xing* as one of its five finalists of the Masterprize Award from over 1,000 entries, hosting a performance of the composition at the Barbican Estate of the City of London by the London Philharmonic conducted by Daniel Harding.⁴⁹ In 2003, EMI/Virgin Classics released an album of Qigang Chen's music, featuring *Wu Xing*, *Iris Dévoilée*, and *Reflet d'un Temps Disparu*, and this album was later voted by Gramophone Magazine as one of the Top Ten Classical Recordings of the Month.⁵⁰ Since its debut performance and album release, the *Wu Xing* has been presented throughout the world and is widely considered one of the most performed modern pieces of music.⁵¹

In addition to its frequent performances over the past two decades, *Wu Xing* continues to garner critical praise from critics throughout the world. Patrick D. McCoy of the *Washington Post* in 2019 hailed "the program...based on the traditional pentatonic scale" as taking on "an otherworldly quality."⁵² In 2019 the classical music website, *Classical Source*, described the piece as "a highly fluid aural experience and very enjoyable."⁵³ The local Chicago PBS affiliate, *WTTW*, praised the piece as "pure musical

⁴⁹ Shan Jiang, "陈其钢的作品《五行》闯进“大师奖”总决赛 [Qigang Chen's *Wu Xing* Entered the Final of the Masterprize Award], " in *Renmin Yinyue/The People's Music* 425 no.9 (September 2001): 29.

⁵⁰ Wei Yi, "陈其钢管弦乐组曲《五行》创作思想 [Creation thoughts of Qigang Chen's *Wu Xing*], " in *Sichuan Xiju/Sichuan Theater* 98, no.3, (April 2013): 44

⁵¹ Jiang, "Qigang Chen," 30.

⁵² "Press," Qigang Chen, accessed August 30, 2019, http://www.chenqigang.com/yueping.php?action=list&channel_id=2

⁵³ Ibid.

poetry,”⁵⁴ while Lawrence Johnson of the *Chicago Classical Review* characterized the work as “surprisingly edgy and ‘modern’ in style”⁵⁵ while stating it was “scored with skill and panache.”⁵⁶ Chen’s magnum opus embodies a timeless quality and represents an exemplar of 21st-century modern music.

Perhaps what critics have found so inventive and intriguing about the piece is the fact that Chen’s *Wu Xing* has been able to introduce non-Chinese audiences to the ancient Chinese Wuxing theory. For many listeners, the ancient Chinese philosophy of Wuxing is little-understood and somewhat mysterious. For this reason, I will provide a brief overview of the tenets of the Wuxing philosophy before delving into a deeper analysis of the musical piece itself.

The Wuxing Theory

Wuxing is a theory of natural worship that was prevalent in primitive Chinese religions. First appearing in Shu Jing’s 4th century BC text “Hong Fan Wen,”⁵⁷ the theory expresses the concept that the world is composed of the five essential properties of metal, wood, water, fire, and earth. Zou Yan, a famous 3rd century BC Yin and Yang expert, believed that every element possesses its own kinetic energy capable of growth or death in its different cycles.⁵⁸ This idea comes from ancient Chinese philosophers who witnessed essential experiences and converted them into five categories which help define the generative and destructive processes found on earth. Every element within the

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Huang-Long Pan, “五行生克八重奏[A Study of Wandlungsphasen for Eight Players],” in *Guandu Yinyue Xuekan/Guandu Music Journal*, no. 6 (June 2007): 78.

⁵⁸ Ibid.

Wuxing concept is endowed with both positive and negative qualities that balance each other.⁵⁹ This equilibrium of energy serves to support each element while ensuring that neither quality can overpower the other. And, put simply, the positive and negative dichotomies of each element serve to explain the generative and destructive nature of Wuxing. Moreover, each element can act constructively or restrictively towards the other.⁶⁰ For example, water is believed to nourish wood and wood, in turn, fuels fire. Yet, water can also extinguish fire, just as fire can melt metal. The full generative sequence of the five elements according to this theory is Water - Wood - Fire - Earth - Metal - Water; the destructive sequence of elements according to this theory is Metal - Wood - Earth - Water - Fire - Metal.⁶¹ The relationships among these five elements become requirements for the existence of each other while explaining phenomena observed in the natural world.⁶²

How the Wuxing Theory Is Reflected in Qigang Chen's Wu Xing

The Wuxing theory reflects an ancient understanding shared by Chinese citizens of the essence and structure of things in the world, and would later become one of the most studied and observed of all Chinese philosophies.⁶³ Qigang Chen and his fellow 20th century Chinese brethren were reared in a society that honored the tenets of Wuxing. This philosophy, instilled in Chen at an early age, later inspired him to create a

⁵⁹ Christopher Cullen, "The Science/Technology Interface in Seventeenth-Century China: Song Yingxing on Qi and the Wu Xing," *Bulletin of the School of Oriental and African Studies* 53 no. 2 (February 1990): 295-318.

⁶⁰ Shou-hsin, Teng, *A semantic study of transitivity relations in Chinese* (Berkeley : University of California Press, 1975), 78-92.

⁶¹ Huaijin Nan, 易经杂说 [Analysis of *YiQing*] (Shanghai: University of Fudan Press, 2002), 9-11.

⁶² Zhongshu Dong "Transformation of Yin-Yang Theory and Contesting of Gender identity," *Philosophy East and West*, no. 2 (April 2005): 209-231.

⁶³ Nan, *YiQing*, 19.

composition interpreting the Wuxing theory through his musical sensibilities. In Qigang Chen's *Wu Xing*, he sonically depicts the physical properties and spiritual components of each of the five elements of this theory through each corresponding movement. Yet what makes this piece truly unique is how Chen is also able to implicitly capture the generative connections of these five elements in a manner that transcends the individual movements themselves. The five movements in Qigang Chen's *Wu Xing* follow the specific generative order of progression based on the Wuxing theory: Water to Wood to Fire to Earth to Metal. Moreover, each movement contains its own distinct characteristics and musical expressions that are consistent with the spiritual nature of each element within the Wuxing concept.

In the chapters ahead, I introduce each movement and provide an in-depth analysis of the musical approaches Qigang Chen employs to depict the distinct natural and spiritual components of each element. This analysis will focus primarily on his use of harmony, gesture and timbre in conveying the Wuxing properties of these elements. It is worth noting that the images and symbolic properties I ascribe to each movement are from my own analytical perspective, rather than from the composer's explicit interpretation of the piece. For example, I label a wave-like gesture heard in the Water movement "flowing water" in order to characterize distinctive sonic properties of this section. These images, moreover, help describe how these elements relate to the spiritual and natural aspects of these individual properties as they pertain to the Wuxing theory. For each movement, I have provided a table listing these images to provide a reference chart for the readers that presents the important aspects of each.

Chapter 4: Analysis, “The Water Movement”

The opening movement is the Water movement. In ancient China, people believe that water is the origin of everything on earth and, as such, is essential to life. In the first movement, Chen creates four musical expressions to represent different images of water: 1) *water droplets* 2) *flowing water* 3) *opaque or clear water* 4) *spirit of water*.

The water movement can be divided into three parts: Part I, mm. 1-8, which includes the introduction and the main theme; Part II, mm. 9-20; and Part III, mm. 21-29. Each part describes a different state of water: Part I- the gentle and clear water; Part II- the surging and muddy water and; Part III- the light and transparent water. Different compositional approaches are used to depict contrasting conditions of water: the pentatonic scale symbolizes a transparent and pure condition of water, while the non-pentatonic scale (atonal and major/minor system) represents an opaque and turbid form of water.

Chen create the four above mentioned different images of water through a diverse array of timbre, harmony and gesture each of which develops and interacts with the other to create a rich character. I will discuss them below

Table 1: Four Images of Water

<u>Images</u>	<u>Types</u>					*Commentary
I. Water droplets	1. Multi-dimensional sound	2. Pure sound				Characterized by instruments
	<i>overtone pizzicato by large ensemble</i>	<i>Overtone pizzicato by harp</i>	<i>Overtone pizzicato by strings</i>			
II. Flowing water	1. Wave-like gesture	2. Cluster sound	3. Short sweeping sound	4. Upward sweeping gesture with small curves	5. Undercurrent's motion	Characterized by gestures
	<i>pentatonic ostinato</i>	<i>atonal ostinato plus trills</i>	<i>glissando</i>	<i>short ascending arpeggio</i>	<i>tremolo</i>	
III. Opaque or clear water	1. Clear quality	2. Opaque quality				
	<i>sustained ordinario chord</i>	<i>sustained trill chord</i>				
IV. spirit of water	1. The pure water	2. The turbid water	3. Returning to pure from turbidity			Characterized by location
	<i>Melody consists of exclusively perfect fifths</i>	<i>Melody contains espressivo decorative notes</i>	<i>Melody without embellishments and</i>			

Four Images of Water

Image 1: “Water droplets”

The "water droplets" occur in Part I of the movement only. The image of "water droplets" is characterized by the soft articulated sound of single pitches. Those soft droplets are assigned to instruments of different timbres to create a variety of textures for this sound effect. There are three different types of water droplets used in this piece, each of which is classified by instrumentation. Type 1 is played by the large ensemble and includes the vibraphone, tam-tam, and string overtone pizzicato. Type 2 is played by a solo harp. Type 3 is played exclusively by the string overtone pizzicatos. Chen purposefully begins the movement with a drop of water in the introduction to convey the greater idea that powerful bodies of water are comprised of these single droplets, each of which fall from the sky at different moments.

Type 1: Multi-dimensional sound

At the beginning of the water movement, a drop of crystal clear water is represented by C played by the vibraphone with slow vibrato, the tam-tam rubbing, and the overtone pizzicato of the viola and the cello sections. (See Ex. 1) The special effect comes from the use of a piece of metal to rub the unpitched metal percussion instruments. The resulting rich resonances give an ethereal, graceful feeling. Chen's use of the tam-tam is worth noting here, because it is one of the most representative sound effects in Chen's music. Here the Tam-tam's resonance can fully absorb the pitch and overtones played by the string instruments and the spacious timbre from the vibraphone, thereby making a multi-dimensional and transparent sound.

cue that symbolizes a different characteristic of water yet can fit in to the rest of the piece. The single timber range for type 2 and 3 provides a noticeable contrast to type 1 that continues the gesture of type 1 while providing new textures of water droplets.

Ex. 2 Pure Sound mm. 1-3

Violons I
Violin I

Violons II
Violin 2

Viola

Violoncelles
Celli

Contrebasses
Double basses

pizz sul C() pizz on C(*)*

pp

pizz sul C() pizz on C(*)*

pp

pizz sul C()*

pp

pizz on C()*

pp

pizz sul D() pizz on D(*)*

pp

sul G on G

pp

sul A on A

pp

sul G on G

pp

sul A on A

pp

sul G on G

pp

sul A on A

pp

Ex. 3 Pure Sound, mm. 1-3

Harpe
Harp

pp

pp

pp

pp

The uses of the single timbral water droplets either anticipate or suspend the movement's first melody. As indicated in the box of Ex. 4, the melody is played by a solo clarinet and solo flute, yet the notes of A and E from the melody are anticipated and suspended in the string section's overtone pizzicato (the water droplets). The string's overtone pizzicato hints at the melody in anticipation of the clarinet and flute's line by playing the same melodic notes of A and E; however, the string section merely accents

The image shows a page from a musical score, likely for a symphony. The score is written in French and includes various musical notations, including notes, rests, and dynamic markings. A red box highlights a section of the score, and a blue box highlights another section. The score is for a symphony by Gustav Mahler, Op. 5, 'Symphony No. 5'.

Image 2: “Flowing water”

“Flowing water” is another image that appears throughout the entire Water movement. There are five types of flowing water, each containing a unique characteristic distinguished by gestures. Certain gestures sweep up, some bounce up and down in a wave-like motion, and others vibrate. Among all five types of “flowing water” images conveyed in this piece, the wave-like arpeggio is the most representative figure.

The different flowing water image is ascribed different harmonic colors to help symbolize and distinguish contrasting textures throughout the Water movement. In Part I and III, the composer is able to create the effect of smooth and concordant waves by highlighting the consonant harmonies of the pentatonic scales with wave-like flowing water. In Part II, on the other hand, the “flowing water” section relies heavily upon atonal dissonance ostinatos to create the volatile and opaque aspect of the wave. By mixing the contrasting harmonies with different flowing water types, the composer creates vital structural meaning, to differentiate the sound of each musical part.

The five different types of “flowing water” will be discussed (below) to provide an explanation of how they merge, reinforce and contradict each other in different harmonic and timbral manners to create a vivid sound effect of flowing water.

Type I: Wave-like arpeggio

The wave-like gesture is the first type of the “flowing water” image. This gesture mimics the ebbs and flows of a wave cycle to express the sonic image of flowing water. It is achieved through the use of group instruments playing ostinato (Ex.5). In Ex. 5, the clarinet, bassoon, and first marimba play in F Gong-mode (F, G, A, C, D), while the

Type 2: Clustered and dissonant water waves

Within the flowing “water image”, type 1 and type 2 both contain wave-like ostinato gestures. However, the two types are quite distinct from each other: type 1 sounds linear and consonant, whereas type 2 sounds clustered and dissonant.

Type 2 appears in the second part of the Water movement, where the water texture is turbid and muddy. As shown in Ex. 6, the gesture features woodwind instruments playing atonal ostinato with sustained trills underneath a dissonant chord played by the string instruments. The intense and articulated timbre of woodwind instruments merged with the soothing string instruments help present the effect of a chaotic wave that is bound together; the atonal ostinatos and sustained notes with trills become the most representative character that distinguishes Part II from Part I and III.

Ex. 6 Clustered and Dissonant Water Waves, mm. 15-16

The image displays a musical score for Example 6, titled "Clustered and Dissonant Water Waves, mm. 15-16". The score is organized into two systems. The top system, covering measures 15 and 16, features woodwind instruments (Flute 1, Flute 2, Clarinet, Bassoon, and Vibraphone) playing atonal ostinatos with sustained trills, highlighted by a red box. The bottom system, covering measures 17 and 18, features string instruments (Violin I, Violin II, Viola, and Cello) playing a dissonant chord, highlighted by a green box. The score includes various musical notations such as notes, rests, and dynamic markings (pp, p, f).

Type 3: Short sweeping sound

The short sweeping sound represents type 3 of the “flowing water” image. This character is achieved when the harp plays the glissando gesture. This gesture often serves as a structural signal because it initiates a harmonic modulation between different parts. For instance, at the end of the introduction section in m.5, the music starts to modulate from F Gong-mode to A-Gong mode and, uncoincidentally, the harp plays a flourishing glissando to present a new harmonic color, A Gong-mode. Because of the dizzying effect of a harp playing a rapid glissando with a sustained pedal, the new key isn’t clearly established until the string section carries on and stabilizes the A Gong-mode. (Ex. 7)

This new mode represents the beginning of the main theme after the introduction section.

Ex. 7 Short Sweeping Sound, mm. 1-8

The image displays a musical score for mm. 1-8, featuring a harp and string sections. A blue box highlights a 'Wave Arpeggio' in 'F Gong-mode' in the harp part. A red box highlights a 'Glissando' in the harp part, which is labeled 'A Gong-mode'. A green box highlights the string section, labeled 'Stabilize A Gong-mode'. Arrows indicate the flow from the arpeggio to the glissando and then to the string stabilization.

Wave Arpeggio
F Gong-mode

Glissando
A Gong-mode

Stabilize A Gong-mode

Type 4: The upward sweeping gesture with small curves

The upward sweeping gesture with small curves is the fourth type of "flowing water" image. It features consecutive, short ascending arpeggios which rise in a continuous upward motion. Ex. 8 shows the varied arpeggios' gesture (in blue box) played by the woodwind section (including bassoon, English horn, clarinet and flute) and doubled with pitch-percussions (including vibraphone, marimba, and glockenspiel) in m. 8. This vibrant movement is also supported by harmony: the ascending short arpeggios are in F Gong-mode, which mixes with the tetrachord (0,2,5,7) in A Gong-mode played by the string section. The combination of woodwind and pitch-percussion instruments provide a lively and bright sound effect to represent the beginning of Part II, where the water's state changes from calm and gentle to exciting and rough.

Ex. 8 Upward Sweeping Gesture with Small Curves, mm. 5-10

The image displays a musical score for Example 8, spanning measures 5 to 10. The score is written for a woodwind section (flute, English horn, bassoon, and clarinet), a string section (violin I, violin II, viola, cello, and double bass), and a percussion section (vibraphone, marimba, and glockenspiel). The woodwind and percussion parts feature a series of ascending arpeggios, which are highlighted by a blue box. The string section provides a harmonic foundation, with the first part of the gesture (measures 5-7) in F Gong-mode and the second part (measures 8-10) in A Gong-mode. A red box highlights the 'connecting gesture' between the two parts. The score is annotated with 'first part' and 'second part' in red, and 'F Gong-mode' and 'A Gong-mode' in blue. A red arrow points to the 'connecting gesture' and a blue arrow points to the 'contrasting harmony'.

Type 5: The undercurrent's motion

The undercurrent's motion is the last type of "flowing water" image. This motion is expressed by the trill gesture in Part II of the Water movement, where the composer conveys a more turbulent state of "flowing water." This turbulent state is not only achieved by the trill gesture, but also through the intensifying orchestration and varied harmonic color. The harmonic color is a mix of pentatonic tetrachords and their non-modal tones - notes that do not belong to the pentatonic mode that is in use. As shown in Ex. 9, m. 9 features non-modal tones played with a tremolo gesture. The pitch E is a non-chord tone of the two tetrachords (0,3,5,7) and (0,5,7,9) in F Gong-mode. Later the tetrachord (0,4,7,9) in Gb Gong-mode, enters while the F Gong-mode tetrachord (0,3,5,7) still remains in the horns and the upper strings. In m. 10, the composer adds the woodwinds and two marimbas to play the tremolo motif to create an even more exciting atmosphere. The harmonic color of the tremolo motif begins to change rapidly at this point in order to create the effect of increasingly rougher waters. More specifically, the naturally jarring sounds of the brass instruments come to the forefront for the very first time and add a new aggressive intensity of the water.

Ex. 9 The Undercurrent Motion, mm. 5-10

The second tremolo gesture appears in m. 20, which is the beginning of the transitional passage between Part II and Part III. It recalls the tremolo gesture at the beginning of Part II, which signals a distinct change from agitation to tranquility. (Ex. 10)

In this section, Chen creates double-layers of harmonic color to represent the rich currents of the "flowing water." The first layer is a tetrachord (0,3,5,7) in Eb Gong-mode and the second layer is a major chord in Eb major. This doubled harmonic layer weakens the pentatonic color by merging it with major chords. It continues with the dissonant sound of Part II, and paves the way for a later unification of the pentatonic mode at the end.

Ex. 10 Second Tremolo Gesture, mm. 17-21

The musical score for Ex. 10, Second Tremolo Gesture, mm. 17-21, is a multi-staff score. The top section includes staves for Vibra, Marimba, Triangle, and Metal chimes. The bottom section includes staves for Hpe and Pno. The score shows a tremolo gesture in the piano part, with dynamic markings from *pp* to *f*. Two blue boxes highlight specific sections of the piano part, indicating the start and end of the tremolo gesture.

Image 3: “opaque or clear water”

The water textures of the “opaque or clear water” image is most essential throughout the rest of the piece. It expresses the ever-changing surface of water, like the pristine creeks flowing in calm or agitated streams through the Water movement that hint at the water’s opaque or clear depth. These pristine creeks feature two forms of sustained chords: the ordinary sustained chord consisting of the pentatonic scale represents the clear water, whereas the trill, atonal chords depict the opaque water. This hidden layer varies throughout the entire Water movement by modulating and overlapping with each other to replicate the feeling of rapidly changing water conditions.

Type 1: From clear to opaque

As shown in Ex. 11, in m. 7, a sustained chord gradually fades-in, like a stream of calm and clear water. This effect is achieved by a pentatonic tetrachord (0,2,5,7) in A Gong-mode, played by violin and viola sections. This string chord provides an initial harmonic bed that invites the music to modulate towards a more agitated state through the use of submerged discordant chords. From mm. 8-9, the harmonic color rapidly switches from the tetrachord (0,2,7,9) in A Gong-mode to the tetrachord (0,2,7,9) in C Gong-mode. Later, another tetrachord (0,2,5,7) in Gb Gong-mode is added to the low string section. Ex. 12 is a harmonic reduction that provides a clear view of this harmonic change. The tetrachord in Gb Gong-mode in the low register and the tetrachord in F Gong-mode in the higher register create a new dissonant color from their superimposition. It heralds the transformation from a clearer water texture to an opaquer one.

Ex. 11 From Clear to Opaque, mm. 7-10

The image displays a musical score for measures 7 through 10, focusing on the string sections: Violin I (VI.I), Violin II (VI.II), Viola (Vla), Violoncello (Vlo), and Contrabass (Cb). The score is annotated with three colored boxes highlighting specific harmonic structures:

- Blue Box (Measures 7-8):** Highlights the A Gong-Mode tetrachord (0,2,5,7) in the violin and viola sections.
- Red Box (Measures 8-9):** Highlights the F Gong-Mode tetrachord (0,2,7,9) in the violin and viola sections.
- Green Box (Measures 9-10):** Highlights the Gb Gong-Mode tetrachord (0,2,5,7) in the cello and contrabass sections.

Below the score, the following labels are present:

- Ab Gong-Mode** (positioned below the blue box)
- F Gong-Mode** (positioned below the red box)
- Gb Gong-Mode** (positioned below the green box)

The score includes various performance markings such as *pp* (pianissimo), *p* (piano), *gliss* (glissando), *arco* (arco), *solo* (solo), and *sf* (sforzando).

Ex. 12 Harmonic Reduction of Type 1

A Gong-mode: (0,2,7,9) F Gong-mode: (0,2,7,9)



Gb Gong mode: (0,2,5,7)

Type 2: The opaque water

In the second part, in order to describe the turbid water texture, Chen adds trill to the sustained notes to describe the vibrant and muddy underneath of water. From m. 13, string instruments start to play trill instead of ordinario. Each string part plays double-stops instead of a single note. As shown in Ex.13, the composer creates two contrasting harmonic layers. The first layer consists of the contrabass and the cello sections. It is a tetrachord (0,2,5,7) in Bb Gong-mode, which consists of two overlaid perfect fifths. The second layer consists of the violin and the viola sections. It plays a minor seventh chord in D Major, which also includes two overlaid perfect fifths. After a glissando, the first violin changes to the tetrachord (0,2,4,9) in Db Gong-mode. Thus, the harmonic color in the string section becomes more complex and dissonant.

Above the multi-harmonic layered string section, the woodwind section expresses a dissonant cluster of sounds. This unique effect consists of all woodwind instruments playing atonal wave gestures and sustained trill notes. The gathering of all woodwind timbres in dissonant ostinato gestures creates a dark, unstable and amalgamated sound.

By merging the multi-harmonic layered string section with the dissonant and vibrant woodwind section, the composer is able to create a turbid and volatile sonic image of water.

Ex. 13 The Opaque Water, mm. 11-15

The image shows a musical score for 'The Opaque Water' (mm. 11-15). The score is written for a woodwind and string ensemble. The woodwind section, including Flute I, Flute II, Oboe, Bassoon, and Clarinet, is highlighted with a green box. The string section, including Violin I, Violin II, Viola, Violoncello, and Contrabass, is also highlighted with a green box. The score includes dynamic markings such as *fpp*, *f*, and *p*, and tempo markings like *plus, lent* and *slow plus*. The woodwind section is marked with *fpp* and *f*, while the string section is marked with *fpp* and *p*. The score is in 4/4 time and features a complex, layered texture.

Image 4: “Spirit of water”

The “spirit of water” is the only melodic figure which appears in the beginning of the movement. And as it is the only melodic water image, it is the most prominent sound among the four water images. This image does not describe the physical movement of the water, but rather expresses its pure or turbid nature. For this reason, I call it the “spirit of water.” Unlike the other three images, which mimic physical movements and shapes of water, this melodic image captures the nourishing energy and spiritual purity that water represents in the Wuxing theory. Layered atop the ever-changing forms of water, the “spirit of water” figure always leads to an eventual change of character or modulation.

And because the “spirit of water” appears once in each part, I will discuss how this figure functions in its three times appearances.

Type 1: The spirit of the clear water

The first appearance of the “spirit of water” is the statement of the water’s purity. This pure sound is expressed through a singable melody in an ethereal timbre that utilizes the harmonic conception of the perfect fifth. After the introduction, the “spirit of water” is played by the solo clarinet beginning in m. 4 (Ex. 14). The melody is built on three notes, two of which (pitch A and E) are played by the clarinet while the note B is played by the solo flute. Each note is a perfect fifth apart, which is an important harmonic idea in the Water movement. The similar sound of the flute and the clarinet allow for a very pleasant and natural timbral modulation through the melody line. The consonant sound effect of this melody line reinforces the purifying qualities of water by using the most perfect of intervals: the perfect fifth.

Also, there are two timbral elements employed in the solo melody line: the vibrato and the decorative notes. The vibrato of the clarinet solo part is derived from the vibraphone’s slow vibrato in the very beginning of the movement, whereas the decorative notes can be seen as a condensed version of the “flowing water” gesture. These elements come from the image of “Water droplets” and are embedded within the “spirit of water” melody. The composer’s ability to hybridize different water images demonstrates his compositional approach of designing and developing multi-dimensional musical materials.

Ex. 14 The Spirit of Clear Water, mm. 1-10

The image shows a musical score for 'The Spirit of Clear Water' (mm. 1-10). The score is for a large ensemble including Flutes, Oboes, Clarinets, Bassoons, Horns, Trumpets, Trombones, Tuba, Maracas, and Timpani. The score is annotated with several key features:

- The Soul of Water**: A red box highlights a section of the score, with the text 'The Soul of Water' written above it.
- Vibrato**: A blue arc labeled 'Vibrato' spans across a long note in the lower part of the score.
- Common note**: A green circle labeled 'Common note' highlights a specific note in the upper part of the score.
- F Gong-mode**: A green box labeled 'F Gong-mode' highlights a section of the score.
- A Gong-mode**: A green box labeled 'A Gong-mode' highlights a section of the score.
- Decoration**: A blue box labeled 'Decoration' highlights a section of the score.

Type 2: The spirit of the turbid water

The second appearance of the “spirit of water” figure ushers the water texture from clear to turbid. It appears at the beginning of Part II (mm. 9-11) as the solo cello plays in the high register (Ex. 15). In the beginning of m. 9, the first note of the solo melody - A - derives from the tetrachord (0,2,5,7) in F Gong-mode that is played by the violin and viola sections. After that, the note of A in the solo melody changes to a B \flat and is followed by the transformation of the string section from F Gong-mode to G \flat Gong-mode. The interplay between the solo melody line and the shifting chords creates a vivid

and rapid motion of water that symbolizes a turning point in the water's complexion from clear to turbid.

Ex. 15 The Spirit of the Turbid Water, mm. 5-10

The musical score for 'The Spirit of the Turbid Water' (Ex. 15) spans measures 5 to 10. It is a complex orchestral work with multiple staves. Key annotations include:

- Melodic theme:** A red box highlights a melodic line in the upper woodwinds (measures 5-6).
- F Gong-Mode:** A blue box highlights a section in the lower woodwinds and strings (measures 7-8).
- Gb Gong-Mode:** A green box highlights a section in the lower woodwinds and strings (measures 9-10).

The score includes various instruments and vocal parts with lyrics in Chinese and English. The tempo is marked 'Allegro'.

Type 3: The spirit of the returning pure water

The last time the “spirit of water” melody figure appears is in the third part, as it attempts to revert the murkier water back to its more tranquil condition (Ex. 16). At this moment, the solo melody is played by the solo oboe and accompanied by an array of

other instruments. In the accompaniment part, the composer divides the orchestra into two groups: the first group includes the woodwind section (except for the first oboe), pitched-percussions, and the piano; the second group includes the first oboe and the string section. The timbre of the solo oboe, in conjunction with the strings, represents a vivid, clear color; the tremolo of the pitched-percussions, piano, and woodwind section, contrastingly, represents the lingering turbid water. In the first group, as the solo oboe plays a new note, the string section responds with a new tetrachord. When the oboe plays E, the string section plays a tetrachord (0,3,5,8) in Eb Gong-mode to create a dissonance against the E in the oboe solo above it. Later, this dissonant color between the oboe and underlying string section converts to a consonant color as the string section plays a new tetrachord in F# Gong-mode to accompany the solo oboe's new note of F#. This color switch represents the reversion of the once-rapid and murky water back to its peaceful, clear state. By allowing the solo oboe line to dictate the harmonic modulations that occur underneath it, the composer is able to show a gradual, yet natural shift from contrast to unity. This allows the solo oboe to lead the harmonic direction of the music away from its murky conditions towards a clearer state one note at a time.

Ex. 16 The Spirit of the Returning Pure Water, mm. 17-23

The musical score is for a large ensemble, including woodwinds, brass, strings, and percussion. The score is divided into three systems. The first system (mm. 17-23) features a woodwind section with a melodic theme highlighted in a red box. The second system (mm. 24-30) features a percussion section with a melodic theme highlighted in a blue box. The third system (mm. 31-37) features a string section with two melodic themes highlighted in green and orange boxes. The score includes various dynamic markings (pp, p, f, ff) and performance instructions (e.g., 'The melodic theme', 'F# Gong-mode', 'Eb Gong-mode').

The melodic theme

F# Gong-mode

Eb Gong-mode

Conclusion of the Water movement

In the Water movement, Qigang Chen uses his unique musical language to describe the four different images of water as they exist in the Wuxing theory. As a core component of the Chinese Wuxing theory, water has both negative and positive connotations associated with it. On the negative side of the spectrum, water represents a turbulent and chaotic energy; however, on the positive side, water represents calmness and purity of spirit. Chen uses the pentatonic style, especially its perfect fifth interval, to represent the harmonic color of placid, undisturbed water. Yet, Chen strategically integrates more dissonant, atonal harmonic colors into the underlying pentatonic style of the water when he wants to express its more turbid condition. Ultimately, Chen takes us on a journey through these ever-changing states of water as it gradually transforms from its innocent, benign beginnings to a growing complexity of disorder before reverting back to tranquility.

Chapter 5: Analysis, “The Wood Movement”

The second movement is meant to reflect the character of wood. According to the traditional Wuxing theory, wood is meant to symbolize the essence of growth, strength and vigor. Besides symbolizing these characteristics, wood is also meant to signify the image of a life in bloom. Quite essential to the theory of Wuxing, the Wood movement intentionally follows the Water movement, as water is recognized in the wuxing theory as nourishing and, ultimately, giving rise to wood. And, as the two elements are so intertwined for this reason, the Wood movement contains similar gestures to the preceding Water movement in order to highlight the connection between the two elements.

The Wood movement gives rise to five different characterizations of five properties of wood: 1) *water dampness*, which pays homage to the previous “water” figures of the piece as a source of nourishment for wood 2) *vitality*, which represents the force of growth powering the trees 3) *germination*, which depicts the spontaneous moment in which seeds first pop out of the ground 4) *spirit of wood*, which conveys the essence of wood and represents the only melodic figure in the movement 5) *sprouting*, which musically mimics the image of plants’ blooming in different directions.

The Wood movement is the shortest movement in *Wu Xing*. It consists of a single part, yet there are two climactic moments within this section that clearly delineate the form of this movement. The first climax occurs in m. 13 and the second climax spans mm. 22-23. The next section provides an in-depth analysis of how Qigang Chen sonically

conveys the aforementioned properties of wood as well as how these properties merge to create a unified whole.

Table 2: Five Properties of Wood

Properties	Types			*Commentary
I. Water dampness	1.Outlines of wave-like gesture	2.Multi-linear wave	3. Rain-drops	Characterized by instrument
	<i>Played by non-pitched percussion instruments</i>	<i>Played by Strings</i>	<i>Aleatoric ostinatos that are played by woodwind and non-pitched percussions</i>	
II.Vitality	1.Ferocious energy	2.Dissipation of growth		Characterized by gesture
	<i>five repetitive 32nd notes without rests</i>	<i>five repetitive 8th notes with rests</i>		
III. Germination	Noise effect			
	<i>Extending technique of strings</i>			
IV. Sprouting	1.Intense Struggle	2.Triumphant blooming		
	<i>accumulative sustained chords from higher to lower register</i>	<i>upward accumulative motion of sustained chords</i>		
V. Spirit of wood	Linear figure			
	<i>Stepwise melodies in legato, played by one piccolo and two clarinets</i>			

Five Properties of Wood

Property 1: “Water dampness”

The first musical property, “water dampness”, begins the Wood movement and harkens back to the “wave-like” gesture that appears in the preceding Water movement. As “water dampness” reflects many of the same characteristics of water, the gesture of “water dampness” in this movement inherits the same rhythmic figure as the “wave-like” gesture in the Water movement but without harmonic sonority. A rhythmic figure is shared in both sections suggests a similar state of flowing water. Moreover, Chen creates three different variations of “water dampness” to highlight the importance of water for wood. Type 1 loosely outlines a wave-like gesture of water independent of pitch, type 2 fully articulates the multi-layered water wave in colorfully harmonic detail, and type 3 portrays the spontaneous sound of rain drops in an aleatoric style.

Type 1: Outlines of Wave-like Gesture

This form of gesture opens the movement and clearly reminds the audience of the wave-like gesture in the Water Movement, albeit with some modifications. As Ex. 17 displays, this gesture is played by non-pitched percussion instruments and is meant to portray the curved shape of a wave. The composer achieves this effect by dividing 12 wood-block instruments into two groups as well as 12 temple block instruments into two groups. Each of the resulting four groups plays in subtle, divergent rhythmic patterns (nonuplet, and decuplet) that create the curving contour of an irregular wave. The composer chooses all wooden percussion instruments to further reinforce the

hollow, wood-like texture of this section and distinguish the character of the wood from the water. Yet by incorporating the wave-like gesture with these wooden instruments, the listeners are reminded of the relationship between water and wood.

Ex. 17 Outlines of Wave-like Gesture, m. 1

The image shows a musical score for four percussion staves, labeled 1 through 4. Each staff is marked with a '6' and the instrument name: '6 Temple-blocks' for staves 1 and 3, and '6 Wood-blocks' for staves 2 and 4. The time signature is 2/4. The music features a wave-like gesture across the four staves, with dynamics marked 'p' (piano) and 'ff' (fortissimo). The notation includes various rhythmic patterns and slurs, creating a continuous, flowing sound.

Type 2: Multi-linear Wave

The second type of “water dampness” is a multi-linear wave figure. Compared to type 1, this gesture contains more rhythmic variety and melodic pitches. In fact, this figure is clearly inspired by the wave-like gesture from the previous Water movement. As shown in Ex. 18, this gesture is played by the string section and, more specifically, features five subsections playing different rhythmic patterns, including triplets, regular sixteenth notes, quintuplets, and sextuplets. Each subsection slithers its way up or down the scale with skip-like motions; yet, when these parts converge, it creates a vivid and lively depiction of a wave of sound that is both constantly in motion and capable of coming together at distinct moments. And from a harmonic perspective, this figure has also adopted the harmonic feature of the previous Water movement: the pentatonic tetrachord. As shown in Ex. 18, the string section plays a pentatonic tetrachord (0,3,5,8)

in B Gong-mode. Yet, for this figure, specifically, the composer incorporates a non-scale tone - an F played by the second violin - naturally creating a dissonant minor second interval with the F# in the pentatonic tetrachord. This F simultaneously blends with the pentatonic color from the Water movement while offering the listener a subtle reminder of the minor second interval, an important harmonic idea that is prevalent throughout the Wood movement.

Ex. 18 Multi-linear Wave, mm. 21-24

The image shows a musical score for a section titled 'Multi-linear Wave, mm. 21-24'. The score is written for a string ensemble, including Violins I and II (VL I, VL II), Viola (Vla), Violoncello (Vcl), and Double Bass (Cb). The notation is complex, featuring many sixteenth and thirty-second notes, often beamed together in dense, overlapping patterns. Dynamics such as *f* (forte) and *ff* (fortissimo) are indicated. There are also some performance instructions in Italian, such as 'sul C' (sul C) and 'div. sul D con fl.' (div. sul D con fl.). The score is divided into measures by vertical bar lines, and the overall structure suggests a highly rhythmic and textural piece.

Type 3: Rain-drops

The “rain drops” sound is the last figure of the three “water dampness” properties found in the Wood movement. This sound is achieved by using aleatoric technique, a 20th century musical style in which some of the musical elements are strictly marked - such as duration and pitch - whereas other elements are undefined, such as tempo and pitch. In this case, the strictly indicated materials are the pitch, duration, and dynamic; the undefined material is the rhythm. The unconstrained rhythm in this aleatoric section is

meant to convey the excitingly unpredictable and randomized phenomenon of falling rain drops that will, later, nurture the wooden tree. Furthermore, the composer attempts to add to the irregularity of the section by blending figures played by pitched (2 flutes, 2 oboes, and 2 clarinets) instruments with non-pitched (12 temple blocks and 12 wood blocks) instruments, as shown in Ex. 19. These woodwind instruments play dissonant atonal ostinatos in the high register, whereas the non-pitched percussions play vertical motion ostinatos. The combination of articulated woodwind high pitch sound and the clear accents of wood percussion instruments create a refreshing emotion that, in conjunction with the unrestrained aleatoric rhythm, creates a raindrop-like sound effect.

Ex. 19 Rain-drops, mm. 9-12

[illegible]

Property 2: “Vitality”

The “vitality” property of the Wood movement is meant to convey the strength and vigor that defines wood growth. This figure features two different groups of accented notes: type 1, which consists of five consecutive accented 32nd notes played with a forceful dynamic; and type 2, which consists of five 8th notes, each of which is followed by an 8th note of rest. Type 1 is played quite animatedly and is meant to express the ferocious and agitated energy that usually accompanies the growth in wood. Type 2, on the other hand, is meant to show the after-effects of the rapid growth represented in Type 1.

Type 1: Ferocious Energy

The “ferocious energy” gesture appears at the outset and constantly reappears throughout the entire Wood movement. This character depicts the strong energy of wood that is eager to grow and fortify itself. The composer expresses this idea by using an aggressive rhythmic figure played in strong dynamics to demonstrate an unbridled state of the wood through purposefully unclear and cacophonous pitches. Below I will discuss the three distinctive appearances of “ferocious energy”: a) the beginning, b) the first climax, c) and the second climax.

a) the beginning

As shown in Ex. 20, the first appearance of the “ferocious energy” gesture occurs in m. 8. This energetic gesture features three sound elements: a muffled piano sound, a deep and grounded bass drum sound, and a refreshing bamboo sound. The muffled timbre

of the piano fuses with the bass drum's accents to create a deep and powerful resonance. This ferocious timbre is played in five consecutive 32nd notes beginning on the downbeat in measure 8. Above the rapid and grinding accents, a bamboo glissando appears on the upbeat of the second eighth note. This rejuvenating high bamboo sound expresses a soothing counterbalancing energy. In this section, the composer not only creates a contrast in timbre, but also in rhythm: the deep and low percussive sound starts at the down beat, and the refreshing and high sound of the bamboo glissando occurs on the upbeat. This timbral and rhythmic juxtaposition helps sonically express the multidimensional nature of wood in growth: deep and strong roots that penetrate into the ground to provide life, and the refreshingly breezy atmosphere of the wood above the ground as it grows towards the sun.

Ex. 20 Ferocious Energy, in the Beginning, mm. 1-8

The image shows a musical score for measures 1-8. The score is written for a large ensemble, including percussion and strings. The percussion section includes Tempto-blocks, Wood-blocks, Marimba, and Vibraphone. The string section includes Harp and Piano. A blue box highlights a section of the score, likely corresponding to the 'ferocious energy' described in the text. The score is in 4/4 time and features a variety of rhythmic patterns and dynamics.

b) the first climax

The second significant moment of the “ferocious genergy” gesture serves as the first climax in the Wood movement (Ex. 21). This section expounds on the previous

repetitive 32nd gesture in both timbre and duration. Timbrally, the sound of 32nd notes is deepened by having the string section play ricochets in a low register with strong dynamic along with 3 log drums and 6 woodwind instruments. The combination of the extended performance of the string instruments with the non-pitched percussion creates a purposely unfocused musical cacophony meant to symbolize a potent blast of energy that defines wood growth. It is an expansion of the previous gesture played by the piano and bass drum. Moreover, on the last upbeat of the measure, the harp and piano play a small gesture to replenish the heavy and aggressive sound of the low and deep string sound. This little gesture can be seen as an updated version of the bamboo sound in the previous example.

Ex. 21 Ferocious Energy, in the First Climax, mm. 9-14

The image displays a page from a musical score, specifically measures 9-14 of a section titled 'Ferocious Energy' in the First Climax. The score is written for a large orchestra, including woodwinds (flutes, oboes, clarinets, bassoons), strings (violins, violas, cellos, double basses), and percussion (timpani, snare drum, cymbals, etc.). A prominent red vertical line is drawn across the score, highlighting a specific section of the music. The notation includes various musical symbols such as notes, rests, and dynamic markings like 'pp' (pianissimo) and 'f' (forte). The score is arranged in a standard format with staves for each instrument family, and the red line indicates a key moment in the composition, likely the 'bamboo sound' mentioned in the accompanying text.

c) the second climax

The most aggressive and colorful moment of the “ferocious energy” figure is at the second climax of the Wood movement. The main different between this and the other two examples aforementioned is that the listeners can not only hear the cacophonous rhythmic figure, but also hear clear pitches in the powerful short gestures. As shown in Ex. 22, from mm. 22-23, the climax consists of two groups of instruments, each playing five accented 32nd notes in a strong dynamic. The first group includes the woodwind section, trumpets, pitch-percussions and piano; the second group features the entire brass section. Each section is playing chromatic scales in descending or ascending patterns. By assigning the five accented 32nd notes into a short chromatic scale, the composer emphasizes the important harmonic color of the Wood movement through minor second intervals. The dissonant intensity of these minor 2nd interval patterns demonstrates an increasingly excited and aggressive ferocity of wood.

Ex. 22 Ferocious Energy, in the second climax, mm. 22-23

The image displays a page from a musical score, specifically focusing on measures 22 and 23. The score is written for a large orchestra, with staves for various instruments including woodwinds, brass, and piano. A blue rectangular box highlights a section of the score, likely corresponding to the 'ferocious energy' figure mentioned in the text. The highlighted section shows dense, chromatic patterns in the woodwind and brass sections, characterized by minor second intervals and accented 32nd notes. The notation is complex, with many notes and dynamic markings, indicating a highly energetic and dissonant passage.

Type 2: Dissipation of Growth

The second type of “vitality” property only appears at the end of the epilogue of the Wood movement. Compared with the ferocious type of “vitality” expressed in type 1, type 2 similarly incorporates a repetitive concept to connote the firm energy of wood; however, type 2 serves as a softer, sonically calmer denouement to the climax of type 1. This figure consists of a group of five repetitive 8th notes, each of which are followed by 8th note rests. These steady 8th notes are played by two marimbas in the mid-high register and are later echoed by the log drums and woodblocks in soft dynamics. Compared with Ex. 22, the sparser instrumentation and slower-paced gesture featured in Ex. 23 is meant to create a soothing effect to the remaining “Vitality” rhythmic figure. This music expression serves to mitigate the intensity from the previous figure while maintaining the vitality of wood in growth.

Ex. 23 Dissipation of Growth, mm. 26-27

The musical score for Ex. 23, 'Dissipation of Growth, mm. 26-27', is presented for four staves. The instrumentation includes Grosse caisse (Bass drum), Tambour de bois (Log drum), (Marimba), and Wood-blocks. A blue box highlights the section from measure 26 to 27. The music features a repetitive eighth-note pattern in the marimbas, followed by eighth-note rests, which is then echoed by the log drums and woodblocks in soft dynamics (pp, p, f, ppp).

Property 3: “Germination”

The “germination” property is a unique gesture that only appears once in the Wood movement. The gesture does not resemble anything else in this movement. It expresses an agitated sound effect meant to sonically depict the urgency and anxiety of seeds expending a lot of energy to burst out of the ground. This concept can easily be associated with the notion of Germination. This sound effect is achieved through sporadic sounds produced by a string section using extended performance technique. As shown in Ex. 24, the whole string section uses the extended technique of hitting its own strings with the very tip of the bow – exactly where the hair covers the ivory tip. This technique creates a similar effect to the technique of *col legno battuto*. Later, the composer adds energy to the gesture by shifting the registers between the bridge edge of the fingerboard and the left hand. This modern performance technique of strings allows the instruments to create a pure sound effect by, ironically, producing intentionally pitch-less sounds. The sound from the technique is exciting, yet slightly unnerving and represents the energy of plants germinating above the ground.

Ex. 24 Germination, mm. 3-12

The musical score for Ex. 24, "Germination," measures 3-12, is presented for a string ensemble. The staves are arranged from top to bottom: Violins I (VL I), Violins II (VL II), Violas (Vla), Violas (Vla), Violins (Vln), Violas (Vla), and Cellos (Cb). A blue rectangular box highlights the performance instructions for measures 3 through 12. Within this box, each instrument part is marked with a dynamic of *pp* (pianissimo) and includes a series of slanted lines indicating bowing patterns. To the right of the box, performance instructions are provided in both French and English: "jouer alternativement sur les 2 cordes" and "play alternately on each string." Above the first staff, a note reads "play alternately on each string." The score is written in 2/4 time and features a key signature of one sharp (F#). The initial dynamic for measures 3-12 is *f* (forte). At the end of the highlighted section, there is a marking "tutti on D" and a final *f* dynamic.

Property 4: “Sprouting”

The “sprouting” figure expresses the gradual culmination of many stages of wood growth as it reveals the depth and scope of its evolution towards full bloom. This sound property is achieved by gradually adding instruments and pitches to either the higher or lower register of the section to reinforce and augment its musical color and energy. The “sprouting” figure has two contrasting types: 1) Intense struggle, which conveys the final push towards sprouting, uses dissonant atonal harmony 2) Triumphant Blooming, which conveys the triumphant moment at which a bloom is achieved, is expressed when the pentatonic color eventually appears.

Type 1: Intense struggle

Type 1 features a descending stacked chord that is simply deepened in intensity. It expresses those chaotic and exhaustive final moments in which a has to persevere to reach a full and unencumbered bloom. As shown in Ex. 25, this sound features the gradual inclusion of woodwind instruments playing accumulative sustained chords from higher to lower register, eventually becoming a vertically clustered chord of deep resonance. This downward gesture is highlighted by two accented short cluster chords played by brass and pitched percussion instruments. The combination of the accumulative sustained chords played by woodwind instruments and the bright, yet brief sounds of the brass and pitched percussion instruments creates a sound image an exciting struggle in which wood is on the verge of sprouting.

Ex. 25 Intense Struggle, mm. 14-17

Type 2: Triumphant Blooming

The second “sprouting” type occurs in short succession to the first type. The “triumphant blooming” figure, is based on pentatonic color (first), in direct contrast to the “intense struggle” figure, features an upward accumulative motion of sustained chords. The composer provides this direct contrast of a powerfully descending figure of type 1, and followed by a resonant upward figure to underscore the initial struggle of the pre-bloom phase as well as the unbridled glory of when blooming is finally achieved.

As shown in Ex. 26, type 2 begins in the lower register and proceeds to gradually add elevated pitches to our growing sustained chord. The composer adds higher registered string instruments to this ascending chord, each new pitch intentionally

doubled by a pitch played on the harp and later on the piano. Eventually, this accumulative gesture become a vertical pentatonic tetrachord (0,3,5,8) in Db Gong-mode. This pentatonic chord is played with soft pedal sound of the string, harp and piano create the illusory and imaginary sound of plants in bloom, and further reinforces the contrast between the “triumphant bloom” and the previous type, “intense struggle”.

Ex. 26 Triumphant Blooming, mm. 16-18

The musical score for 'Triumphant Blooming' (mm. 16-18) is shown. The score includes parts for Harp (Hpe), Piano (Pno), Violins I (Vi. I), Violins II (Vi. II), Viola (Vla), Violoncello (Vlc), and Contrabass (Cb.). The key signature is B-flat major (two flats). The time signature is 4/4. The score is marked with 'dolce' and 'normal dolce'. A red arrow points to the 'Double' annotation, indicating a doubling of the pitch. A red box highlights the 'Db Gong-mode' section, which is a vertical pentatonic tetrachord (0,3,5,8) in Db Gong-mode. The score shows a sequence of notes in the right hand of the piano and the harp, which are doubled in the strings. The notes are: G4, A4, Bb4, C5, D5. The notes are played in a sequence, with the piano and harp playing the notes in the right hand, and the strings playing the notes in the left hand. The notes are played with a soft pedal sound, creating an illusory and imaginary sound of plants in bloom.

Property 5: “Spirit of Wood”

The “spirit of wood” property is the only linear figure in the Wood movement and appears just once early in the Wood movement. Compared with the three previous properties of wood, this figure does not depict the physical and powerful characteristics of wood but, rather, expresses the refreshing atmospheric spirit of wood. This property is achieved by having woodwind instruments play stepwise melodies in legato in the harmonic color of perfect fifths and minor seconds, the most prominent harmonic elements throughout the Wood movement.

As shown in Ex. 27, this linear figure consists of one piccolo and two clarinets in the high register. It begins monophonically with all three instruments playing the note E. After this note, the two clarinets fade away by playing chromatic scales in a quasi-glissando manner in opposing directions: one clarinet playing ascending notes from E to A while the other plays descending ones from E to B. While this divergence is occurring, the piccolo continuously holds the note of E as a pedal tone so that, by the conclusion of this melody, the two clarinets are playing A and B, respectively, while the piccolo is playing an E - these three notes represent the superposition of two perfect fifth intervals (A-E-B). This perfect fifth harmonic concept is inherited from the preceding Water movement. More interestingly, when the perfect fifth is obscured on both sides by the chromatic scale, the sound of the perfect fifth is weakened. Chen’s ability to use the pentatonic element of a consonant perfect fifth and mix it with minor 2nd harmonic color is a unique and effective way to show wood’s multifaceted aura of both calm and aggressive strength.

Ex. 27 Spirit of Wood, mm. 9-10

Picc. (Picc.)
 Hrb. 1
 Hrb. 2
 Cl. 1 en Si.
 Cl. 2 en Mi.
 Cl. 3 en Si.
 (B.)
 p
 quasi gliss
 p
 quasi gliss
 p

Conclusion

In the Wood movement, each property possesses its own distinct character. Some properties represent the flowing and graceful gesture of nurturing water while others express the firm and harsh characteristics of wood. By blending the differing harmonic and timbral colors of these contrasting gestures, the composer is able to portray different stages of wood's development to richly encapsulate its many different characteristics.

Chapter 6: Analysis, “The Fire Movement”

In the Wuxing theory, all elements are connected to each other. In keeping with this conception, the water element is thought to give rise to wood which, in turn, helps to generate fire. For this reason, Chen purposefully ordered the Fire movement to follow the Wood movement. During ancient times, people believed that fire represented warmth and vitality, but also danger and risk. Thus, the Fire movement in Qigang Chen’s *Wu Xing* composition is meant to sonically depict the image of a chaotic, unpredictable, and volatile fire.

The Fire movement contains a clear form. It consists of two parts and a coda. Part I of this movement goes from mm. 1-13, Part II of this movement spans mm. 14-27, and the coda concludes the movement from mm. 28-32. In this movement, Chen conveys three states of fire: 1) *growing flames* 2) *blazing flames* 3) *simmering fire*. By mixing, varying and allocating the three main states, Chen is able to demonstrate all of the different phases and characteristics of fire in breathtaking detail.

In the next section, I will analyze how Qigang Chen combines and mixes his unique approach of harmony, timbre, and gesture to portray the multifaceted characteristics of fire.

Table 3: Three States of Fire

States	Types			*Commentary
I. Growing flames	1. Gradual fire	2. Subdued fire		Characterized by gesture
	<i>Series of steady patterns consisting of successive half-note chords on downbeats</i>	<i>Added upbeat pattern</i>		
II. Blazing flames	1. Downward jumping motion	2. Steady motion	3. Upward shooting motion	
	<i>Accented and articulated 16th notes vacillate up and down with highlights accented chords.</i>	<i>Trill without accents</i>	<i>Fast moving ascending motion</i>	
III. Simmering fire	Sustained energy	Energy transference		
	<i>One sustained chord by brass section</i>	<i>Two overlapping chords played by brass and woodwind sections.</i>		

Three States of Fire

State 1: “Growing flames”

The “growing flames” state is the initial representation of fire in the movement. The sound feature of this “growing flames” state is an array of sustained chords consisting of whole notes, half notes that ebb and flow in intensity based on the appearance of accented half notes meant to add a dramatic flare. The state appears three times: at the beginning of Part I and II as well as the coda. The timbre of the “growing flames” state is bright and warm, and it is mostly performed by brass instruments playing in a variety of harmonies. This distinct brass sound is striking to the listener's ear and, as such, helps signify the beginning of a brand new Fire character. The composer creates two types of “growing flames.” Type 1 presents a gradual fire that begins to burn brightly; type 2 depicts a subdued fire that diminishes in energy.

Type 1: The gradual fire

At the beginning of the Fire movement, the “growing flames” state creates the effect of a fire that is just starting to burn brightly. As shown in Ex. 28, this character features brass instruments playing a series of steady patterns consisting of successive half-note chords with accents and subito piano. The accented half note of the brass section blends with the harmonic colors of the perfect fifth, diminished fifth, and minor second in order to emphasize the unstable and intense condition of Fire. As shown in Ex. 28, this section begins with a pentatonic chord in Bb Gong-mode. Soon thereafter, the

composer builds a superimposed perfect fifth (the third chord in Ex.29, Bb-F-C-G-D-A-E) to blur the pentatonic color as this superimposition includes several non-scale tones from Bb Gong-mode (E and A). Towards the middle of the “growing flame” section, this superimposed perfect fifth chord gradually transforms to a more dissonant sounding color with the inclusion of minor second and diminished fifth intervals. This transition to a more dissonant and excited harmony color helps depict a change in the energy of the fire that is increasing in intensity. After this foray into harmonic dissonance, the harmony eventually resolves back to its original position of the superimposed perfect fifth. The composer mixes the harsh, timbral sounds of the brass section with rapidly-changing dissonant chords to create the effect of the gradually intensifying and ever-changing condition of growing flames.

Ex. 28 Gradual Fire, mm. 1-7

The musical score for Ex. 28, "Gradual Fire," measures 1-7. It is written for five brass instruments: Cors 1 et 3, Cors 2 et 4, Th. 1, Th. 2 et 3, and Tuba. The key signature is B-flat major (two flats). The time signature is 4/4. The score features a series of chords and intervals, with many notes marked with 'sf' (sforzando) and 'p' (piano). The music is characterized by rapid changes in harmony and intensity, creating a sense of growing flames.

Ex. 29 Harmonic Reduction of Gradual Fire, mm. 1-7

Type 2: Subdued Fire

The “subdued fire” figure is the second type of the “growing flames” state and reappears towards the end of the Fire movement. This figure features the same series of steady patterns consisting of successive half-note chords as type 1, yet the sound of “subdued fire” in this section is both softer in timbre and richer in rhythmic detail (Ex.30). The composer is able to achieve a softer effect by doubling the brass section’s half-note pattern with a harp playing pizzicato chords. The harp’s pizzicato sound moderates the intense sound of the brass while providing a more soothing and rounded timbre at the end of the epilogue. As the brass and harp play this figure in unison, the lower string instruments and piano play repetitive, quarter notes on each upbeat to subvert the rhythmic consistency of the “gradual fire” gesture that occurs on the downbeat. As shown in Ex. 30, this section begins with a pentatonic trichord (0,2,7) and, through a harmonic progression of added and transformed diminished fifth and minor second intervals, resolves to a major third chord. The transitory nature of this harmonic

progression, played by the accented soft timbre of the brass, combines with the short, pulsating quarter note pattern to evoke the feeling of an understated yet bristling fire.

Ex. 30 Subdued Fire, mm. 26-31

The musical score for "Subdued Fire, mm. 26-31" is arranged for a large ensemble. The instruments and their parts are as follows:

- Cori 1 et 3**: Cornet 1 and 3, playing a melodic line with dynamic markings *sf* and *p*.
- Cori 2 et 4**: Cornet 2 and 4, playing a similar melodic line with dynamic markings *sf* and *p*.
- Trp. 1**: Trumpet 1, playing a melodic line with dynamic markings *sf* and *p*.
- Trp. 2 et 3 en SB**: Trumpet 2 and 3 in B-flat, playing a melodic line with dynamic markings *sf* and *p*.
- Th. 1**: Trombone 1, playing a melodic line with dynamic markings *sf* and *p*.
- Th. 2 et 3**: Trombone 2 and 3, playing a melodic line with dynamic markings *sf* and *p*.
- Tuba**: Playing a melodic line with dynamic markings *sf* and *p*.
- Perc. 1**: (Gr. caiss.) (flam. drum) playing a rhythmic pattern with dynamic markings *sf* and *p*.
- Hrp.**: Harp, playing a rhythmic pattern with dynamic markings *f* and *p*. A blue box highlights a section of the harp part.
- Pnn.**: Piano, playing a rhythmic pattern with dynamic markings *f* and *p*. A blue box highlights a section of the piano part.
- Vl. II**: Violin II, playing a melodic line with dynamic markings *f* and *p*. A blue box highlights a section of the violin II part.
- Vla**: Viola, playing a melodic line with dynamic markings *f* and *p*. A blue box highlights a section of the viola part.
- Vcl.**: Violoncello, playing a melodic line with dynamic markings *f* and *p*. A blue box highlights a section of the cello part.
- Ch.**: Chorus, playing a rhythmic pattern with dynamic markings *f* and *p*. A blue box highlights a section of the chorus part.

The score includes performance instructions such as *div.* (divisi) and *pizz.* (pizzicato). The dynamic markings *f* (forte) and *p* (piano) are used throughout the score to indicate volume changes. The blue boxes highlight specific sections of the harp, piano, violin II, viola, cello, and chorus parts.

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Ex. 31 Harmonic Reduction of Subdued Fire, mm. 28-31



State 2: “Blazing flames”

The “blazing flames” figure is the most prevalent of all the fire state throughout the Fire movement. The rapidity and intensity of this state sonically depicts the chaotic burning condition of a fire’s blazing flames. The composer expresses this state through the use of woodwinds, strings, and pitch-percussion instruments. There are three different shapes of the “blazing flames”: 1) downward jumping motion 2) the trill motion 3) the upward motion. The three conditions will be analyzed below to provide an understanding of how they are altered and combined with various harmonies, gestures, and timbres to depict different stages of “blazing flames”.

Type 1: Downward jumping motion

The downward jumping motion is the most representative figure among the three “blazing flame” types in the Fire movement, appearing directly after the soothing and steady “growing flames” figure. The dichotomy between the two figures is quite dramatic: the “growing flames” expresses the gradual state of fire while the downward jumping motion of “blazing flames” depicts a more excitable and unpredictable fire. As shown in Ex. 32, this figure features accented and articulated 16th note patterns that vacillate up and down, and is accompanied by additional accents to highlight the chord.

The composer assigns this animated gesture to three pairs of nimble and lively sounding woodwind instruments to sonically depict the excitement sound of “blazing flames.” The three pairs are the 1st flute + 1st oboe, 2nd flute + 1st clarinet, 2nd oboe + 1st bassoon. These highly-articulated woodwinds parts are further accented by harsher tones produced by the xylophone and marimba. In this section, the composer alternates between augmented fourths, perfect fourths and major third intervals. When these three contrasting intervals mix together during this rapid section, both the consonant and dissonant colors are obscured, thus creating a volatile sonic atmosphere to enrich the vivid and burning feeling of the “blazing flame.” The combination of the shrill timbre of the orchestra and the dissonant harmony sonically depicts the wildly aggressive energy of the “growing flames” in a downward jumping motion.

Ex. 32 Downward Jumping Motion, mm. 7-8

Type 2: Steady motion

After type 1 of the “blazing flames” state jumps chaotically downward, it eventually lands and uses the type 2 figure to define a more stable state of blazing fire.

Relying on a trill motion pattern played by three clarinets and the string section, type 2 serves as the transitional break between the downward jumping motion and the ascending pattern that will soon follow. Compared to the previously agile and volatile descending pattern with accents in skip-wise motion, this trill motion section provides the distinct contrast of a more soothing step-wise motion played in legato (Ex. 33). In this section, each of the three clarinets plays alternating minor second intervals to mimic the sound of the trill. Moreover, the clarinets' smooth trill pattern blends with the similar minor second motion played by the mid-register string instruments, creating a comprehensively relaxed state of fire.

Ex. 33 Steady Motion, mm. 7-8

The image shows a musical score for Example 33, titled "Steady Motion, mm. 7-8". The score is for a full orchestra, including Flutes 1 and 2, Horns 1 and 2, Clarinets 1, 2, and 3, and Basses. The tempo is marked as quarter note = 60. The key signature has one flat. The score shows measures 7 and 8. A red box highlights the clarinet parts in measure 8, showing a trill pattern of alternating minor second intervals.

Type 3: Upward shooting motion

After the soothing and gentle sound of type 2 of the “blazing flames” state, the upward shooting motion first appears and serves to boost the intensity of the blazing flames. This motion features fast-moving, ascending patterns played with strong dynamics, usually consisting of multiple step-wise ascending arpeggios in atonal style.

As the motion ascends, stronger dynamics are added to intensify the energy of the fire so as to present it as on the verge of erupting. As shown in Ex. 34, from the end of m. 9 through m. 10, the ascending pattern is played in an alternating fashion by the bassoon, bassoon & clarinet, clarinet & oboe, and oboe & flute. To add to the dramatic ascent of this section, these woodwind parts are doubled by the contrabass, cello & viola, and violins. Moreover, the pitch-percussion instruments of the vibraphone and two marimbas provide an underlying pedal effect by playing dissonant atonal intervals in tremolo motion. This flurry supportive bed underneath the upward shooting motion of the “blazing flames” state provides a consistently volatile stream of energy to heighten the motion above it. Lastly, the composer adds the bright sound of the cymbal and tam-tam to support the brilliant image of this chaotic fire.

Ex. 34 Upward Shooting Motion, mm. 8-9

The image shows a page of a musical score for measures 8 and 9. The staves are arranged vertically. The top section, enclosed in a red box, includes staves for Flute 1 & 2, Oboe 1 & 2, Clarinet 1 & 2, and Bassoon 1 & 2. These instruments are playing rapid, ascending sixteenth-note patterns. Below this, the string section (Violins 1 & 2, Violas, Cellos, and Contrabasses) is also enclosed in a red box and plays a tremolo accompaniment. At the bottom, there are staves for Vibraphone, Marimba 1, and Marimba 2, which are playing tremolo patterns. The score includes dynamic markings like 'f' (forte) and 'ff' (fortissimo). The overall texture is dense and energetic, characteristic of a 'blazing flames' state.

State 3: “Simmering fire”

The “simmering fire” state is the most subtle gesture in the Fire movement, featuring gentle sustained chords that increase and, later, decrease in intensity through the use of crescendos and diminuendos. This figure often accompanies or follows the “blazing flames” state either to emphasize the sizzle of the fire or help the “blazing flames” state diffuse throughout the piece. There are two types of “simmering fire.” Type 1 expresses sustained energy through the use of an elongated, sustained chord; type 2 represents energy transference by featuring multiple sustained chords that overlap with one another.

Type 1: Sustained energy

Type 1 of the “simmering fire” state features a long sustained chord. As shown in Ex. 35, this sound is achieved by brass instruments - four horns, one trumpet and two trombones - playing an accented long chord. This sustained chord can be divided into two harmonic layers: the top layer, a pentatonic tetrachord (0,2,5,9); the bottom layer, a diminished third chord. The mixing of pentatonic and atonal harmonic colors is a hallmark of this piece, as it can also be found in the previous Water and Wood movements. In this specific iteration, it begins with forte subito piano in m. 8 and, with the increasing intensity of a long crescendo, ends in blistering forte in m. 9. This sustained chord also accompanies both the downward jumping motion and steady motion types of the “blazing flames” state. In its every occurrence, it supports the dissonant harmonic colors above it while also emboldening it with depth. In so doing, it conveys the visceral feeling of a blazing fire.

Ex. 35 Sustained Energy, m. 8

The musical score for Ex. 35, Sustained Energy, m. 8, shows four staves: Cors 1 of 3, Cors 2 of 4, Th. 1, and Th. 2 et 3. The music is in 4/4 time and features a series of sustained notes with dynamic markings of *sfz* and *p*. Two specific harmonic structures are highlighted with red boxes: a 'Pentatonic tetrachord' in the upper staves and a 'Diminished 3rd.' in the lower staves.

Type 2: Energy Transference

While the type 1 figure suggests a rather pronounced and intense blaze, type 2 harnesses and, eventually, redirects the energy of this flame towards a dramatic grand gesture. This “energy transference” ultimately serves as an animated transition of the preexisting fire state from the end of Part II to the coda. As shown in Ex. 36, the first chord - a pentachord (0,2,4,7,9,) of Ab Gong-mode - is played by brass instruments in a soft dynamic. Later, the harmony changes to the dominant major third chord of Ab major and is expressed with a more intensifying crescendo dynamic. While the brass section sustains the major third chord in forte, woodwind instruments begin to play the new harmonic color of a major seventh chord in a very soft dynamic. Due to the similar timbre of the woodwind and brass instruments in the mid to low-register, this soft dynamic transition enables the woodwind instrument to build a smooth transition between the two chords. Gradually, the diffuse major-seventh chord of the woodwind section gradually overtakes the fading brass instruments, replacing the major triad color to portray fire in a gentler and calmer state. Ultimately, this combination serves to mitigate the intensity of the “blazing flames” state while paving the way for a new gesture.

Ex. 36 Energy Transference, mm. 19-22

The musical score for Ex. 36, 'Energy Transference, mm. 19-22', is for a string quartet. It features three distinct harmonic regions highlighted with colored boxes and labels:

- Pentatonic:** A blue box highlights measures 19-20, showing a pentatonic scale in the Violin I part.
- Major Seventh chord:** A green box highlights measures 20-21, showing a major seventh chord in the Violin I part.
- Major 3rd chord:** A red box highlights measures 21-22, showing a major third chord in the Violin I part.

Conclusion

According to the Wuxing theory, fire features many different characteristics and states, including heat, sizzle and flame. A “growing flame” represents the earliest stages of a fire that is attempting to generate momentum and longevity. This fire state eventually gives way to “blazing flames”, which represents a powerfully intense and chaotic fire. And the “simmering fire”, the remaining energy from a fire that once burned brightly, represents the concluding stage of a fire’s life cycle. When considering *Wu Xing* holistically as a composition whose movements connect with one another, the Fire movement represents the climax of the whole. After the Water and Wood movements, the musical qualities of the piece gain in intensity and appear ready to reach its climax. Harmonically, the Fire movement contains some elements from both the Water and Wood movements - such as the perfect fifth, minor second, and the augmented fourth. The harmonic transformation from the Water to Fire movement is a progression from pentatonic to atonal and from consonance to dissonance. And because fire represents a lively and intense energy in Wuxing, the Fire movement possesses more exciting and bright sounds compared to the Water and Wood movements.

Chapter 7: Analysis, “The Earth Movement”

The Earth movement is the third movement of *Wu Xing* and is meant to represent stability, harmony, and placidity. This movement contains an inviting warmth and femininity in keeping with the conception of a “mother earth” who nurtures and cares for all creatures on earth. The Wuxing theory subscribes to a similar idea of Earth as a force of stability, yet what distinguishes the earth from the other elements is the fact that it is directionless. While water flows downwards, wood grows outwards and fire burns upwards, earth is characterized as a vast and consistent plane extending in all directions, representing an eternally timeless and peaceful spirit. As such, Earth is believed to be the most balanced element among the five of Wuxing.

In Qigang Chen’s *Wu Xing*, the Earth movement is the most restrained and linear of the five movements. Three primary sound “landscapes” help to comprehend the way in which the composer expresses the simple yet elegant nature of Earth: 1) *earth’s foundation*, which sonically depicts the vast and graceful character of earth 2) *spirit of earth*, which is a melodic figure above the “earth foundation” landscape meant to connote the serene energy of the earth 3) *life on earth*, which consists of small contrasting gestures used to refresh and contrast the linear paths of the other two landscapes.

This movement contains two parts: Part I, which spans mm. 1-9, introduces the broad energy of a boundless earth; Part II, extending from mm. 10-25, contains the main theme and coda. In the next section, a detailed analysis will be provided to demonstrate how the composer’s unique compositional approach to harmony, gesture and timbre creates each sound landscape.

Table 4: Three Landscapes of Earth

Landscapes	Types		*Commentary
I. Earth foundation	1. Calm	2. Vibrant	Characterized by gesture
	<i>Ordinario sustained chord</i>	<i>tremolo sustained chord</i>	
II. Spirit of earth	Solo melody		
	<i>Heterophony played by solo viola and piccolo flute</i>		
III. Life on earth	Short vivid gesture		
	<i>Repetitive 32 notes</i>		

Three Landscapes of Earth

Landscape 1: “Earth foundation”

The Earth foundation landscape establishes the tone of the Earth movement and displays the calming spirit of a philanthropic earth. This landscape features consecutive, sustained chords of varying timbres and textures. Specifically, the “earth's foundation” landscape appears in two types: Type 1 depicts the restful earth as both peaceful and still and is expressed by ordinario sustained chords; type 2 portrays an animated landscape illuminated by the rising sun and is expressed by tremolo sustained chords.

Type 1: Calm

At the beginning of the Earth movement, the composer introduces the vast and tranquil energy of a boundless earth engaged in a pre-dawn sleep. This sound features string instruments playing ordinario sustained chords based on pentatonic colors. As shown in Ex. 37, the first chord consists of seven overlapping perfect fifths (C,G,D,A,E,B,F#,C#) and is purposefully assembled in this manner by the composer to depict a broad and contented spirit of earth through the harmonically pleasing sound of perfect fifths. This chord can be seen as the combination of two pentatonic tetrachords (0,2,5,7), yet this chordal arrangement can also be viewed as a stack of C Gong-mode (C,D,E,G,A) at the chord's lower end and an incomplete B Gong-mode (B,C#,F#) at its top. Whereas a traditional pentatonic Gong-mode includes five perfect fifth intervals,

these two overlapping pentatonic modes feature an additional three, perfect fifth intervals to create a rich tapestry of complementary colors.

Later, in measure 3, a new variation of the preceding chord gradually enters in and overtakes the previous chord, creating a more dissonant and vivid color. We are able to see how the composer creates this effect as we look at the harmonic reduction of the first two chords in Ex. 38. Both the initial chord and the following chord - (C,G,D,A,E,B,F#,C#) and (G,C,D,A,Bb,F), respectively - feature the same four bass notes, yet the bottom two tones invert from C,G, to G,C. The movement of C to G is a tonic-dominant progression, which provides a forward momentum to the continual development of these sustained chords. Moreover, the top part of the initial chord features a perfect fifth - (B,F#), this interval is later transferred to a half step lowered perfect fifth - (Bb,F). This is noteworthy because the lowered Bb creates a dissonant minor second interval with A in the replacement chord. Both the inversion of the bottom two notes in the chord progression and the appearance of a minor second interval on the top part of the second chord produces a resonant and intense chordal movement of similar harmonic colors. And the fact that these sustained chords are played in an *affettuoso* manner by the smooth timbral string instruments of the mid-low register further enhances the harmonic qualities of this progression so as to create the effect of a gradually widening panoramic view of an endless landscape of earth.

Type 2: Vibrant

If type 1 describes the gentle calm of a dormant earth, type 2 depicts an awakening one as the newly born sun brings activity to life. Thus, this type of the "earth's foundation" landscape is a more lively and irrepressible expression of earth. In order to depict this lively energy, the composer relies on pitch-percussion instruments in combination with the piano or harp to play sustained chords in tremolo. The burnished sound of these pairings creates a refreshingly contrasting timbre and energy from the sustained string chord in type 1. As shown in Ex. 39, the xylophone, marimba and piano initially play a tremolo chord with a very soft dynamic that gradually crescendos, whereas type 1 is played in a sustained ordinario that gradually diminuendos. This tremolo chord also possesses two stacked pentatonic colors: a perfect fifth (C,G) in C Gong-mode at the bottom of the chord and a tetrachord (0,3,5,8) in Gb Gong-mode at the top. These soft, yet contrasting harmonic colors between C Gong-mode and Gb Gong-mode create a vibrant and hopeful energy befitting the earth's landscape, much like when the sun gradually appears above the horizon to illuminate a vast scenery to its listeners.

It is also worth mentioning this bottom, perfect fifth interval - (C,G) - are of the same harmonic integrity as the chord in type 1. By applying the same bass intervals in the landscapes of type 1 and 2, the composer is able to create a harmonic similarity among these multi-textured chords to convey a continuity amongst these boundless images of earth.

Ex. 39 Vibrant, mm. 1-5

The musical score for Ex. 39, titled "Vibrant, mm. 1-5", is presented in two systems. The first system includes staves for Vibraphone, Kylophone, Marimba, Glockenspiel, Hpe, and Pao. The second system includes staves for Vl. I, Vl. II, Vla, Vlc, and Cb. A blue box highlights the first five measures of the percussion section, and a red box highlights the first five measures of the string section. A red line connects the two boxes, with the text "Perfect fifth" written in red above it.

System 1:

- Vibraphone X:** Measures 1-5, marked *pp*.
- Kylophone X:** Measures 1-5, marked *pp*, *mf*, *pp*.
- Marimba X:** Measures 1-5, marked *pp*, *mf*, *pp*.
- Glockenspiel:** Measures 1-5, marked *p*.
- Hpe:** Measures 1-5, marked *p*.
- Pao:** Measures 1-5, marked *p*.

System 2:

- Vl. I:** Measures 1-5, marked *p*, *pp*, *p*.
- Vl. II:** Measures 1-5, marked *pp*, *p*, *pp*.
- Vla:** Measures 1-5, marked *pp*, *p*, *pp*.
- Vlc:** Measures 1-5, marked *pp*, *p*, *pp*.
- Cb:** Measures 1-5, marked *pp*, *p*.

Annotations:

- Perfect fifth:** A red line connects the first five measures of the percussion section (blue box) to the first five measures of the string section (red box).
- 46 Tranquillo:** A tempo marking above the string section.
- div. 9, 11, 13, 15:** A marking above the first staff of the string section.
- 10, 12, 14, 16:** A marking above the second staff of the string section.
- 1, 2, 3, 4:** A marking above the third staff of the string section.
- div. 5, 7, 9, 11, 13:** A marking above the fourth staff of the string section.
- 6, 8, 10, 12, 14:** A marking above the fifth staff of the string section.
- 2, 3, 4:** A marking above the sixth staff of the string section.
- div. 5, 7, 9, 11:** A marking above the seventh staff of the string section.
- 6, 8, 10, 12:** A marking above the eighth staff of the string section.
- 2, 3, 4:** A marking above the ninth staff of the string section.
- div. 5, 7, 9:** A marking above the tenth staff of the string section.
- 6, 8, 10:** A marking above the eleventh staff of the string section.
- 1, 2:** A marking above the twelfth staff of the string section.
- lo resto:** A marking at the end of the string section.

Landscape 2: “Spirit of earth”

The “spirit of earth” landscape is located in Part II and is the only melodic component of the Earth movement. This melody is written with a heterophonic style and represents the first (and only) time the composer utilizes this technique throughout the entire composition. The purpose of the heterophonic melody is to allow multiple voices to perform a single melody in different variations. This heterophonic melody expresses a *lontano* and indistinct quality that creates the effect of suffusing this vast landscape with a mysteriously distant spirit. As shown in Ex. 40, this heterophonic melody is played by the solo piccolo flute and viola in C Mixolydian scale (C,D,E,F,G,A,Bb). In this example, the viola plays a basic contour of the melody in a clear harmonic shape; whereas, the piccolo solo sounds more ebullient as it fills in the sparse melody of the viola with ornamental 16th note gestures. The simple melodic line of the viola begins with a sustained pitch of G, and shifts to a lower pitch of C. This idea of the perfect fifth interval is the most prominent harmonic element in the Earth movement, and harkens back to the same harmonic color that is prevalent in the previous Water, Wood and Fire movements. With this approach, the composer is able to provide a connectivity and uniformity of the Wuxing elements throughout the composition.

It is interesting to mention the relationship between the solo melody and the accompanying sustained chord beneath it. The composer creates a uniform and expansive sound image of this “spirited” landscape by applying similar timbral sounds and harmonic colors to seamlessly blend the melody and accompanying chord together. The sustained chord, just like the heterophonic solo melody, is played by string instruments: the sustained chord consists of the second violin, the remainder of the viola section, the

cello and the contrabass. The sustained chord in C Mixolydian - (C,D,E,G,A,Bb) - not only shares all the same pitches with the solo melody but also spans the entire duration of the melody section, thereby evoking a feeling that the solo viola melody in the high register emanates directly from the foundational sustained chord. Additionally, the piccolo variation of the melody provides a decorative and glossy layer to the melodic line of the section. By mixing the blurry heterophonic melody with an underlying sustained chord of a similar timbral and harmonic color, the listener can discern a harmonically balanced sound image of a spirited landscape that is atmospheric yet grounded.

Ex. 40 Spirit of Earth, mm. 10-16

Ex. 41 Heterophonic Melodies, mm. 12-16

Landscape 3: “Life on earth”

“Life on earth” is the final landscape and provides a fresh and unique texture to the composite image of earth in this Movement. Whereas the previous landscapes were more atmospherically linear and stabilizing, this landscape depicts the terrestrial life found therein. To create this effect, the composer crafts repetitive 32nd note patterns played by the string instruments in the high register. These mini-gestures, scattered throughout the entire Earth movement, are used to emphasize some of the same notes found in the “spirit of earth” melody. However, these chaotic, rhythmic bursts, while sharing the same harmonic materials as the overarching landscape melody, also create the effect of creatures scurrying throughout the land. As shown in Ex. 42, two small gestures of repetitive 32nd notes in mm. 16-17 are played by the second and the first violin in higher registers. The first gesture consists of repetitive C notes and the second gesture consists of repetitive B notes - these pitches correspond to the heterophonic melody section and serve as the suspension notes of the melody part. By echoing the same or slightly off pitch from the solo melody and playing it in contrastingly articulated and fast patterns, the composer is able to rejuvenate the “spirit of earth” landscape while providing a vivid depiction of an organic earth.

Ex. 42 Life on Earth, mm. 16-17

The image displays a musical score for measures 16 and 17 of the piece "Life on Earth". The score includes staves for Violin I (VL I), Violin II (VL II), and Viola (Vla). Two specific passages are highlighted with green boxes and labeled "1st solo" and "2nd solo" with a piano (p) dynamic. A red arrow points from the "2nd solo" box on the VL II staff to the "1st solo" box on the VL I staff, with the label "Same pitch". A red vertical line is drawn between the two boxes, labeled "Semitone", indicating the pitch difference between the two gestures.

Conclusion

The various landscapes described above combine to form a vast and elegant view of earth. The diverse harmonic, gestural, and timbral characteristics of the Movement work together to deliver a musical expression of the eternally balanced and gentle nature of Earth as characterized by the Wuxing theory.

The idea of sustained chords based on perfect fifths interspersed with minor seconds are used throughout the entire movement to establish the unity of color inherent in the Earth movement. Ex. 43 and 44 shows the harmonic reduction of Part I and Part II of the Earth movement. As shown in Ex. 43, the minor second (C, C#) serves to bookend the first chord, which consists of seven, perfect fifth intervals. After the first chord, the harmonic color begins to change gradually as most of these pitches move either up or down in minor second intervals.

In Part II, the perfect fifth remains in the bass voices to remind the listener of the perfect fifth harmonic material used in the previous Part. As shown in Ex. 44, on the top part of the chord in this section, a pentatonic trichord (0,2,7) plays in D Gong-mode. The trichord (0,2,7) can be seen as the inversion of the two overlapped perfect fifths (D,A,E). After its inversion, the upper pitches also proceed to change their order; however, the perfect fifth of C and G remain until the end of the movement. This example demonstrates the importance of the perfect fifth in the Earth movement as well as how Chen not only maintains the idea of the perfect fifth throughout the Movement but also tinkers with it to create various colors to enrich the notion of Earth's landscape as everlasting.

Ex. 43 Harmonic Reduction of Part I, mm. 1-9

The musical score for Ex. 43 shows a piano accompaniment with a melody line in the right hand. Red lines connect notes across measures, highlighting a 'minor second' and a 'Perfect fifth'. A blue line connects notes across measures, highlighting a 'common tone'.

Ex. 44 Harmonic Reduction of Part II and Coda, mm. 10-25

The musical score for Ex. 44 shows a piano accompaniment with a trichord in the right hand and a pentachord in the left hand. A red arrow points from the trichord to the pentachord, labeled 'inverted'.

In the Wuxing theory, the earth element's primary function is to fortify and balance the other four elements. The composer's use of the viola in the landscape of "spirit of earth" demonstrates his loyalty to this conception. The viola plays in the mid-range of the string section and, in so doing, balances the high end of the violin section with the low sound of the cello and contrabass. This thoughtful mitigation of the highest and lowest ends of the string spectrum by the moderate viola represents the meaning of Earth in the Wuxing theory.

In Chinese culture, the earth is perceived to promote capacity and longevity, and through Chen's depiction of the Earth in this Movement the audience is made aware of both.

Chapter 8: Analysis, “The Metal Movement”

The Metal movement in Chen’s orchestral suite *Wu Xing* is both the final one of the piece and the most intense and energetic section of the composition. The emotional culmination of the suite, the Metal Movement is informed by metal’s relationship to the other four elements: water nurtures wood, wood fuels fire, fire’s ash replenishes earth, and earth contains metal. To commemorate this cycle of Wuxing in music, Chen approaches the movement in such a way as to represent metal’s rigid, harsh, and bright characteristics. In this movement, Chen employs more dissonant harmonies, trenchant timbres, and vigorous gestures than in any other. And as metal is the only artificial element among the five of Wuxing theory, Chen shifts away from the consonant, pure pentatonic color, instead relying on a variety of dissonant harmonic colors - including the 12 tone technique - to emphasize metal’s unnatural condition.

In this 2 minute Metal movement, Chen presents what can be perceived as five distinctive music characters which rapidly appear one after the other through its entirety. For the listener, these five sonic characters can be interpreted as corresponding to five metal properties: 1) *copper* 2) *silver* 3) *tin* 4) *iron* 5) *gold*. Designating these different musical characters with metal, each of which features varying colors, luster, firmness, and density, helps explain Chen’s unique approach to harmony, gesture and timbre.

Chen’s Metal movement contains four parts: Part I, which spans mm. 1-11, introduces the properties of copper, silver, and tin; Part II, which extends from mm. 12-24, offers a variation of Part I; Part III, which continues from mm. 25-39, presents the

new property of gold; and Part IV, which represents the coda from mm. 40-52, restates and summarizes the inimitable characteristics of each metal.

In the next section, a detailed analysis will be provided to unearth each metal property's distinctive characteristics as well as interpret its significance within the context of the Metal movement.

Table 5: Five Properties of Metal

Properties	Types		*Commentary
I. Copper	Intense, bright		
	<i>short chromatic pattern</i>		
II. Silver	1. Silver dust	2. Silver bar	Characterized by gesture
	<i>1. intermittent repetitive 16th notes</i>	<i>2. consecutive repetitive 32nd notes in 12-tone series</i>	
III. Tin	Gray and rough		
	<i>Accented chords in C Major Locrian scale</i>		
IV. Iron	Dark, Dense		
	<i>Accented chords in 12-tone series</i>		
V. gold	1. Melting gold	2. Gold bar	Characterized by gesture
	<i>1. legato patterns in atonal ostinato</i>	<i>2. staccato patterns in atonal ostinato</i>	

Five Properties of Metal:

Property 1: “Copper”

Since prehistoric times, people have mined copper ore and used it to make weapons, tools, and utensils. One of the earliest known metals, copper features an abrasive texture that is equally glossy in its orange complexion. The piercing “copper” sound of this property features a three-note chromatic pattern that is repeated five times in rapid crescendos, and this figure is played by instruments of a brassy timbre.

Ex. 45 shows the beginning of the Metal movement in mm. 1-3, where these chaotic, three-note chromatic bursts are expressed by five groups of instruments: trombones & trumpets; trumpets & horns; oboes & flutes; two marimbas & harp; and piano. The timbre of the brass, woodwind and pitch percussion instruments are jarringly bright in this property, which serves to depict the brilliance of this metal. Moreover, Chen fuses these timbral elements with the aforementioned dissonant chromatic harmonic colors to further emphasize the piercing quality of the copper. The whole section, in fact, is a harmonic break down of a chromatic scale between the perfect fifth interval of F# and C#. The highest and most prominent voice in each of the five groups plays a three-note pattern consisting of the same notes - B,C,C#. By continuously repeating the same, startling top voices of this dissonant chromatic color with these five timbral groups, and in the purposeful sequence of the most intense trombones and trumpets to the least intense piano sound, Chen is able to simultaneously maintain the aggressive character of copper while gradually mitigating its intensity, thereby providing an effective sonic bridge to silver, the next section.

Ex. 45 Copper, mm. 1-2

♩ = 112

Fl. 1 et 2
Fl. 3
Hth. 1 et 2
Hth. 3
Cl. 1 en Sib.
Cl. 2 et 3 en Sib.
Bon 1 et 2
Bon 3
Cor. 1 et 3
Cor. 2 et 4
Trp. 1
Trp. 2 et 3 en Sib.
Tbn. 1
Tbn. 2 et 3
Tuba

sourd. muctio
straight mute
sourd. muctio
straight mute

pp
p
f

Ex. 46 Chromatic Ascending Patterns in Copper, mm. 1-3

Property 2: "Silver"

After Chen conveys the aggressively brilliant sound of the Metal movement's "copper" property, he next introduces a more elegant and refined sonic quality that can best be described as silver. Compared with copper's more abrasive physical features, silver possesses a higher purity and finer texture. These inviting characteristics are exemplified through the pure and elegant sound of the "silver" property of the Metal movement. More specifically, the representation of silver can be perceived in two different versions: 1) silver dust, which can be characterized as a scattered and less focused form of this property 2) silver bar, which sounds more firm, focused and excited than its counterpart.

Type 1: Silver dust

"Silver dust" is the first "silver" property the listener hears, as it directly follows the copper property. This section possesses a sparkling sonic texture featuring individual 16th notes bouncing between higher and lower octaves of the same pitch. By assigning the same pitch to various instruments in a staggered manner, the composer is able to create the vivid image of a silver dust that is pure in its color yet diffuse in its condition and form. As shown in Ex. 47, the string instruments play an A in both high and low octave overtones with strong dynamics. This oscillating gesture is doubled by pitch-percussion instruments, including the vibraphone, marimba, glockenspiel, as well as the harp & piano. The accented and bright sound of those instruments provides a glary timbre befitting the brilliant color of silver. By merging these harmonic, rhythmic, and timbral

features, the composer creates a multifaceted musical tapestry that can best be characterized as silver dust.

Ex. 47 Silver Dust, mm. 1-6

The image displays a page from a musical score for 'Silver Dust', measures 1 through 6. The score is divided into two main sections by a vertical line. The left section, labeled 'Copper' in red, covers measures 1 through 3. The right section, labeled 'Silver' in blue, covers measures 4 through 6. The score includes staves for various instruments and voices, with dynamic markings such as *pp*, *f*, and *ppp*. The 'Copper' section features a dense, textured sound, while the 'Silver' section is characterized by a more delicate, shimmering quality. The score is written in a standard musical notation style, with notes, rests, and other musical symbols clearly visible.

Type 2: Silver bar

The second form of the “silver” property that can be perceived in the Metal movement is the “silver bar” figure. Occuring in the coda section, type 2 sonically contrasts with silver’s type 1 form by being more dense and compact than its predecessor. This property is expressed by combining different animated rhythmic and timbral layers in the dissonant 12-tone color in order to create cacophonous and chaotic sounds. As shown in Ex. 48, the orchestra is split into three groups: the first group - consisting of the high register woodwind and pitch-percussion sections - plays consecutive and accented 32nd-note patterns in strong dynamics; the second group - consisting of low register woodwinds, harp, piano, and string section - plays consistently sporadic 16th-note patterns to underscore the pitch and energy of the first group; and the third group - consisting of a pared down brass section of four horns, one trumpet and two trombones - plays a sustained chord to harmonically and timbrally support the sharp and excited spirit of the section overall. All three groups merge with each other and, in so doing, create the effect of a densely-layered musical melange that exudes the brilliance of silver in a firmly compressed form.

Furthermore, type 2 is predicated upon the harmonic conception of the 12-tone system. Ex. 49 displays the 12-tone row employed in this section. The first three notes of the 12-tone series represent a pentatonic trichord - (0,2,5). Immediately after this trichord, the composer abruptly applies an augmented fourth interval - (F#,C) - to shift away from the consonant pentatonic color and, instead, lead into a variety of new harmonic colors, including major third and diminished third triads as well as minor second and major sixth intervals. As shown in Ex. 48, the first appearance of each new pitch from the tone row

is marked in the orchestral score in order to show how the composer gradually adds new pitches from the tone row, albeit in a rhythmically staggered fashion. The three different aforementioned rhythmic layers, 12-tone row harmonic system, and piercing timbral instrumentation blend together to exhibit the properties of a silver bar: a musical section bright in color and dense in quality.

Ex. 48 Silver Bar, mm. 41-42

The image shows a page from an orchestral score for measures 41 and 42. The score is divided into three main sections, each highlighted with a colored box and labeled with a group number:

- Group 1 (Pink box):** This group includes the Flutes (Fl. 1, 2, 3), Horns (Hbn. 1 et 2, Hbn. 3), Clarinets (Cl. 1 et 2 en Si, Cl. 3 en Si), and Bells (Bm. 1, Bm. 2, Bm. 3). These instruments play a complex, rhythmic pattern in measures 41 and 42, with some notes circled in red.
- Group 2 (Blue box):** This group includes the Cymbals (Cym. 1 & 2), Triangles (Trep. 1, Trep. 2 et 3 en Si), and Xylophone. These instruments play a rhythmic pattern in measures 41 and 42.
- Group 3 (Blue box):** This group includes the Vibraphone (Vibron) and Marimba (Marimba). These instruments play a rhythmic pattern in measures 41 and 42.

The score is written in 2/4 time. The key signature has one sharp (F#). The tempo is marked 'Allegro'. The score is for measures 41 and 42.

Ex. 49 12-tone Row in Silver Bar, mm. 41-42



Property 3: “Tin”

The next metallic property, “tin,” follows the silver dust version of the silver property identified earlier in the Metal movement. Tin is a metal possessing a similar color as silver, albeit with a more gray complexion and rougher texture. Tin’s coarse and dark character represents the perfect metal to describe the aggressively rich sonic qualities of this property: accented staccato chords of a strong dynamic in C major locrian, a dissonant-sounding scale that contains four augmented fourths (Ex. 51). As shown in Ex. 50, the whole section is based on the harmonic color of C-major Locrian scale (Ex. 51) a dissonant and sharp scale that contains four augmented fourths in it. The orchestra is divided into separate groups - including brass, woodwind, higher string, middle string, lower string, and pitched percussion - and each group plays staggered, accented chords from the same C-major Locrian scale in consecutive 16th notes. By having each group play different versions of the same harmonic scale and merging those inversions with contrasting timbral colors, Chen is able to emphasize the dizzying and rough sound of tin being struck. It is also important to mention the Locrian mode that defines the sound of tin provides a harmonic transition between the purity of the single-pitch silver dust section and the complexity of the 12-tone series found in the subsequent iron section.

Ex. 51 C-Major Locrian Scale, Tin, mm. 7-8**Property 4: “Iron”**

After creating a cacophonous blend of harmonic, rhythmic and timbral gestures found in the previous tin section, Chen proceeds to compose a similarly rhythmic yet harmonically more intense sound that can best be characterized as iron. Though comparable in many respects to tin, iron is noticeably darker while having a much greater density. These differences are sonically expressed by the composer through the use of the 12-tone harmonic series. As shown in Ex. 52, the woodwind, pitch percussion and string sections play accented 16th notes that represent similar rhythmic gestures to the previous “tin” property. Towards the end of this section, the aggressively accented 16th notes are maintained in the pitch percussion and piano sections, yet abruptly cease in the string section and, instead, are replaced by gradually appearing sustained chords of the same 12-tone color. This stark difference creates a dramatic reduction in intensity at the conclusion of the iron section, which establishes a noticeable detente in the music before the energetic “copper” section emphatically returns in Part II.

Ex. 52 Iron, mm.11-15

The image shows a page from a musical score, likely for a large ensemble or orchestra. The title "Iron 12 tone" is prominently displayed in the center in a large, bold, black font. The score is written on multiple staves, with various musical notations including notes, rests, and dynamic markings. The page is divided into two main sections by a vertical line, with a pink vertical bar on the left and a blue vertical bar on the right. There are several handwritten annotations in red ink, including the numbers 10, 11, 12, and 13 in circles, and 14, 15, 16, 17, 18, and 19 in circles. The page number "1" is at the bottom center.

Ex. 53 12-tone Series, Iron, mm. 11-15**Property 5: “Gold”**

The final metallic property that can be used to describe the Metal movement is “gold.” Gold is the most precious and coveted of all the metals in this movement and, as such, is the only metallic property one can hear in Part III. Possessing soft, elastic and firm physical characteristics, “gold” is the only sound property that contains lyrical and linear sections in the Metal movement. In Part III, there are two contrasting sound types of the gold property: 1) melted gold, expressed in a legato approach through varying rhythmic ostinatos 2) gold bar, expressed in an accented staccato fashion through a different set of rhythmic ostinatos.

Type 1: Melted gold

The soft, viscous texture of “melted gold” appears in the beginning of Part III. This lyrical and linear sound figure contrasts with the heavily articulated gestures found in Part II. The “melted gold” property features wavy legato gestures in multiple rhythmic ostinatos played by woodwind instruments. As shown in Ex. 54, the woodwind section is divided into two groups: the first group contains the pitches of C, Db, D, and Eb and is played by three flutes in the low register; and the second group contains the same four chromatic pitches and is played by three clarinets and three bassoons in the mid-low register. Each instrument within these two groups plays a different rhythmic ostinato - 16th-triplet, regular 16th, regular 32nd, and an eighth note tied to a 16th note - to create a

floating and liquid sound effect. The dissonant chromatic color merges with the multi-rhythmic ostinatos in the mid-low register woodwind sound to convey an ebulliently melted condition of gold metal. Moreover, the linear and elastic figures serve to remind the listener of the wave-like gestures heard in the prior Water movement, thus highlighting the important relationship in the Wuxing theory of metal generating water.

Ex. 54 Melting Gold, mm. 31-32

Melting Gold: ClusterB-#D

Type 2: Gold bar

The second type of “gold” property that can be described is the “gold bar”. While the first type of gold figure represents the malleability of a more elastic gold through its lyrically legato articulation, the second type of gold gesture expresses its powerful solidity and brilliant complexion through rigidly defined accented characters. As shown in Ex. 55, the “gold bar” section runs from mm. 33-39 and utilizes the same abridged chromatic scale found in the previous section - C, C#, D, Eb. As the melting gold section fades away in m. 33, the string section comes in with a soft dynamic. This string sound

adopts the concept of a legato ostinato from the previous woodwind section and plays it in a contrasting staccato articulation. This noticeable yet gradual articulation and timbral shift from type 1 to type 2 serves to represent the transformation of melted gold into a solid gold bar, and emphasizes the forceful and bright nature of this form of gold.

Ex. 55 Gold Bar, mm. 31-36

This musical score, labeled 'Melting Gold: ClusterB-#D', features a red rectangular box highlighting measures 31 through 36. The score is written for a large ensemble, including strings (Violins I, Violins II, Violas, Cellos, and Double Basses), woodwinds (Flutes, Oboes, Clarinets, Bassoons, and Contrabassoons), and percussion (Timpani, Snare, and Cymbals). The highlighted section shows a complex, dense texture with rapid sixteenth-note passages in the strings and woodwinds, creating a shimmering, melting effect. Dynamics range from piano (p) to fortissimo (ff).

Melting Gold: ClusterB-#D

This musical score, labeled 'Gold Bar: ClusterB-#D', continues the composition from the previous section. It features a blue rectangular box highlighting measures 31 through 36. The score is written for the same large ensemble as the previous section. The highlighted section shows a more solid, sustained texture with slower-moving lines in the strings and woodwinds, creating a sense of a solid gold bar. Dynamics range from piano (p) to fortissimo (ff).

Gold Bar: ClusterB-#D

This musical score, labeled 'Gold Bar: ClusterB-#D', continues the composition from the previous section. It features a blue rectangular box highlighting measures 31 through 36. The score is written for the same large ensemble as the previous section. The highlighted section shows a more solid, sustained texture with slower-moving lines in the strings and woodwinds, creating a sense of a solid gold bar. Dynamics range from piano (p) to fortissimo (ff).

Conclusion

The metallic elements described above represent five musical characters in the Metal movement. By varying and developing the harmonic, gestural, and timbral elements of this movement, Chen is able to create five distinct yet unifying metallic sounds properties. Furthermore, when analyzing the *Wu Xing* composition holistically, the Metal movement represents the second and culminating climax compared to the first climax found in the Fire movement. The harmonic component of the suite gradually evolves from consonance to dissonance: the opening Water movement contains primarily traditional pentatonic colors, whereas the closing Metal movement features modern harmonic systems, such as the 12-tone series. Ultimately, the dissonant harmony and piercing timbre represents metal's coarse and abrasive qualities.

Chapter 9: Conclusion

Throughout *Wu Xing*, Qigang Chen reinvents harmony, gesture and timbre in his effort to create a unique interpretation of the Chinese theory of Wuxing. The techniques employed in these movements not only depict the distinctive characteristics of each element in the Wuxing theory but also form a sense of musical connectivity to unite the work overall. The perfect fifth interval as well as the common gestures linking pairs of elements throughout the generative cycle are two most significant musical ideas in the composition.

The perfect fifth is a prominent harmonic concept that not only endows this suite with the sonorous sound of the pentatonic scale, but also honors the importance of the number five in traditional Chinese culture. According to Wuxing theory and Chinese numerology, the number five plays a significant role in the cosmological system. Ancient Chinese philosophy taught that numbers contain either unripe or ripe qualities: 1, 2, 3, 4 and 5 are deemed unripe numbers, whereas 6, 7, 8, 9 are ripe.⁶⁴ The unripe numbers correlate to the idea of generation and are thought to support and nourish the ripe numbers. And as the number 5 is the greatest in the unripe series, it represents the ultimate generative power. In ancient China, people even referred to their emperors as “the nine-five supremacy” for this reason.⁶⁵

⁶⁴ Nielsen Ben, *A Companion to Yi Jing Numerology and Cosmology Chinese Studies of Images and Numbers From Han (202 BCE-220 CE) to Song (960-1279 CE)* (London ; New York : Routledge Curzon, 2003), 1, ProQuest Ebrary.

⁶⁵ Nan, *YiQing*, 4.

Chen repeatedly underscores the importance of the number 5 in the composition *Wu Xing* by relying on the five-note pentatonic scale and its circle of fifths (C-G-D-A-E).⁶⁶ In the Wuxing theory, each of the five elements is believed to correspond to one of the scalar tones found in the pentatonic scale: I-earth, II-metal, III-wood, V-fire, VI-water.⁶⁷ The symbolic relationship between the pentatonic scale and Wuxing's elements highlight the natural role that the pentatonic color and perfect fifth musically serve in the Wuxing theory.

Another significant compositional idea found in the composition is derived from the generative concept of the Wuxing Theory. Qigang Chen not only arranges the order of Movements to adhere to the generative cycle of elements according to the Wuxing theory - Water to Wood to Fire to Earth to Metal - he also creates a common gesture or pitch for each individual pair of this generative sequence of Movements to further reinforce these connections. I consider these common gestures and pitches as “traits”. The “traits” usually first appear in the generating element, and later reemerge in the generated element, thus demonstrating the link between the two. In the following section, I will discuss how these “traits” exist in each element to musically express the philosophical meaning of the Wuxing theory.

1. Water generates Wood

The small 32nd note gesture played by the woodblock is the recurring “trait” linking the Water and Wood movements. As shown in Ex. 56 at the end of the Water

⁶⁶ Yunnan Li, “Cross-Cultural Synthesis in Chen Qigang’s Piano Composition *Instantes d’un Opera de Pekin*” (PhD diss., University of North Carolina, 2012), 11.

⁶⁷ Ji Xiao, 五行大义 [*Wuxing Dayi*], trans. Bingyi Liu (Beijing: Meteorological Press, 2015), 20.

movement, the “trait” adopts the previous wave-like gesture of the flowing water image, but expresses this gesture in a new, non-pitched timbre. This non-pitched gesture then reappears at the beginning of the Wood movement (Ex. 57), yet is played by 12 temple-blocks and 12 wood-blocks in a more exaggerated form. By implanting the same “trait” of rhythmic figures in both movements, Chen is able to express a generative relationship between the two elements. Moreover, Chen’s method of introducing a new material at the conclusion of one movement and then reusing it in the next creates a compositional concept that represents the spirit of Wuxing.

Ex. 56 The “Trait” in the Water Movement, mm.24-25

Ex. 57 The “Trait” in the Wood Movement, m.1

2. Wood generates Fire

The “trait” connecting the Wood and Fire movements is the figure of five repeated eighth notes - a gesture meant to connote the “vitality” of the wood element. In Ex. 58, the pattern of repeated eighth notes occurs in the movement’s epilogue and is performed by the marimba, woodblocks, and log drums. At the end of the subsequent Fire movement, a similar rhythmic pattern re-emerges and is played by piano and low register strings in pizzicato (Ex. 59). The composer integrates these two rhythmically similar gestures in both movements in a varied timbre to imply the generative connection between Wood and Fire.

Ex. 58 The “Trait in the Wood Movement, mm. 25-27

The musical score for the Percussion section (Perc.) spans measures 25 to 27. It features four staves, each with a grand staff (treble and bass clef). The instruments and their parts are as follows:

- Staff 1:** Grrosse caisse (Bass drum) and Tambour de bois (Log drum). In measure 25, the bass drum plays a *pp* pattern of five repeated eighth notes. In measure 26, the log drum plays a *f* pattern of five repeated eighth notes. In measure 27, both play a *pp* pattern of five repeated eighth notes.
- Staff 2:** (Marimba) and Wood-blocks. In measure 25, the marimba plays a *p* pattern of five repeated eighth notes. In measure 26, the wood-blocks play a *ppp* pattern of five repeated eighth notes. In measure 27, both play a *ppp* pattern of five repeated eighth notes.
- Staff 3:** (Marimba) and Tambour de bois (Log drum). In measure 25, the marimba plays a *p* pattern of five repeated eighth notes. In measure 26, the log drum plays a *p* pattern of five repeated eighth notes. In measure 27, both play a *p* pattern of five repeated eighth notes.
- Staff 4:** Tambour de bois (Log drum) and Wood-blocks. In measure 25, the log drum plays a *f* pattern of five repeated eighth notes. In measure 26, the wood-blocks play a *pp* pattern of five repeated eighth notes. In measure 27, both play a *ppp* pattern of five repeated eighth notes.

The score includes dynamic markings (*pp*, *f*, *ppp*) and a crescendo hairpin in measure 27, indicating a build-up in intensity.

Ex. 59 The “Trait in the Fire Movement, mm. 25-32

The musical score for Ex. 59, 'The Trait in the Fire Movement, mm. 25-32', is presented for a symphony orchestra. The score includes parts for Horn (Hrn), Percussion (Psn), Violin II (Vl. II), Violin (Vln), Viola (Vla), Violoncello (Vcl), and Chamber Orchestra (Ch.). The music is in 2/4 time. The score shows measures 25 to 32. The Hrn and Psn parts have a tremolo motif highlighted in blue. The Vln and Vcl parts have a tremolo motif highlighted in blue. The Ch. part has a tremolo motif highlighted in blue. The score includes dynamic markings such as f, p, and pp.

3. Fire generates Earth

The tremolo gesture serves as the “trait” relating the Fire (Ex. 60) and Earth (Ex. 61) movements. Fire has the ability to burn things to ash or dust, which is believed to subsequently seep into the earth. Chen expresses this meaning by employing the same musical gesture of tremolos in both the Fire and Earth movements. In Ex. 60 below, the Fire movement contains a diminutive tremolo motif that appears in a much grander manner later in the “earth foundation” landscape. The tremolos’ development from nondescript to grandiose is meant to convey how the seemingly insignificant character of a fire can be repurposed to fuel a great earth landscape.

Ex. 60 The “Trait” in the Fire Movement, mm. 9-10

Ex. 61 The “Trait in the Earth Movement, mm. 1-6

4. Earth generates Metal

The distinct sonic dichotomy between the Earth and Metal movements initially makes listeners think the two are unrelated. When listening carefully, however, one can discern the common trait of a ricochet gesture linking the two. Ex. 62 and Ex. 63 show two similar moments - one from the Metal movement, the other from the Earth movement. In Ex. 63, the sound of a sustained single pitch accompanied by the ricochet gesture in the high register string section serves to express the animated nature of metal. This ricochet gesture is adopted from the preceding “life on earth” element found in the Earth movement, which depicts the rich organic nature of earth. This small gesture appears quite frequently throughout the Earth movement, yet only occurs twice in the

Metal movement - each time as a musical detente meant to contrast the accented chords surrounding it. This common trait underscores the idea that metal is composed of the earth's contents and, as such, is linked with Earth in the Wuxing concept.

Ex. 62 The “Trait” in the Earth Movement, mm. 14-17

Ex. 63 The “Trait” in the Metal Movement, mm. 9-14

5. Metal generates Water

Although the music in Qigang Chen's *Wu Xing* technically ends with the Metal element, the elements of the Wuxing theory remain cyclical and, as such, never stop informing one another. This concept is demonstrated through the trait linking the end of the Metal movement with the beginning of the Water movement. The last chord of the Metal movement contains the same exact note as the very beginning of the Water

movement, reaffirming the notion that the materials belonging to each element are always in transference with one another. In Ex. 64, beneath the energy and chaos of the prominent accented chords, a sustained bassline featuring the pitch of C is played by the woodwind, brass, and string sections in the low register in the final part of the Metal movement. This distinct sound pitch lasts through the epilogue and reappears as the bass note in the last accented interval - C,Bb - of the Metal movement. The same C pitch, however, also serves as the very first note of the Water movement (Ex.65), demonstrating that Metal does not conclude the five elements found in the Wuxing theory but, rather, continues the cycle of generation to water.

Ex. 64 The “Trait” in the Metal Movement, mm. 43-47

The image shows a complex musical score for an orchestra. The staves are arranged in two main groups. The bottom group, which is highlighted with a red rectangular box, includes staves for Flute 1, Flute 2 and 3, Horns 1 and 2, Horn 3, Clarinet 1 and 2, Clarinet 3, Bassoon 1 and 2, and Bassoon 3. These instruments are playing a sustained bassline in the low register. The top group of staves includes Violins 1 and 2, Violas, Violoncelles, and Contrabasses, which are playing more complex, accented chords. The score is marked with various dynamics and articulations, including 'ff' (fortissimo) and 'pizz' (pizzicato).

Ex. 65 The “Trait” in the Water Movement, m.1

The image shows a smaller musical score for the beginning of the Water Movement. It includes staves for Violins 1 and 2, Viola, Violoncelles, and Contrabasses. The instruments are playing a sustained bassline in the low register, marked with 'pp' (pianissimo) and 'pizz' (pizzicato). The score is marked with various dynamics and articulations, including 'pp' and 'pizz'. The tempo is marked as '♩=42'.

The timbral, gestural and harmonic techniques Chen uses to promote the characteristics in *Wu Xing* focus primarily on the five elements cyclical relationships as well as their ability to contrast and evolve with each other. Yet, Chen's conveying of these elements through his use of innovative harmonic, gestural and timbral techniques not only represent accurate and striking portraits of each element, but also create such a vivid musical canvas so as to inspire the audiences to project their own sensations and imageries from its expressive effects and sense of motion. Thus, *Wu Xing* invites listeners to use their own musical imaginations to unearth the physical characteristics and deeper meanings of Wuxing theory. This is Chen's true gift to his listeners.

Qigang Chen's unique musical language not only reflects his keen sense of traditional Chinese philosophy but also his acute awareness of his time. Though Chen employs his inimitable style, his work also contributes to the international contemporary music scene, together with other prominent composers of his generation and in particular other pupils of Olivier Messiaen, including Iannis Xenakis, Tristan Murail, Gerard Grisey and so on. Chen's integration of recent compositional innovations forms interesting comparison with his contemporaries.

Two of the great musical voices of Chen's generation, Tristan Murail and Gerard Grisey, are prominent composers of spectral music. It is a distinctive modern composition technique that Chen fuses into his own musical idiom as well. Many of Murail and Grisey's works feature the musical tenets of spectral technique, in which they aim to discover intervallic pitches from harmonic partials of a music pitch through the use of its microtones, frequency modulation, and psychoacoustic concepts. Yet, whereas Murail tends to develop to focus and explore elaborately on a music pitch, Chen tends to

combine and shift among a wider variety of different sounds and harmonic partials to create a sense of movement in the harmony and timbre in his compositions. Another person Qigang Chen has been influenced by is György Ligeti and his distinct compositional technique known as micropolyphony. Micropolyphony enables composers to create a deliberately atmospheric sound energy by embedding intricately slow-moving gestures and gradually shifting harmonies into a piece. Many of Qigang Chen's scores include this novel technique, but it often appears for a short period of time to decorate monophonic melodies or support dissonant harmonic colors. His work is undoubtedly situated firmly in the musical trends and innovation of his contemporaries, yet at the same time moves these ideas forward in distinctive ways.

Thus, the uniqueness of *Wu Xing* rests in the fact that Chen is able to pay homage to ancient Chinese musical principles while drawing upon prominent modern compositional techniques to create something altogether new. This defining characteristic most likely explains why *Wu Xing* has resonated with audiences all over the world from Shanghai to New York to Paris. It might be an important reason that it received the BBC's Masterprize Award in 2001. By introducing an analysis of the piece through attentive listening to symbolic properties that define each Movement of *Wu Xing*, I hope to present the listener with a better understanding of the principles of the ancient Chinese Wuxing theory, as well as the timbre/texture/harmony details that constitute Chen's musical idiom. Meanwhile, I hope this analysis can also work to empower the listener to discover their own relationship to Wuxing theory through this musical medium.

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