Chinese Musical Language Interpreted by Western Idioms: Fusion Process in the Instrumental Works by Chen Yi

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CHINESE MUSICAL LANGUAGE INTERPRETED BY WESTERN IDIOMS:
FUSION PROCESS IN THE INSTRUMENTAL WORKS BY CHEN YI

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ABSTRACT

The purpose of this study is to provide an analysis of works for Western instruments by the Chinese composer Chen Yi (b. 1953). In recent years, non-Western composers’ practice of incorporating non-Western traditional musical concepts and materials with Western contemporary post-tonal compositional techniques has received more serious scholarly research that includes efforts at analysis. The methods of fusion are varied from work to work as well as from composer to composer, presenting a unique set of challenges for musical analysis. By incorporating recent achievements of music theorists, composers, musicologists and ethnomusicologists, this study proposes a multidimensional approach to the analysis of Chen Yi’s music for Western instruments. The analytical procedures are informed by Richard Waterman’s theory of syncretism and Peter Chang’s research on composers’ reinterpretation of cultural elements, which serve to explore Chen Yi’s cultural and educational background in relation to her composition. A set of factors including pitch logic, time, sound color, texture, process, performance ritual, and parody or historicism, proposed by Elliott Schwartz and Daniel Godfrey, are examined to discover underlying organizational principles.

The analysis of selected instrumental works by Chen Yi reveals a process by which she focuses on four aspects of musical structure: 1) pitch; 2) rhythm and proportion as determinants of form; 3) timbre; and 4) textural process that governs the
placement and duration of events in time. Related processes reveal a personal style that can be described as a Chinese-based musical language interpreted by Western idioms.

The first two chapters provide an overview of Western and non-Western composers’ approaches to cross-cultural fusion in general and Chinese composers’ approaches in particular. The second chapter also provides biographic information on Chen Yi with observations on how her cultural and educational background influences her attitude toward composition. The subsequent four chapters present detailed analyses of Chen Yi’s nine instrumental compositions with an emphasis on underlying organizational principles. The final chapter summarizes the characteristics of Chen Yi’s personal style and the evolution of her concepts of stylistic fusion and related techniques, and evaluates their significance with respect to successful fusion and to future directions of music.
CHAPTER ONE
AN INTRODUCTION TO
THE CROSS-CULTURAL PHENOMENON IN MUSIC

In this study, the discussion of the cross-cultural phenomenon in music is focused on a compositional process, in which musical elements or aesthetic ideas from Western and non-Western cultures are intentionally reconciled or fused into a single composition.

Fusing musical elements from different cultures as a compositional process is not new in itself; all musical traditions are cultivated with cross-cultural elements to a certain degree. For example, cultural exchanges took place primarily through influences of the medieval church and then political, scientific, and social revolutions among European metropolitan cities and countries. Western classical or art music was therefore crystallized by assimilating European ideas and unified by the tonal systems. Whereas highly cultivated Western art music was once considered a universal language over centuries, the non-synchronism of civilizations and cultural distinctions containing aesthetic concepts and musical expressions in the non-Western world present a striking incompatibility for the fusion of Western and non-Western music.

The awareness, recognition and practice of the cultural exchange between Western and non-Western music are bound up with the mutual reactions from these two worlds under European industrialization in the nineteenth century and worldwide
modernization in the twentieth century. Among many compositional procedures from which contemporary composers can choose at the end of the twentieth century, the fusion of Western and non-Western musical elements or aesthetics has become an important compositional process and has been adopted by a large number of composers throughout the world. Consequently, the composers’ intentions and practices concerning cross-cultural fusion, the effects of their compositions, and the influence of their practice on music in the future have attracted scholars’ attention.

Non-synchronic civilizations and social revolutions of Western and non-Western worlds cause composers from these two worlds to approach the fusing process differently. While most Western composers had the aid of this fusion process to expand their stylistic base and enrich their compositional materials, almost all the non-Western composers intended to introduce their own musical cultures to the world through this fusion process and strived to compose a kind of music that reaches an equal position side by side with Western music. Whenever composers approach cross-cultural fusion and incorporate this procedure into their composition, the originality or identity of the music sources in their finished work has been changed. Elliott Schwartz and Daniel Godfrey borrow two terms used by French anthropologist Claude Lévi-Strauss (b. 1908) to describe two trends of the changes in music:

“Many of the sources from which [Western] composers typically draw (such as North Indian ragas, West African tribal rites, or Indonesian gamelan music) stem from cultures that are synchronic, in that they attach no value to concepts of cultural and societal change or progress, often dedicating themselves instead to the purity and longevity of established traditions. By contrast, occidental civilization and its arts
are *diachronic*, tending to regard change and development as positive and necessary for cultural health and well-being.\(^1\)

From the standpoint of musical change, the study of the cross-cultural phenomenon in music is mainly conducted in musicology from two directions: historical and theoretical studies focus on the stylistic broadening or variety of Western music that absorbs ideas from non-Western music, while anthropological study concentrates on the non-Western musical reactions to the impact of Western music.

Among the accomplishments of non-Western composers, the compositions for Western instruments by Chinese composer Chen Yi (b. 1953), who is a resident of the United States and is trained in both Western and Chinese music, have a strong appeal to both Western and non-Western audiences for their non-Western musical expressions. The success of her practice in the cross-cultural fusion has recently acquired widespread critical acclaim, and discussions on her intention and practice, her technical innovation and stylistic evolution, and the implication of her work in regard to the change of music in the future, are the central issues of this study.

The study of Chen Yi’s works for Western instruments as a product of Western and non-Western cultural synthesis in music will emphasize the aspect of compositional procedures through detailed analysis. Four relevant issues, which represent varied research angles and approaches, are necessary to be considered for a more complete

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1 Elliott Schwartz and Daniel Godfrey, *Music since 1945: issues, materials, and literature* (New York: Schirmer Books; Toronto: Maxwell Macmillan Canada; New York: Maxwell Macmillan International, 1993), p.216. The terms "synchronic" and "diachronic" were introduced originally by the Swiss linguist Ferdinand de Saussure in his *Course in General Linguistics* (McGraw-Hill, 1959. Chapter 3, p.81), which was originally published in 1915. Lévi-Strauss cites Saussure several times in his *Structural Anthropology* (Basic Books, 1963). Though he doesn't relate Saussure to the terms synchronic and diachronic, he was plainly familiar with Saussure's works and regarded him as an important figure in the development of structural linguistics, which became the most important model for structural anthropology.
understanding of this particular subject and will be examined in the present chapter.

First, a historical approach is applied to elucidate Western composers’ recognition and reaction to the fusion of Western and non-Western musical elements and the development of this practice in the twentieth-century. Second, a brief overview on the universal influence of Western culture, music and musical thought in the twentieth century serves to present typical non-Western responses to the impact of Western music; discussions on the concepts of motivation and degree of compatibility are included. Third, the incompatibilities and possibilities of the fusion of Western and Chinese musical cultures relevant to Chen Yi’s fusion process are explored through a comparison of the essential philosophical, aesthetic, physical, and expressive differences between Western and Chinese music. Fourth, the appropriateness and limitations of the existing analytical systems and more recent approaches to the analysis of compositions constructed with the fusion of Western and non-Western elements are discussed from an analyst’s standpoint.

Western Recognition and Reaction to the Fusion of Western and non-Western music

A common perception shared by scholars is that the Universal Exposition of 1889 in Paris is a watershed event in Western music history. Through this event, non-Western music played by native musicians, especially those of Asia and Africa, greatly attracted Western composers’ attention, and the fusion of Western and non-Western musical elements and aesthetics has since then gradually become an important compositional procedure for Western composers. Since World War II, Westerners have had ready
access to broadcast or recorded music from all over the world due to instantaneous global communication, and the emergence of ethnomusicology as an academic discipline has brought live experience of many kinds of music to university campuses.\(^2\) As the boundaries of the tradition widened, the music of Western composers was no longer shaped exclusively by the central European legacy but increasingly by the particular combination of non-Western influences.\(^3\) According to these social and technological changes, the development of this cross-cultural practice can be divided into three periods: 1) before 1889; 2) from 1889 to 1945; and 3) from 1945 to present.

According to historical-ethnomusicological studies, non-Western influences on Western music date to the early Middle Ages. An accepted fact is that the origins of Western chant were rooted in non-Western sources (Byzantine, Syriac, and ultimately Jewish).\(^4\) The issue of Eastern influence on medieval European music, based on eight centuries of Arabic presence on the continent and on the close contact with the East during the Crusades, has increasingly received attention although this proposition has been debated among music scholars.\(^5\) After the establishment of a unified system as Western art music through the development of early Christian church music, the first substantial interaction came in the seventeenth century, when the Ottoman Empire’s

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\(^2\) The term *ethnomusicology* was coined in 1950 by the Dutch scholar, Jaap Kunst, to replace the label ‘comparative musicology,’ which dated from the landmark publication of the Viennese scholar Guido Adler, “Umfang, Methode und Ziel der Musikwissenschaft” (1885). As an academic pursuit, ethnomusicological study has been rapidly developed in the United States after it originated in Europe. In the 1950s, the two earliest institutions with programs of training in the study of non-Western music were the University of Indiana, where George Herzog had developed a program in the Department of Anthropology and Folklore, and the University of California, Los Angeles, where Mantle Hood had amplified existing courses initiated by Laurence Petran in the Department of Music.


\(^5\) Ibid., p. 120.
reed, drum and cymbal Janissary bands began to gain popularity in Europe.⁶ Their impact on European music occurred in three respects: first, some composers viewed Turks as an exotic and hostile people, so they employed the music of Janissary bands to caricature foreign people. In this way, a model for the ‘exotic’ in Western music was introduced.⁷ For instance, Lully exploited the potential of Turkish music with derisive comic effect in his incidental music for Molière’s *Le bourgeois gentilhomme*, wherein the Turks are mocked as pathetic, ignorant buffoons.⁸ Second, some important percussion instruments in Janissary bands, such as the big bass drum, cymbal and triangles, were introduced into European military bands. Finally, a Turkish effect, “suggesting” rather than “copying” Turkish music, was achieved by the use of the newly added percussion instruments, by the introduction of the piccolo to create shrillness, and by characteristic methods of writing interval leaps, simple harmonies, and sudden changes in dynamics.⁹ Turkish music became an important resource for European composers throughout the Classical period. For example, Mozart applied *alla turca* style in his Violin Concerto in A major K 219 and Piano Sonata in A major K 331, and in *Die Entführung aus dem Serail*; Beethoven inserted a Turkish march in *Die Ruinen von Athen*.

Cross-cultural impacts in the Romantic period were presented mostly as musical nationalism. Folksongs were harmonized and given symphonic treatment by composers throughout Europe. Individual countries, like Russia (Western areas), Finland, and

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⁸ Michael Tenzer, p. 397
⁹ Michael Pirker, p. 804.
Norway, strove to accentuate their cultural differences from German music. While European folk music shared relative proximity to Europe’s cultural centers and was readily adaptable to the Romantic musical style and aesthetic, Liszt’s rubato style that he adopted from Hungarian gypsy music injected a kind of rhythmic and temporal freedom into the restrictive metric framework of European cultivated music. In addition to applying gypsy scales and quotations from popular songs, Liszt extended piano performing practice by using fluttering chords to mimic the tremolos of the gypsy cimbalom (hammered dulcimer).  

Until the late Romantic period, styles and techniques of Western music were largely developed and explored exhaustively along a single path; non-Western cultural elements were absorbed only when they could fit into the styles and aesthetics of Western music. For example, Janissary march rhythm is compatible with Western metric organizational principles, the introduction of Janissary indefinite-pitch percussion instruments does not affect the foundation of the Western tuning system, and simple melodic construction is easily harmonized with the major-minor tonal systems. The augmented seconds in gypsy scales coincide with Western scale construction of the harmonic minor, and the gypsy rubato style conforms to the Romantic aesthetic ideal in which the emotional expression tends to be exaggerated. African and oriental musics were largely unknown until the end of the nineteenth century, although there were occasional descriptions in the journals and publications of

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10 Tenzer, p. 397. Liszt was not the only figure in the development of the style hongrois (literally, “Hungarian style”), but he was one of the foremost exponents of this style. See Jonathan Bellman, The Style Hongrois in the Music of Western Europe (Boston: Northeastern University Press, 1993).
early ethnographers.\textsuperscript{11} In addition, individual minor composers wrote music on oriental topics. For example, French composer Félicien David (1810-1876) wrote piano pieces, choral-orchestral music, and operas on oriental topics, with mildly Middle Eastern turns of phrase in the melodies but Western harmonies.\textsuperscript{12}

In 1889, an Annamite (Vietnamese) theatre group and a Javanese gamelan and dance troupe were brought to the Exposition Universelle in Paris, creating a stir in musical conception and execution for Western composers. By this time, the expressive potential of Western musical structure had been explored extensively and the tonal system had started to break up. Non-Western musical elements and aesthetics, with their vast treasury of sounds and broad range of alternative perspectives on the ritual and societal contexts of music, began to attract more Western composers, especially those who viewed the concert music tradition, even in its more avant-garde guises, as a calcified residue of nineteenth-century European thinking.\textsuperscript{13}

From 1889 to 1945, Western composers approached the incorporation of non-Western musical elements and aesthetics from three standpoints. First, some composers followed the track similar to their predecessors, absorbing non-Western elements, basically melodic and rhythmic elements, into the Western musical framework. Examples of this practice include the pentatonic melodies (evoking Chinese music) in Gustav Mahler’s song cycle \textit{Das Lied von der Erde} (1908), the choices of Japanese and Chinese subjects and imitations of oriental music in Giacomo Puccini’s operas \textit{Madama Butterfly} (1904) and \textit{Turandot} (1926), the Indian-influenced scale formations in Albert

\begin{footnotes}
\item Tenzer, p. 397.
\item Schwartz and Godfrey, p. 195.
\end{footnotes}
Roussel’s 1914 opera-ballet *Padmâvatî*, and the strains of Brazilian rhythm and melody in Darius Milhaud’s ballet *Le boeuf sur le toit* (1919) and in his *Saudades do Brasil* for piano (1921). Although the oriental scale structures they adopted are similar to certain European folksongs, the underlying grammatical organizations differ from those of the West. The distinct stylistic and aesthetic divergences therefore emerged, particularly when pentatonic melodies were harmonized by functional harmonies.

Second, some composers took structural ideas from non-Western music culture in order to match the composers’ own musical ideals. The prominent example is Claude Debussy’s incorporation of Javanese gamelan music. American ethnomusicologist Michael Tenzer, a specialist in Indonesian gamelan music, observes that there might be a certain compatibility between the multi-tiered orchestration in Debussy’s music and the heterophonic stratification of musical parts in Javanese music. Passages in *Sirènes* (the third of the three Nocturnes) or *La mer* feature rippling ornamentation similar to the kind played by the Javanese *gambang* (bamboo xylophone) or *celempong* (zither). Tenzer also observes that there is some similarity between Debussy’s approach to meter and rhythm, which allowed for a new sense of life and detail in the subdivisions of the beat, and the Javanese principles of *irama*, or layers of tempo and density relationships.\(^\text{14}\) Debussy’s application of pentatonic, octatonic, and whole-tone scales and concomitant non-functional harmonies tended to free music from the Germanic stronghold. His aesthetics and instrumentation, however, were still Western-based.

\(^{14}\) Tenzer, p.398.
Third, some composers had a more deeply influential interest in the folk music of their own homeland. Although this music is not “non-Western” from a geographical point of view, its vigor, directness, spontaneity, and variety have suggested refreshing alternatives to the conventional limitations of Western art music. Illustrative of this are the assimilation of Hungarian folk elements by Zoltán Kodály and Béla Bartók, Heitor Villa-Lobos’ emulation of Brazilian dance rhythms, and the borrowing of American folk materials by Aaron Copland and Virgil Thomson. The rhythm and melodic patterns of Spanish dance music were exploited by such Spaniards as Isaac Albéniz and Manuel de Falla, as well as by other Europeans such as Maurice Ravel, Claude Debussy, and Jacques Ibert.¹⁵

Among these composers, Bartók’s practice is more meaningful for later composers, especially for non-Western composers (as will be discussed later). He recorded and transcribed thousands of songs from Hungarian peasants during the first three decades of the twentieth century. To Bartók, the most important aspect of this work was the way it influenced his own style of composition. Tenzer summarizes the importance of Bartók’s practice:

“…his contact with the [folk] music was considerably more conscious and thorough than had been Debussy’s with the gamelan; and from the beginning he set out to create a new style based on a marriage of Western music to the traditions of his folk informants, which he considered to be his own true heritage. Thus, in an important sense, Bartók expanded the Western tradition not by looking outside it for stimulus or perspective, but by widening its perimeter to include what he viewed as his own tradition. In his work the modal scale forms, irregular meters and additive rhythms of his homeland blend with the most modern timbral, formal and tonal gestures of Western art music in a

¹⁵ Schwartz and Godfrey, p. 196.
seamless reconciliation, so that it is impossible to separate its components.”¹⁶

Compositional developments after 1945 are less clearly defined by dominant lines. Composers confronted many co-existing models, and could choose among them and combine them in whatever ways their imaginations suggested. Facilitated by the rapidly developing communication media, by the widely traveling performances of non-Western musicians in the West, and by scholarly fieldwork in non-Western countries, the research for non-Western music has intensified and broadened in scope. Western composers who incorporate non-Western influences have adjusted or shifted their focus in three respects.

First, non-Western musical elements are assimilated into a thoroughly Western framework of twentieth-century music, thus broadening Western composers’ already established vocabulary. For example, Olivier Messiaen’s *Turangalîla-symphonie* (1948) reflects his rhythmic approach to Hindu music, and his exotic, metallic percussion timbres are inspired partly by the Indonesian gamelan. The percussion writing in Pierre Boulez’s *Le marteau sans maître* (1953-54) drew from his exposure to music from Africa and East Asia, while the pitch structure of this work is based on a serial approach. Parts of Karlheinz Stockhausen’s electronic *Telemusik* (1966) involve the integration of electronically generated sounds with prerecorded music from the Sahara, the Amazon, Bali, Vietnam, Japan, and elsewhere. George Crumb’s *Ancient Voices of Children* (1970) presents a variety of allusions to American Indian song, Hispanic folk idioms, Japanese court music, and Indonesian gamelan music, along with

¹⁶ Tenzer, p. 398.
fragmentary quotes of Bach and Ravel. From their standpoints, the inherent properties and minute details of non-Western traditions are less important than their otherness, their capacity to lead Western ears beyond the limits and assumptions of an essentially European nineteenth-century aesthetics.

Second, non-Western instruments with their distinctive and colorful timbres are adopted in Western standard instrumentation, or combined with selected Western instrumental ensembles. Since the 1960s, public awareness of instruments from non-Western countries has evoked a serious and consistent attempt for Western composers to compose with non-Western instruments in a Western context. A notable phenomenon is that a Korean *komungo* or Indian *sitar* may be included as a soloist with a Western orchestra or chamber ensemble. Among the Western composers who incorporate non-Western instruments in their compositions, Alan Hovhaness (1911-2000) has more interest in enriching timbres than seeking any deep-seated affinity with a given tradition. In his *Firdausi* for clarinet, percussion, and harp (1976), percussion instruments may be chosen freely from a culturally diverse array, including Laotian drum-gongs, deep gongs from Java or Bali, and various drums from the Near, Middle, and Far East. In contrast to Hovhaness, Lou Harrison (b. 1917) has immersed himself deeply in the music theory and practice of various cultures. He is recognized particularly for his percussion music, experiments with just intonation and syntheses of Asian and Western styles. His works have incorporated Chinese, Korean, and Indonesian instruments with those of the West, such as *Pacifika Rondo* for Western,

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17 Schwartz and Godfrey, p. 200.
Asian, and African instruments (1963) and \textit{La Koro Sutra} for chorus and gamelan (1972).\footnote{Leta E. Miller, “Harrison, Lou,” in \textit{The New Grove Dictionary of Music and Musicians}, 2\textsuperscript{nd} ed. (2001), Vol. 11, pp. 64-67.} Harry Partch (1901–1974) devoted most of his life to composing exclusively for and performing on instruments that he had either adapted or designed and built himself. Many of these are suggestive of instruments from other cultures, such as an Mbira Bass Dyad (a giant derivative of the African mbira or thumb piano) and various marimbalike bamboo instruments such as the Boos I and II and the Eucal Blossom (evoking both African and East Asian precedents).\footnote{Schwartz and Godfrey, p. 207; Harry Patch, \textit{Genesis of a Music}, 2\textsuperscript{nd} ed. (Madison: University of Wisconsin Press, 1974).} The intonation or tuning systems and performance techniques of non-Western instruments, which are radically different from those of Western music, are adjusted, altered or improved through the practice of mixing Western and non-Western instruments, thereby leading to a Westernization for those non-Western instruments.

Third, non-Western principles of theory, aesthetics, philosophy, and performance practice are explored deeply and assimilated to an extent that changed or adjusted Western thought.\footnote{James Pritchett, “Cage, John,” in \textit{The New Grove Dictionary of Music and Musicians}, 2\textsuperscript{nd} ed. (2001), Vol. 4, pp. 796-804; Schwartz and Godfrey, pp.215-216.} The two most prominent examples of this aspect are the minimalist music of the 1960s and John Cage’s 4’33’’ (1952), which represent two extremes of sound: one side is a continual sound and the other is silence. Inspired by the structural principles of Indian drone-based music, as well as those of African drumming, Indonesian gamelan, and Hebrew cantillation, the core constructional principles of minimalism seek to generate materially cyclical, texturally transparent, and harmonically static structures through repetition and gradual transformation of
limited material. This style of music is presented primarily by American composers including Terry Riley (b. 1935), La Monte Young (b. 1935), Steve Reich (b. 1936), and Philip Glass (b. 1937).

Non-Western influences were crucial to John Cage’s development, and their role was more philosophical than musical. The philosophy of Zen Buddhism proved a life-changing force for Cage; the value of silence and the need to free one’s actions from individuality resulted in his most notorious piece, 4’33”. Schwartz and Godfrey describe this work as ‘purposeless’ in the sense that “nothing is expressed during the four and half minutes of silence, representing the ultimate renunciation of individual creative input from composer and performer.” But this purposelessness has a serious purpose, which allows ultimate truths to be realized—sounds as they really are, not subjugated to the theories, emotions, or activities of musicians. In addition, Cage’s use of chance is Zen-inspired, providing a way to end the tyranny of the individual ego over sound. Although based on the Chinese I Ching (Book of Changes), his work Music of Changes for piano (1951) aspires to the Zen ideal by attempting to remove all human contrivance from the creative act, simply allowing sounds to come into being.

At the end of the twentieth century, cultures have become far too interactive to isolate non-Western influences from individual Western composers. Compositional approaches to cross-cultural fusion have constantly changed, and the change of compositional approaches has helped to change music in the Western world.

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24 Schwartz and Godfrey, p. 214.
Non-Western Responses to the Impact of Western Music

Since about 1880 the cultural interaction in music between Western and non-Western worlds has become a major focus of ethnomusicological research. Among the musical traditions that have been systematically studied, the representative musical cultures that contrast with Western music in philosophy, religions and musical systems include Islam, which permeates countries in the Middle East, North Africa, and parts of Asia; Buddhism, which prevails in countries of Central and Southeast Asia; Confucian ideology and Taoism, which permeate the Far East including China, Korea, and Japan; African diaspora music including drumming, slave songs, and Negro spirituals; Hebrew or Jewish ancient cultural traditions in Europe and Western Asia; and American Indian native music. All of these musical cultures are distinctive and rich on their own terms, and no pan-cultural attributes can bind all non-Western musics together in contrast to Western music. Nonetheless, Western musical culture may be distinguished from non-Western musical cultures by its several unusual characteristics: 1) individual composers claim the origin of compositions; 2) compositions are notated accurately in pitch and rhythm and transmitted in the form of scores and parts; 3) a common or unified intonation or tuning system is applied; and 4) well-developed music theories for codifying the structures of compositions are continuously studied and developed.

Non-Western musics have been perceptibly changed under the impact of the West in the twentieth century. The most significant of these changes is the diverse reactions of non-Western cultures to the introduction and importation of Western music.

27 Michael Tenzer, p. 392.
and musical thought. Bruno Nettl suggests three major types of motivations to distinguish the reactions of non-Western societies.

The first type of motivation is the desire to leave traditional culture intact, surviving without change. One of the ways to enact this desire is to isolate the tradition in a restricted environment. In Japan, for example, *Gagaku* music (ancient court music) is preserved under the continual patronage of the Japanese government and performed exclusively by musicians from the families of the Imperial Household. In South Korea, distinguished older musicians are formally given special status as “national treasures.” Changes under the impact of the West, however, are inevitable. Many musical changes can be interpreted as strategies for survival, changing aspects of the old system in order to save its essence. These changes differ by culture, but in common they address the need to balance the advantages of old (traditional) and new (Western-influenced). Bi-musical training or practice for performers and composers is a typical way used to balance old and new systems in some oriental countries. For instance, the Japanese musicians of the Imperial Household in Tokyo “have undergone rigid training since childhood, not only in the *Gagaku* dances and instrumental techniques, but also in the performance of Western music of the classical period. In their capacity as official court musicians, they are required to perform both *Gagaku* and Western classical music.”

In India some musicians seem to have managed to keep classical and folk musics separate, obeying for each its own set of rules. Some of the

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29 Ibid., p. 351.
30 Ibid., p. 348.
31 Robert Garfias, *Gagaku, the Music and Dances of the Japanese Imperial Household* (New York City: Theatre Arts Books, 1959), (not numbered) see second page under “historical Development.”
folk singers of northern Iran, specialists in two or three rather rigidly circumscribed repertories or genres of song, seem to keep these systems from affecting each other.\textsuperscript{32} The bi-musical training or practice provides opportunities for non-Western musicians to learn, understand and master two or more different musical systems, thereby establishing a technical and theoretical basis for fusing musical elements from both Western and their native cultures. When defining the concept of “bi-musicality,” Mantle Hood asserts that the East has made more progress in facing the challenge of “bi-musicality” than the West since this kind of bi-musical training or practice is common in some oriental countries.\textsuperscript{33}

The second type of motivation, counter to preserving the tradition without changes, is complete Westernization, simply incorporating the Western cultural system into a society. Mexico serves as an example. Although Mexican culture is not indistinguishable from European culture, the difference between Mexican and Spanish culture is possibly no greater than that between Spanish and Norwegian. In addition, some Australian aboriginals claim that their cultures have in essence become part of the West, even though the population was once culturally non-Western and is biologically descended only in small measure from Europeans.\textsuperscript{34} At this end of thought, there is no real process to fuse different musical cultures, although regional features exist.

The third type of motivation, between these two extremes, is modernization, in which Western technology and other products of Western culture are adopted and


adapted simultaneously with an insistence that the core of cultural values, different from those of the West, will not change greatly. From this standpoint, the practice and the final products of the fusion may vary greatly in content and manner, and individual non-Western composers have started to claim their specific fusion process. Another form of Western cultural permeation, therefore, has emerged: the collective nature and flexible recording manner of much non-Western music has been transformed to a Western-oriented approach to musical creation—emphasizing contributions of individual composers with precise notation. The hybrids and mixes of musical elements under the practice based on this type of motivation could be interpreted as enrichment, while old traditions as a foundation have not simply disappeared.

In order to examine the proportion of integrated components in the cross-cultural fusion, an important concept known as “compatibility” is introduced into the standard ethnomusicological literature. According to particular emphases laid on central compatible traits in Western and non-Western musical systems, Nettl provides three concepts, some of which overlap with the types of motivations elucidated above but contain distinct implications, to distinguish the fusion process relating non-Western to Western music: 1) syncretism, which results when the two musical systems in a state of confrontation have compatible central traits; 2) Westernization, when a non-Western music incorporates central, non-compatible Western traits; and 3) modernization, when

it incorporates noncentral but compatible Western traits.\textsuperscript{37} Nettl admits that “in their original uses these concepts do not readily form a group, but as processes they can be distinguished in part by their use of centrality of traits in a musical style, that is, the proposition that a style is comprised of certain traits essential to its identity and others that are more expendable.”\textsuperscript{38}

Syncretism is defined by the \textit{Encyclopedia Britannica} as “fusion of elements from diverse cultural sources,” but is used more specifically in anthropology to explain the growth of culturally mixed phenomena when the elements are similar or compatible, as in Elsie Parsons’ “Milta, Town of the Souls” (1936).\textsuperscript{39} It has been widely used in ethnomusicology, most notably to explicate the broad spectrum of African-derived musical styles, which has a long-standing affinity with Western music, as suggested by Richard Waterman. Through observing the give-and-take process of cultural exchange, Waterman concludes: 1) the homogeneity of American Negro culture has protected traditional values which are not in conflict with the prevailing Euro-American cultural patterns, and 2) because of certain similarities between African and European (folk) music that permit musical syncretism or musical fusion, African traditional values have not been forced out of existence in the musical fusion.\textsuperscript{40} He

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\item \textsuperscript{38} Ibid., p. 353.
\item \textsuperscript{39} In the anthropological study of acculturation, Parsons observed that during the acculturation process, the ‘new traits tend to be welcomed or readily borrowed if they do not clash with pre-existent traits, or again if they have something in common with pre-existent traits to take the edge off the unfamiliarity.’ Parsons also found that the basis for rejecting a new trait by the natives develops ‘when the new trait is too unfamiliar, offering nothing to tie up to, or is quite incompatible with old traits, not yielding to any process of identification, it will be rejected.’ From Elsie Clews Parsons. “Milta, Town of the Souls,” \textit{University of Chicago Publications in Anthropology} (Chicago: University of Chicago Press, 1936), p. 521.
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illustrates several compatible traits and musical concepts existing in both European and African music, such as harmony, metric emphasis on rhythm, polymeter, off-beat, phrasing of melodic accents, and overlapping call-response patterns. African music is at the core of all jazz and jazz-related idioms, whose evolution began around 1890 with the black musicians of New Orleans. But only since the 1960s have Afro-American jazz musicians started to emphasize a connection between jazz and its African lineage.\textsuperscript{41} One of the most “serious” or avant-garde proponents of this trend was the Art Ensemble of Chicago. Their performances have encompassed not only musical (especially rhythmic) features of Sub-Saharan African cultures, but authentic instruments and ritual elements as well. Other black jazz/avant-garde figures who reestablished ties with African culture during this period include saxophonist John Coltrane and trumpeter Don Cherry.\textsuperscript{42} This kind of practice as a contributing factor has also been touched upon in the evolution of modern Middle Eastern, Indian, and European Jewish musics. The development of mixed or hybrid styles is a prominent feature of twentieth-century world music, and this compositional practice seems to have developed most readily when the sources are similar, compatible, and most important, share central traits.\textsuperscript{43}

Westernization is used when some societies or individual composers have changed their traditional musical culture in the direction of the West by taking Western elements they consider to be central. In such a situation, non-Western traditional elements are incorporated under Western thoughts and aesthetics. Foremost among

\textsuperscript{41} Schwartz and Godfrey, pp. 201-202.
\textsuperscript{42} Ibid., p. 202.
these Western traits are functional harmony, simple but stable metric rhythms, musical genres and forms, and Western instrumentation and orchestration. These features are incorporated whether they are compatible with the traditional music or not.\footnote{Ibid., p. 353.} Most of the comparable practices have come from Asian composers who were Western-trained, such as Paul Ben-Haim (1897-1984) of Israel, Isang Yun (1917-1995) of Korea, and Toru Takemitsu (1930-1996) of Japan, among others. These composers have built upon familiarity with their own musical roots and tended to be biased strongly in favor of the West. For example, Ben-Haim juxtaposes extreme chromaticism and jazzy rhythms in his early \textit{String Trio} (1927) and integrates melodies of traditional Middle Eastern folksongs into his First Symphony (1940), the Clarinet Quintet (1941) and the Piano Concerto (1949).\footnote{Jehoash Hirshbeng, “Paul Ben-Haim,” Stanley Sadie, ed. \textit{The New Grove Dictionary of Music and Musicians}, 2nd ed. (London: Macmillan Publishers Limited, 2001), Vol. 3, pp. 261-262.} As for the works of Takemitsu and Yun, Paul Griffiths observed:

“If Takemitsu’s delight in evanescent, apparently unwilled sonorities seems on the surface to be a Japanese trait, on further reflection it may be found to link him at least as much with Feldman, while his orchestral writing draws much more from Debussy and Boulez than from indigenous traditions. Even in those of his works that employ Japanese instruments, such as \textit{November Steps for Shakuhachi} (vertical bamboo flute), \textit{biwa} and orchestra (1967) the manner is distinctly Western. So it is too in the music of Yun, who, born in Korea but long resident in Berlin, has progressively distanced himself from the oriental sound world of his \textit{Loyang} for chamber ensemble (1962).”\footnote{Paul Griffiths, \textit{Modern Music – the Avant Garde since 1945} (JM Dent & Sons Ltd, 1981), pp.197-198.}

Modernization refers to non-Western thoughts and aesthetics in traditional music expressed through Western contemporary means, including prominent post-tonal techniques in pitch construction, rhythmic organization and varied instrumental combinations. In this case, both Western and non-Western elements have been not only
adopted, but also adapted or reinterpreted: scales have been slightly adjusted, instrumental playing techniques altered, Western notation introduced, and musical grammatical systems changed. For example, Chinary Ung (b. 1942) has blended the music of Cambodia with Western practice. Ung’s intimacy with Cambodian music grows out of his active involvement as a performer in native ensembles. His writing for Western musicians draws upon both religious and popular traditions, featuring richly elaborate vocal and instrumental lines and exotic percussion timbres.\textsuperscript{47}

Similarly, Chou Wen-chung (b. 1923) has incorporated the instrumental music of ancient China into a distinctly modern Western idiom. His intensive research on classical Chinese music, poetry, dance, and art, together with composition studies under Edgard Varèse and Otto Leuning, eventually led to a more dissonant style in the late 1950s, incorporating not only elements of traditional music but principles of Chinese poetry and calligraphy as well.\textsuperscript{48} His \textit{Yu ko} for violin, alto flute, English horn, bass clarinet, and two percussion instruments (1965) is a parody of a \textit{qin}\textsuperscript{49} piece. In this piece, Western instruments are carefully selected and their playing techniques are intentionally altered in order to create specific timbral effects of the \textit{qin}. Chou considered that the aim of his orchestration was to amplify pitch inflections, articulations, timbre and dynamics according to the capacities of each Western instrument, and the subtle temporal fluctuation is “in accordance with the tradition of the \textit{daqu} (a kind of court music for song and dance) of the T’ang Dynasty.”\textsuperscript{50}

\textsuperscript{47} Schwartz and Godfrey, p. 198.
\textsuperscript{48} Ibid., p. 197-198.
\textsuperscript{49} The ‘\textit{Qin}’(\textit{Ch’in}), a seven-string zither, was regarded as one of the earliest indigenous instruments in China and usually played by educated people.
Chou Wen-chung’s practice not only presents his own research and speculation on modernization of non-Western musical tradition, but has also influenced a generation of Asian composers. As an educator, Chou Wen-chung advocated that Asian composers should be more conscious of the serious research Bartók did on folk music of his own country in order to evolve his own compositional concepts and practices. Chou believes that “what one can learn from Bartók is not apparent in his scores, if one were only to look for venturesome orchestration and texture. The lesson is in the metamorphosis of simple folkloric ideas and indigenous sonorities into Bartók’s own musical grammar that in turn has had such an impact on contemporary musical language.”\(^{51}\)

In both Westernization and modernization, musical actions may be interpreted as adaptations of the original musical system for survival but with different emphases. Some non-Western music has been changed to make it in the minds of everyone concerned a particular kind of Western music. In other cases, the desire has been to create a new, adapted, modernized version of the original.\(^{52}\) Since non-Western composers strived to incorporate Western cultural elements into their own music, their music will remain a major symbol of their cultural identity and a high degree of musical diversity will therefore continue to exist.

Incompatibilities and Possibilities of the Fusion of Western and Chinese Music

Western musics differ from Chinese not only in musical expression and structural principles, but also in their philosophical and aesthetic foundation. An


overview and comparison of the philosophical and aesthetic foundations of Western art music and traditional Chinese music as well as their essential structural concepts will serve to identify the incompatibilities and also the possibilities of their fusion.

Western art music as one of the accomplishments in Western civilization represents a classical stereotype: music created from personal conviction rather than the demands of the commercial market, and often intended for an elite audience rather than for mass appeal.\textsuperscript{53} This type of music has been reasonably unified in the countries of Western Europe for many centuries through the early influence of the medieval church. Certain national characteristics and traits can be readily distinguished, but the great body and resources of musical material are characterized by a unity of expression. The same basic tuning and notation systems, the same families of instruments aggregated in various ensembles, the interchange of poetic texts from one country to another, and the influence and counterinfluence of regional and national styles have produced a relatively unified mode of musical expression in the Western tradition.\textsuperscript{54}

Like every well-developed art form that reflects the manner of thinking in a culture, Western music bears a strong scientific basis rooted in Greek philosophy, especially the thoughts represented by Aristoxenus and Pythagoras, among others. Guided by their rigorous logic of rationale and empirical approach to research, music is characterized by the mathematical foundation of acoustics, systematic organizations of the materials, and formal patterns. The history of the Western musical tradition, in Douglass Seaton’s view, is best regarded as one of changing models for musical

\textsuperscript{53} Schwartz and Godfrey, p. 2.
expressions.\textsuperscript{55} The change of music’s aesthetic assumptions from mathematical/symbolic to literary ones is crucial to explaining the great separation of music-historical periods in the fifteenth century. From the fifteenth through the nineteenth centuries, the continuous reliance on literature for expressive models and the successive exploration of the approaches of different literary genres accounts for both unifying and dividing factors: poetry served as the expressive model for music in the Renaissance, rhetoric in the Baroque period, and finally drama in the Classic-Romantic period, although the aesthetic ideals are different for these two periods. The Classical spirit is characterized by clarity and simplicity, symmetry, balance, order, and objectivity, while the Romantic attitude concentrates on emotional conflict and climax, and stresses the uniqueness of the individual.\textsuperscript{56} The establishment and development of major-minor tonality unified the musical system in these periods.

The anti-Romantic tendency of the twentieth century resulted in changes of musical aesthetics and compositional approaches. Impressionism, Primitivism, Expressionism, and even the aesthetics of ugliness emerged along with deviation from the single-minded tonal system. This era has undergone three phases in compositional approaches. The first phase (1890–1918) witnesses the breakup of the traditional tonal system and its replacement by a number of new compositional approaches. This direction is exemplified by Arnold Schoenberg’s atonal language, which is formed by highly chromatic, linear interplay of brief motives and textural contrasts, by Claude Debussy’s free-floating sonority, non-developmental form and unusual scales, by Igor

\textsuperscript{56} Ibid., p. vi, p.234 and p. 277.
Stravinsky’s asymmetrical and unsettling rhythm and the use of “primitive” pitch patterns, and by Edgard Varèse’s exploration of the physical aspect of sound. The second phase (1918–1945) reveals a general tendency toward consolidation, with efforts to forge new links with the tradition, and a strong reaction against the subjective, outwardly emotional features of musical Romanticism. Some representative trends include Stravinsky’s neoclassism, Schoenberg’s development of the twelve-tone method as a way to systematize atonality, Anton Webern’s coloristic orchestration and his development of Schoenberg’s Klangfarbenmelodie, Paul Hindemith’s new tonal theory, and Webern and Bartók’s interest in palindromes and symmetries as formal organization. The third phase (after 1945) differs from the first two by being less clearly defined through a single dominant line of development; rather, its most salient characteristic would appear to be an ability to accommodate, within an all-encompassing pluralism, many distinct tendencies, some of them contradictory. Two distinctly contrasted poles of thought—“order” and “chaos”—had evolved regarding issues of rationality, conscious control, and “order” in art. The “order” is represented by the integral serialism, typified by the music of Karlheinz Stockhausen, Milton Babbit, and Pierre Boulez, while the “chaos” is led by John Cage, presenting anti-ordering, and advocating spontaneous, immediate, and even unpredictable aspects of the musical experience. All other compositional approaches and practices have been located somewhere between these two poles.

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59 Schwartz and Godfrey, pp. 78-79.
Compared with the relatively unified style of Western classical music, there are few unifying attributes setting traditional Chinese music together as a group apart from Western music. According to Qiao Jianzhong, one of the Chinese leading contemporary scholars, traditional Chinese music, which refers mainly to the culture of the largest ethnic group, the Han Chinese, includes court music, the music of the literati, religious and ritual music, and folk music. Court music in China has essentially disappeared as a living tradition, while literati music centers on the qin (ch’in) music and kunqu opera. Ritual music includes state and court ceremonies along with music performed by Buddhists and Taoists in temples and in other contexts associated with popular religion. Folk music can be subdivided into folk songs, song and dance music, narrative songs, theatrical music, and instrumental music.\textsuperscript{60} In addition to musical genres of the Han people, the musical traditions of the fifty-five minority nationalities that live mainly in southwestern and northwestern China are also classified as a unique category of traditional Chinese music.\textsuperscript{61} In this study, the nature and characteristics of the Han musical tradition will be compared with Western art music in philosophical foundations and structural concepts.

The literati and ritual music typifies the cultivated music and reflects Chinese philosophy and the aesthetics of Confucianism and Taoism (Daoism), which are complementary, not competitive. Confucian philosophy set forth a common ethical ideal with a series of norms for cultivating people’s moral conduct, which emphasize


self-restraint and a reverential attitude to others.\(^{62}\) Music becomes an organic component of this ideology, as the greatness of music lies not in “perfection of artistry” but in attainment of “spiritual power inherent in nature.”\(^{63}\) Under this manner of thinking, music rests on a humanistic rather than a scientific foundation. Taoist aesthetics, on the other hand, seek to reach a realm in which one lives with his spontaneous inclinations by unwrapping the social fabric, forsaking his cultural conditioning, and abandoning rational thought.\(^{64}\) Under this anti-rational thought, no attempt or realistic goal governs people’s lives or actions, and thus, the expression of music seems to go nowhere, like walking without touching the ground. While Confucian philosophy has strongly influenced music with the control of unburdened personal emotion, the Taoist aesthetics has guided individuals’ intuition more or less consciously or unconsciously to shape the music. This type of traditional music, represented by the music of the qin, brings about relatively loose and random relationships in rhythm. One of the prominent features is the absence of time values in the notation, which is based on the ideograms of the written language, achieving a surprising economy with one composite symbol describing the proper string, direction of stroke, and particular fingering.\(^{65}\) This kind of notation is precise in performance methods, while the actual rhythmic realization would provide greater potential for reconstruction or interpretation by performers.

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Folk music reflects the life and emotions of ordinary Chinese people. Each genre is spontaneously created, developed, and handed down from ancient ages orally or aurally without any type of notation. This category of music, however, presents a series of structural principles in pitch and formal organization that typify Chinese musical style. The most significant character of traditional Chinese music is that the musical expression focuses on only the linear dimension (i.e. melody without harmony). The expressive potential of the melody is therefore well explored. Pitch structure in folk music, particularly in folk and narrative songs, is closely related to Chinese speech, in which each character can be pronounced in four different “tones” or inflections: ‘level,’ ‘rising,’ ‘dipping,’ and ‘falling,’ and moreover, the same character may be pronounced differently in different dialects. Certain folk melodies, either vocal or instrumental, are generated primarily by the imitation of these speech tones; different melodic styles are produced from diversified regional dialects, although all these melodies may share the same modes. Numerous types of narrative music (speaking-singing) are even more closely related to regional dialects since the proportions of speaking are more than those of singing.

Chinese musical style is also represented by another rich source: many types of regional or local operas; some provinces have several sub-genres. Their stories were drawn generally from history and folktales, although in the course of evolution old stories dropped out and new ones were adopted. Among the genres of regional operas,

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the Beijing opera (also called Peking opera in English language publications) is most widely known as the “national drama.” Derived from one of the Chinese regional opera systems (p’i-huang) and introduced into the court in Beijing during the Ch’ing dynasty (1644-1911), the Beijing opera was established and developed under the support and promotion of the government and has been popular throughout the country since the mid-nineteenth century. The music for the Beijing opera is arranged from a traditional repertoire of stock arias. Original compositions are not particularly valued, but fresh interpretations and original embellishments of familiar tunes are highly prized. The combination of familiarity and originality, tension of plot, emotional states symbolized by specific melodies including the highly elaborated or melismatic style of singing, and voice timbre associated with personality characteristics makes the music of Beijing opera a multidimensional experience.69 A confluence of literature, music, and different staging techniques including singing, heightened speech, mime, dancing, and acrobatics made the Beijing opera an elitist art form, becoming the quintessence of Chinese cultural and artistic heritage.70

Among different types of instrumental music, ensembles are mainly divided into two forms—standing and sitting, analogous to Western marching band and concert ensemble. The styles of these ensembles are principally distinguished by northern (Shantung) style, which is strident and loud due to the use of the suona (a wind instrument) and percussion, and by the southern (Cantonese) style, which is soft.

69 Ibid., p. 22.
and lyrical because of the dominance of strings.\textsuperscript{71} These ensembles play in unison with heterophonic effects. Rhythmic patterns in sections or in an entire piece played by percussion instruments are usually controlled by the arrangement (addition and subtraction) of the number of beats or strokes, thereby becoming the determinant of form (Figure 1-1).

\begin{center}
\begin{tabular}{l|l|l}
  & x & 1 (strokes or articulations) \\
adding 2 & x x x & 3 \\
  & x x x x x & 5 \\
subtracting 2 & x x x x x x & 7 \\
  & x x x x x & 5 \\
  & x x x & 3 \\
  & x & 1 \\
\end{tabular}
\end{center}

The numbers at the left are the total strokes or articulations per measure.

Figure 1-1. A Typical Rhythmic Pattern for Percussion Ensemble.\textsuperscript{72}

The conceptual difference between Western and Chinese music can be seen in four structural aspects: pitch construction, formal structure, timbral exploitation in relation to the development of instruments, and orchestration. Pitches in Western music are organized into systems, such as the major-minor system in the common-practice period, or the twelve-tone system in contemporary practice. Each of these systems is characterized by a set of principles for the manipulation of pitches in successions and combinations. The major-minor tonal system features hierarchical pitch relationships within a key represented by the tonic note and the triad constructed


on the tonic, while the twelve-tone system features equal importance among pitch
classes with fixed ordering and intervallic relationships. Individual pitches have
meaning only in the context of note groupings. Two dimensions of pitch structure—
vertical and horizontal—take on essentially equal importance in both polyphonic and
homophonic compositions. The equal division and hierarchical relationships in
organization of time, represented by rhythmic events and metrical patterns, also
embody the rationality in music.

In traditional Chinese music, pitches are organized into either pentatonic
modes or heptatonic modes, which are regarded as extensions of the pentatonic
modes. The concept of pitch structure within these modes, however, differs from that
of Western music.

Figure 1-2 presents a pentatonic collection in its various rotations and
illustrates the difference between Western and Chinese concepts of mode and tonal
center. In Western thinking, the modal “final” is considered the keynote, and the
mode is named according to the keynote and the arrangement of intervals above it.\textsuperscript{73}
The vast majority of pentatonic melodies in Western music are in either mode Do
(pentatonic major, e.g., “Swing Low, Sweet Chariot”) or mode La (pentatonic minor,
e.g., “Wayfaring Stranger”). In the Chinese approach, a mode is defined by the final,
but there is only one keynote for the collection (e.g., the boxed G in Figure 1-2). If
successive phrases within a piece end on some member of the collection other than
the final, then the mode is considered to have changed, but the key remains the same.

\textsuperscript{73} The system of identification employed here parallels that for transpositions of liturgical modes: it is
common, for example, to refer to Dorian mode not only in its original form beginning on D, but also
when it is transposed to begin on some other note, in which case it may become E Dorian, F Dorian,
and so forth.
In practice therefore, one pentatonic mode can easily be transformed into another one if the two modes share the same pitches. This concept is similar to the relationship between relative major and minor keys in Western tonal music.

<table>
<thead>
<tr>
<th>Western Application: The final of each mode is the keynote.</th>
<th>Do</th>
<th>Re</th>
<th>Mi</th>
<th>Sol</th>
<th>La</th>
<th>Do</th>
<th>Re</th>
<th>Mi</th>
<th>Sol</th>
<th>La</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Pentatonic Mode Do:</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>D</td>
<td>E</td>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Pentatonic Mode Re:</td>
<td>A</td>
<td>B</td>
<td>D</td>
<td>E</td>
<td>G</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Pentatonic Mode Mi:</td>
<td>B</td>
<td>D</td>
<td>E</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D Pentatonic Mode Sol:</td>
<td>D</td>
<td>E</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Pentatonic Mode La:</td>
<td>E</td>
<td>G</td>
<td>A</td>
<td>B</td>
<td>D</td>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Chinese Application: G is always the keynote; the modal “final” is variable. | Mode ‘Gong’ (Do) | Mode ‘Shang’ (Re) | Mode ‘Jiao’ (Mi) | Mode ‘Zhi’ (Sol) | Mode ‘Yu’ (La) |

Figure 1-2. Comparison of Western and Chinese Names for Pentatonic Modes.

Pentatonic modes in traditional Chinese music can also be changed from one to another by replacing one or two pitches with different notes, a technique called “borrowing notes.” Example 1-1 illustrates how G pentatonic mode Zhi (the top staff) can be changed to mode Gong (the middle staff) by substituting B for C, and then to mode Shang (the bottom staff) by replacing E with F. The keynote (G) remains the same, and the three modes share most of their pitches, but certain scale-degrees are variable. This procedure resembles that of mode mixture between parallel major and minor keys in Western tonal music.

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74 Li Minxiong, *Traditional Chinese Music: Instrumental Music*. (Shanghai: Shanghai Music Press, 1989), pp. 11-12. The melodies shown in Example 1-1 are also taken from this source.
Example 1-1. The technique of “Borrowing Notes.”

The notes marked by triangles are the replaced or “borrowed” notes.

G Pentatonic Mode Sol:  G  A  C  D  E   G
G Pentatonic Mode Do:  G  A  B  D  E   G
G Pentatonic Mode Re:  G  A  C  D  F   G

As mentioned above, traditional Chinese music focuses on only the linear dimension; pitches are presented exclusively through a single melodic line. Harmony was not a consideration until the beginning of the twentieth century, when the Western tonal system was introduced into China. In traditional Chinese music, the expression of individual pitches is thus raised to an important position: a single pitch can be presented with wide vibrato, portamento, or even with a gradually modified frequency or “continuous tone modulation.”\(^75\) These kinds of variations for individual pitches result in a kind of rhythmic flexibility, and where the changes occur depends on performers’ interpretations.\(^76\)


Western concepts of formal structure in instrumental music differ from those of the Chinese. Western formal principles, codified to a large extent in the common-practice period, emphasize unity and balance through contrasting tonal regions, the restatement of melodic themes following the presentation of contrasting themes, and the development of motivic ideas. In a large-scale formal structure, an entire piece or movement can be divided into sections that are delineated by harmonic cadences, the presentation or restatement of thematic materials, and contrasting treatments of melodic or motivic ideas. Phrases are often symmetrically constructed and hierarchically combined to form larger sections. Most of these formal principles, especially the contrast and restatement of thematic materials, are maintained in twentieth-century practice, although new harmonic vocabularies or atonal methods replace functional tonality as the primary determinants of formal process.

Since traditional Chinese instrumental music is built up exclusively from a single melodic line, the achievement of formal unity and balance relies on the handling of structural parameters other than harmonic motion, tonal centralization, and contrast and restatement of musical ideas as in Western music. The arrangement of tempo changes becomes a common device for formal unity and balance. Typically, the music begins at a slow tempo, accelerates section by section to a climax at the fastest tempo, and then returns quickly to the initial slow tempo.\textsuperscript{77} Formal unity is achieved by the correspondence between the initial and final tempos, and formal balance results from an average momentum gained from the use of different tempos.

In certain traditional Chinese instrumental music, phrases are not constructed symmetrically, but instead resemble the structure of Chinese poetry, which relies on irregularly alternating short and long lines. Phrases are often constructed by “shapes,” a structural technique in Chinese instrumental music that consists of a crescendo to a climax or apex, followed by a decrescendo. Any structural parameter—melodic undulations, rhythmic groupings, dynamics, the expansion and contraction of range, or changes of tempo—can create a shape, or generate a phrase.

Another common device for formal unity is the transformation of pitch materials. A melodic idea can be transformed by retaining the basic melodic contour and the same materials at the beginning and the end of the phrase while expanding or contracting the intervals between pitches, or by augmenting or diminishing the rhythmic value of certain pitches in the middle of the phrase. Formal unity can also be obtained from the proportional enlargement of a melody. Through the insertion of embellishing notes between adjacent notes in the original form, the melody is transformed into a new one with a different melodic contour and phrase structure. But the underlying melodic structure remains the same; formal unity is therefore produced by the coherence of the underlying structures. In addition, fixed rhythmic patterns and fixed accompanimental figuration also produce formal unity.

Timbre, or composite sound colors produced by combinations of instruments, is inherently important in both Western and Chinese instrumental music. The advanced

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78 “Shape” is not a standard term in history of Chinese music, but is used by Chen Yi to describe a structural technique she learned from traditional Chinese music and applied it as an underlying formal principle in her instrumental compositions. This term is introduced here in preparation for the analysis of Chen Yi’s works.


80 Li Minxiong, p. 11.
exploitation and organization of timbre, as well as subsequent modification in the
collection of instruments, however, have followed different courses in Western and
Chinese approaches to musical expression. Western music, as discussed above, attaches
equal structural importance to both the vertical and horizontal dimensions. The timbral
exploitation for any instrument therefore concentrates not only on its unique sound
quality for melodic expression, but also on its blending potential for harmonic
expression that can be produced either by the instrument itself or through combinations
with other instruments. For these reasons, the construction of instruments in the West
has continuously experienced improvements. The bowed string family, for example,
was fully developed first and played a dominant role in the orchestra for a long time.
All members of this family possess a homogeneous timbre that is rich in overtones, and
cover a combined range of more than seven octaves. Their diverse performance
techniques allow this family to state a melody, to build up harmony and provide a bass
line or pedal tone, and to blend timbre with other instruments. The heterogeneous
timbres of monophonic woodwind instruments are more suitable for solo presentation
by individual instruments. It is hard to achieve a harmonious and balanced effect
without carefully handling their ranges and dynamics as well as spacing and doubling.
In addition, some instruments are introduced into the standard orchestra primarily for
harmonic reasons, like the tuba, which provides the bass support or the fundamental to
blend the timbre of the brass family. Percussion instruments, although they have existed
since the dawn of mankind, were less significant timbrally until the twentieth century,
when composers began to explore their expressive potential more fully.

81 “Rich” used here refers to sounds with a large number of audible overtones, which are often produced
by lower strings on all members of the string family.
Orchestration, or the process of using these different instruments to create “timbral combinations that will characterize the music to be played,” therefore, became a sophisticated, intricate and highly personal art.\textsuperscript{82} Technically, orchestration involves differentiation and balance of textural stratification, which is essentially divided into foreground, middleground, and background, by different timbral combinations arranged in proper spacing and registers, in distinct rhythmic patterns, and with different articulations and dynamic levels. Functionally, orchestration can be confined to accompaniment for operatic singing, or used as a means for delineating the formal divisions in instrumental music by varying the instrumental combinations of melodic statements. It can also create a musical structure through alternations and manipulations of pure or blended instrumental timbres, so-called timbral melody or timbral structure.\textsuperscript{83} Stylistically, composers’ individual predilections have produced different results. Some emphasize pure (solo) timbres against a background of transparent texture, or blended timbres with a rather thick texture. Some prefer timbral modulation and timbral melody; still others experiment with specific instrumental combinations for exploring new timbral resources, either from the innovative treatment of traditional sound sources or from the invention of new sources.\textsuperscript{84} These stylistic tendencies not only developed in different periods, but also may coexist in the same period.

Most Chinese traditional instruments are simply and monophonically constructed with narrow ranges, suitable for melodic presentation only. Plucked instruments, such as the pipa (a pear-shaped lute with four strings), and the zheng (cheng, a half-tube zither with sixteen strings and movable bridges), cannot sustain tones, although they can produce simultaneous sounds. A wind instrument, the sheng (mouth organ), can play simultaneous and sustained sounds, but in practice produces an ‘accompanying tone’ a perfect fifth above each ‘root tone’ with or without the addition of the bass octave.\textsuperscript{85} Blending the sound from instrumental combinations is impossible since the instruments are not intentionally constructed to play at the same pitch. Furthermore, there exists no bass instrument to blend all the tones within an overtone series because almost all the instruments produce high frequency tones with few overtones.\textsuperscript{86} Although diverse timbres are possible on individual instruments, instrumental construction and methods of performance prevent these instruments from achieving more resonant and harmonious sound effects. This situation has changed through the development and standardization of traditional instrument manufacturing since the founding of the People’s Republic of China in 1949. Some non-chromatic instruments were provided with keys or frets, wind instruments were given standard pitches, greater sonority and volume were sought by adding extra strings, and new bass instruments based on traditional prototypes were introduced as equivalents of the


\textsuperscript{86} Mackerras, p. 277. Mackerras states that “The Chinese wind family has no truly low-pitched members; there is nothing corresponding in range and depth to the European bassoon.” Most traditional Chinese string instruments, either bowed or plucked, also have no low frequency sound.
Western cello, which once provided the bass line in Chinese instrumental ensembles.\(^{87}\)

There was no actual provision for textural stratification in Chinese instrumental ensembles; all instruments normally play the same melody, but with heterophonic variation, in which each instrument decorates the melody according to its own idiomatic capabilities.\(^{88}\) The structural concept of the instrumental ensemble is governed only by the linear dimension; the entire piece often grows out of repetitions of a single melody, which is led by each instrument in turn. The timbre of each leading instrument thus became an important structural element.

The styles of Western classical and Chinese traditional music seem incompatible in many ways because they are cultivated from two diametrically opposed philosophical origins, while some trends in Western contemporary music appear compatible with certain structural principles in Chinese folk music. As in the aspect of pitch structure, the expression of *singing-speaking* in Chinese narrative music is similar to the *Sprechstimme* in Schoenberg’s compositions, in which the pitches of a melodic line are mostly derived from the language itself.\(^{89}\) Certain formal principles are common to both Western and Chinese instrumental music. One is Golden Section division, in which proportions of length are controlled by the number of beats or measures. As a formal principle, such division tends to occur naturally and coincidentally in the shaping of musical climaxes in Chinese folk instrumental music as well as in Western classical music, and has been re-explored in twentieth-century

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\(^{88}\) Li Minxiong, pp.10-15.

\(^{89}\) Moh-Wei Chen, “Myths from Afar: Chinese Myths Cantata by Chen Yi.” (DMA treatise in choral music, School of Music, University of Southern California, 1997), p. 4.
Western music, notably in the music of Bartók. Numbers in Western contemporary music have become determinants of phrase structure, rhythmic pattern, dynamics, intervals, pitches, and instruments. This thought is highly congruent with the practice of Chinese folk instrumental music, particularly in percussion ensembles when the numerically controlled rhythmic groupings are the determinant of musical form. The Westernization of Chinese instruments makes the combination of Chinese and Western instruments possible due to the adaptation of tuning systems, and the texture produced by the heterophonic variation in Chinese folk instrumental ensembles resembles the texture created by aleatoric technique in some Western contemporary orchestrational practice.

Analytical Methodology of the Fusion Process

The scholarly research on the cross-cultural phenomenon in music has been primarily directed in the discipline of ethnomusicology, and samples of musical synthesis have often drawn from cultures that share central musical features with the West, such as African American music and, to a certain extent, modern music from the Middle East and India. In recent years, the use of fusion process by individual non-Western composers, which mainly refers to the practice of incorporating non-

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Western traditional musical concepts and materials with Western contemporary post-tonal techniques, has received more serious scholarly research that includes efforts at analysis. For example, by investigating Chou Wen-chung’s fusion process through the method of stylistic characterization to isolate different cultural elements in a musical fusion, Peter Chang observed that incompatible cultural elements can be modified or avoided, and compatible elements can be stressed or cultivated in order to reach a new level of syncretism. The style of Chou’s composition thus has been developed “from the impressionistic use of Chinese melodies, modes, rhythmic figures and percussion sounds in his early works to an abstract portrayal of Chinese subjects, aesthetic ideals and principles realized through structural manipulation in his later works.”

The facts that culturally divergent musical concepts and materials are reconciled in a single composition and that methods of fusion are varied from work to work as well as from composer to composer present a unique set of challenges for musical analysis, a process that strives to offer a convincing explanation of how all the structural elements are interrelated and meaningfully or logically organized. The necessary basis for this analytical study includes identifying the cultural sources of different elements and describing how the composers employ these materials to establish their personal compositional style. Ethnomusicologists and composers have now accomplished this basic task of the analytical study. On the one hand,

93 Chang took this viewpoint from Guido Adler’s Der Stil in der Musik, i:Prinzipien und Arten des musicalischen Stils (1911) and Jan LaRue’s Guidelines for Style Analysis (1970).
94 Peter Chang, “Chou Wen-chung and His Music: A Musical and Biographical Profile of Cultural Synthesis” (Ph. D dissertation, the University of Illinois at Urbana-Champaign, 1995), p. iii in his Abstract.
ethnomusicologists have drawn support from an anthropological theory of syncretism as an analytical approach to explore how composers reinterpret musical material and aesthetics to make a successful fusion, as in Peter Chang’s analysis of Chou Wen-chung’s fusion process. On the other hand, composers themselves have often been involved in building theoretical systems that explain exactly the manner by which they composed. For example, based on the symbolism, structures, and orderly sequence of the sixty-four hexagrams, Chinese composer Yiu-Kwong Chung formulated the “I Ching Compositional System” and composed his *Under the Red Eaves* for orchestra (1994) by using this system. The composer explains that he “first determines the yin and yang musical elements and selects the pre-determined background structure, and then constructs the middle-ground level and foreground fabric.”95 He also states that his own interpretation of the Judgments, Commentaries, and Orderly Sequence of the hexagrams governed the procedure of the yin-yang interaction throughout the composition.

According to Patrick McCreless, developing theoretical systems and musical analysis are the basic responsibilities in the discipline of music theory, and the central thrust of the discipline is directed toward analytical theory and its use. He believes that the responsibility of music theorists is, “first and foremost, the analysis of music in the Western tradition, using both existing theories such as those of Heinrich Schenker, the early twentieth-century Viennese theorist of tonal music, and newer theories.”96 As McCreless mentions, the existing theoretical systems, such as functional harmony, the

twelve-tone system, set theory, and the Schenkerian analytical method, are Western-oriented and mainly concerned with the unifying means in the dimension of pitch structure. Since the structural unity in most non-Western music does not rely merely on the pitch contents, the theory-based and Western-oriented approach seems not completely suitable for the analysis of works that combine Western and non-Western elements or aesthetics. Even in this very aspect of pitch structure, as Leonard Meyer points out: “two cultures may appear to employ the same scale structure, but the structure might be interpreted differently by the members of each culture. Conversely, the music of two cultures may employ very different materials, but the underlying mechanism governing the organization of these materials might be the same for both.”

A purely descriptive method to treat the pitch structure as a physical phenomenon to be observed, measured, classified, and compared may be unable to discover and explain properly the underlying psychological responses that may be common for human beings despite the culturally diverse and divergent surfaces.

Edward T. Cone believes that “the good composition will always reveal, in close study, the methods of analysis needed for its own comprehension.” He then questions why “analysis is no longer applicable to certain recent [in the 1950s] compositions, such as pieces that use chance procedures, those completely predetermined by serial operations, or those in which improvisation plays a significant role.” Aiming to solve Cone’s problem in analysis for contemporary music, Robert Morgan proposes an improved analytical approach: “if things are changing—if music

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99 Ibid.
and its social role are undergoing transformation—it seems likely that analysis itself must experience some sort of analogous conversion.”

By comparing the traditional responsibilities of analysis, which deals with the relationship between the musical work and musical system, Morgan considers that contemporary composers tend to disregard a single and unified compositional system, and that each of their works tends to create a purely individual system with validity for its own unique purpose. The construction of the system has itself become an essential and inseparable component of the creative act. In Morgan’s view, “an important part of the analyst’s activity—description and elucidation of pre-compositional planning as distinct from the composition itself—has thus brought about a definite shift of analytic emphasis: from the work to the manner in which it was composed.” While the description of manner in composition has usually been done by the composers themselves, the analyst’s work has to go further: “he must examine the composers’ intentions in relation to their compositional realization, must discuss the implications of the compositional system in regard to the music it generates, consider how the resulting music relates to older music and to other present-day music, examine its perceptual properties and problems, etc.”

For broadening the scope of structural analysis for the music composed after 1945, Schwartz and Godfrey propose a set of nine factors as referential guides, which provide directions and impetus for more thorough analytical study. Seven basic concerns—pitch logic, time, sound color, texture, process, performance ritual, and

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102 Ibid., p. 40.
parody or historicism—shape the aesthetics of today’s composers and influence their creative decisions. Two compositional tools—technology and notation—enable them to articulate those concerns.103

Morgan’s suggestion referring to the shift of analytical emphasis and Schwartz and Godfrey’s proposition of broadening the analytical scope provide a guideline for the analysis of works engaged in the process of cross-cultural fusion. If analysts’ work is merely to identify the cultural sources of different elements and to describe how the composers employ these materials to establish their personal compositional style, it seems to be stagnating at the level that has been reached by ethnomusicologists and composers, although these procedures comprise a necessary basis for analytical study. Nevertheless, many layers of meaning in a single work can be decoded through emphases on different directions. Ethnomusicological study requires a more social and cultural relation to the music meaning and less rigid mode of understanding and interpretation of structural coherence. Thus, isolating stylistic components (i.e., non-Western and Western elements) and then putting these constant features in their historical, social, artistic and cultural contexts as an analytical method is aimed to identify the forces responsible for shaping the composer’s stylistic development. On the other hand, whereas the composers’ analytical approaches to their own works are often subjective in nature, the actual effect and artistic attainment of their compositions needs to be examined objectively. To understand and interpret the structural coherence under certain organizational systems and to examine the composers’ intentions in relation to their compositional realizations are the responsibilities of analysts and are the goals of this study.

Chen Yi’s instrumental works serve as ideal subjects for this study for several reasons. First, Chen Yi has touched upon a wide range of musical genres, such as vocal music including solo, chorus, and cantata; music for traditional Chinese instruments, including solo, ensemble of Chinese instruments and the combination of Chinese and Western instruments; and a large range of Western instrumental music from solo, to ensemble, to full orchestra. Among these genres, the music for Western instrumental ensemble or orchestra particularly represents Chen Yi’s effort for the fusion of Western and Chinese structural elements and concepts in music. This is because in vocal music, the national or ethnic character or content can be identified through the text, while in traditional Chinese instrumental music, distinct sounds of instruments themselves easily reveal their nationality. The music written for Western instruments, however, requires more sufficient organizational means to realize the composer’s expressive intention and more comprehensive ability to handle abstract musical form as well as physical energy and color of the sound. Second, the historical, cultural, and social context and Chen Yi’s musical education in relation to the formation of her compositional approach can be more thoroughly explored by the aid of concepts and theories from ethnomusicology, thus providing a substantial contextual basis for later objectively investigating and understanding her work and properly evaluating her contribution to the development of contemporary music. Third, the underlying organizational principles of nine instrumental works composed by Chen Yi between 1987 – 1998 will be revealed by the incorporation of Chen Yi’s own statement of her predetermined systems, the existing theoretical systems and analytical methods, and a set of factors proposed by Elliott Schwartz and Daniel Godfrey. The scope of theory-based analysis
will in this way be broadened. Finally, a new analytical direction suggested by Robert Morgan can further illuminate Chen Yi’s intentions in relation to her compositional realization, and permit a more objective evaluation of her work and her position in the development of contemporary music. In addition, Bruno Nettl’s concepts about the proportion or classification of cross-cultural fusion can help to describe the procedure in which Chen Yi’s music style has developed from Westernization, through modernization, to the achievement of syncretism at a new level. The analytical study at these three levels presents an initial exploration toward a multidimensional analytical approach to the cross-cultural fusion in music.
CHAPTER TWO

CHEN YI’S CULTURAL AND MUSICAL CONTEXT

A native of Guangzhou, southern China, Chen Yi was born into a family of doctors in 1953. She began to learn the piano at the age of three and then the violin at four. She was sent to the countryside for two years (1968-1970) during the Cultural Revolution (1966-1976), and at the age of seventeen, she joined the Beijing Opera Troupe in Guangzhou, where she served as concertmaster. After the Cultural Revolution, she was among the first students admitted to the Central Conservatory of Music in Beijing in 1978. Studying composition with Wu Zuqiang and Alexander Goehr, she earned a bachelor’s degree in composition in 1983, then a master’s degree in 1986. Chen Yi came to the United States for further study in 1986 and studied primarily with Professors Chou Wen-chung and Mario Davidovsky at Columbia University in New York City. She earned her Doctorate in Musical Arts in 1993 and served as composer-in-residence for the Women's Philharmonic, the vocal ensemble Chanticleer, and the Aptos Creative Arts program in San Francisco from 1993 to 1996. She joined the composition faculty of the Peabody Conservatory at Johns Hopkins University in Baltimore in 1996, and has been the Cravens/Millsap/Missouri Distinguished Professor at the Conservatory of Music at the University of Missouri in Kansas City since 1998.

Perhaps the most internationally renowned female Asian composer of contemporary music today, Chen Yi has, in particular, become a prominent figure in
music circles of the United States and China. Chen's major works have been widely performed around the world by such orchestras as the National Symphony, the American Composers Orchestra, the Austrian Radio Symphony Orchestra, the BBC Philharmonic, the Hallé Orchestra, the NHK Symphony, the Singapore Symphony, and the China National Symphony. She was the recipient of several awards and fellowships, including the prestigious Ives Living Award from the American Academy of Arts and Letters (AAAL), the ASCAP Concert Music Award, the Guggenheim Fellowship, the Goddard Lieberson Fellowship from the AAAL, the CalArts Alpert Award, the NYU Sorel Medal, and the UT Eddie Medora King Composition Prize. Chen Yi has also received commissioning grants from Meet the Composer/Reader's Digest, the Koussevitzky Music Foundation, the Fromm Music Foundation at Harvard University, the Ford and Rockefeller Foundations, the Mary Cary Trust, Carnegie Hall, and the San Francisco Art Commission, among others. Her works are published by Theodore Presser Company and can be heard on CDs issued under the CRI, New Albion Records, Teldec, Nimbus, Angel, Bis, Cala, Atma, and China Record Company labels.

Chen Yi’s compositional approach was established before she came to the United States, influenced by her family, her early working experiences and the bi-musical training she received in China, and then developed through her study and work in the United States. A close investigation of her biographical accounts will reveal the reasons, motivations, and procedures for the establishment of her approach to composition. Beginning with compositional procedures similar to those of her Chinese predecessors, she subsequently incorporated Western post-tonal techniques into her works in a systematic way. For this reason, Chinese composers’ approaches to the
cross-cultural fusion in relation to the social and political environments will be briefly considered here in an effort to establish Chen Yi’s position within the history of “new” or “modern” Chinese music, as well as to provide a cultural context for the formation of her compositional style.

Chinese Composers’ Approaches to the Fusion Process

In China, there was no academic musical training until the beginning of the twentieth century, when political and economic development brought about drastic cultural changes, which included a new school system based largely on Western educational methods. While feeling that the real position of China in musical development and education lagged behind Western countries, almost all the Chinese music composers and educators strived to create a “new” or “modern” music with a distinct Chinese character by assimilating new and advanced Western methods. Five generations of Chinese professional composers have undergone a long process of cognition and digestion of Western compositional approaches and techniques, re-evaluation of Chinese musical heritage, and integration of elements from both cultures in their compositions. This goal-directed undertaking has continued to the present, although the approaches to the fusion of Western and Chinese musical components were varied and even conflicting tremendously under different political environments.

The development of Chinese modern music can be divided into three periods according to the changes of composers’ approaches to the fusion process, the sources of musical elements to be integrated, and the classes of audience. The first period extends
from the beginning of the twentieth century to the 1940s under the political environment of the preparation, establishment, and destruction of the Republic of China governed by the Nationalists (1911–1949). During this period, principles of Western music dominated the fusion process, Western and Chinese popular songs prevailing in the urban areas became musical sources, and urban inhabitants who came from the middle or upper classes and trained under Western educational systems comprised the audiences.

The fusion process became effective even from the initial stage of the modern musical development. Music was formally introduced into the curriculum in 1907; Western music in the form of the school song was brought back to China by Chinese students who studied in Japan, where Western music had been incorporated into the Japanese school system following the Meiji Restoration in 1868. As a genre, the school song was a setting of modern Chinese poetry, usually with political and educational content, to Western popular music, with the original melody retained. Such adaptations of Western music (especially choral music) were widely accepted and remained popular among the Chinese populace until 1918. Although aesthetically crude and rudimentary in nature, this practice represented the earliest integration of Western music into Chinese culture.¹

As discussed in the previous chapter, traditional Chinese music is collective in nature and no individual composer claims the origin of compositions. In “new” or “modern” Chinese music, however, the contributions of individual composers are clearly recorded. A group of Western-trained Chinese composers became involved in

the procedure of rediscovering the tradition when they experimented with fusing Chinese and Western elements in vocal compositions. Zhao (or Chao) Yuanren,² for example, focused his research on the reconciliation of Western and Chinese elements on the relationship between melodic contour and Chinese speech intonation. Huang Zi,³ on the other hand, following Mahler’s method, tried to find equivalent texts from Chinese poems to compose art song in the style of German lied.⁴

These Western-trained Chinese composers regarded Western music as a subject of science and believed that its rules can be applied cross-culturally. They shared a view that a fundamental requirement for a Chinese composer was to master Western tonal harmony.⁵ Although the majority of these composers felt that they should use Chinese material in their compositions, Western music was considered superior to its Chinese counterpart. Thus, a genuine interest in studying traditional Chinese music in its own right was never developed among them, and their re-evaluation of the Chinese tradition never reached a deeper level.⁶

The founding of the Shanghai Conservatory in 1927 marked the starting-point of professional musical education and a new step forward in the modern musical development in China. The curriculum, which included the study of theory and

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² Zhao Yuanren (1892-1982), a well-known linguist and composer, was sent to the United States by Tsinghua University in 1910 and earned his doctoral degrees in physics from Cornell University and in philosophy from Harvard University. At the same time, he studied music theory and composition. After returning to China in 1920, he taught at Tsinghua University. He moved to the United States in 1938 and taught at Hawaii, Yale, and Harvard University. See A Dictionary of Chinese Music (Miao Tianrui, Ji Liankang and Guo Naian, ed. Beijing: People’s Music Press, 1984), pp.498-499.

³ Huang Zi (1904-1938) earned two Bachelor degrees, one in psychology at Oberlin University in 1926 and another in music at Yale University in 1929. When returning to China, he taught theory and composition at Shanghai Conservatory from 1930 to 1938. See A Dictionary of Chinese Music (1984), pp.177-178.


⁶ Peter Chang, p. 44.
composition, orchestral instruments, piano, voice, and traditional Chinese instruments, was closely modeled after the Western system of musical instruction. The faculty was made up of Chinese musicians trained in Germany or the United States, plus a group of European musicians. The leading composers of this period, including the group of composers mentioned above, and their students, such as Ding Shande and He Luting, were regarded as the first and second generations of professional composers. They wrote music for a wider range of Western genres, including mixed chorus, solo and chamber music, and orchestral works. Their compositions illustrate efforts to adopt a mid-romantic harmonic language in harmonizing Chinese melodies, and to organize Chinese melody according to Western formal principles—particularly in their use of sectional structures. The piano solo Mutong Duandi (The Cowherd’s Flute, 1934) written by He Luting, for example, won the first prize on a “Call for piano composition in Chinese style” held by Russian pianist and composer Alexander Tcherepin in 1934. In this piece, Chinese melody in pentatonic modes is successfully integrated with Western counterpoint techniques and ternary form. His compositional practice earned him a reputation in China as a fervent promoter of Western classical music, seeing it as

7 Ding Shande (1911-1995) studied with Huang Zi then Wolfgang Frankel at the Shanghai Conservatory. After studying with Nöel Gallon, Aubin and Boulanger at the Paris Conservatoire, he returned to Shanghai in 1949 and taught at the Shanghai Conservatory. His piano miniatures in Western Romantic style are popular in the Chinese urban middle-class. His style was barely affected by the influx of contemporary Western music in the later years of his life. See Frank Kouwenhoven, “Ding Shande,” in The New Grove Dictionary of Music and Musicians, 2nd ed. (2001), Vol. 7, p. 360.

8 He Luting (1903-1999) began studying composition with Huang Zi in 1931. During the anti-Japanese and civil wars of the 1940s, he was active as a conductor and composer in the Communist mass song movement. He taught composition in Shanghai and from 1949 to 1984 directed the Shanghai Conservatory, with an interruption during the Cultural Revolution. A prominent Communist Party member, he was known for his numerous patriotic film scores and politically inspired songs and choral works. Much of his music consists of Western Romantic harmonization of Chinese folk and folk-inspired melodies. See Frank Kouwenhoven, “He Luting,” in The New Grove Dictionary of Music and Musicians, 2nd ed. (2001), Vol. 11, pp. 358-359.

a means of modernizing Chinese music.

The Chinese preference for fusing Chinese melody with Western harmony was due largely to their views on the success of the Russian nationalist composers, whose contributions for preserving national characteristics had won acclaim among Western musicians and audience. The Chinese composers’ conviction about the compatibility of Chinese melody and Western techniques was coupled with the Western fascination with oriental modes and melody, as seen in the works of Rimsky-Korsakov, Mahler, Ravel, and Debussy. Thus, this view had become orthodox as the result of experiments, successes and failures of these two generations of Chinese composers.  

There is still another group represented by Liu Tian-Hua (1895–1932), a composer, music educator, and master of several traditional Chinese instruments. He advocated the transplantation of Western performance techniques to the Chinese instruments, such as using vibrato on the erhu (two-stringed fiddle), and established an ensemble for traditional Chinese instruments, modeled after the Western orchestra.

During this period, the debate on the formation of modern Chinese music was conducted between conservative and progressive Chinese musicians. Differing in educational background, the progressives, represented by Western-trained composers, considered that the conservatives’ adamant refusal to adopt a Western scientific method in creating music merely made Chinese traditional music a living fossil incapable of development. On the other hand, the conservatives, represented by traditional music performers, saw the composition curriculum in conservatories as “blind” imitation of

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10 Peter Chang, p.49.
the West that was undermining the Chinese tradition.\textsuperscript{11} With the tension among various groups, only the Western-trained composers stood at the center, although their abilities and superficial understanding about traditional Chinese music prevented them from discovering the fundamental principles of this music.

The second period of modern Chinese musical development extends from the 1940s to the 1970s under the political environment of the preparation, establishment, and construction of the People’s Republic of China, governed by the Communists to the end of the Cultural Revolution in 1976. During this period, traditional Chinese folk materials became the basis for the composition, Western compositional techniques were cautiously selected to add to the potency of the Chinese materials in the synthesis, and the ordinary people throughout the country became the audiences. The Communists’ policy on art was featured by filtering out the unsuitable elements from the tradition, which required a re-evaluation of the tradition. The criteria for this re-evaluation stressed that when the elements of folk arts were associated with the ordinary people, then they were desirable; anything else was politically undesirable. From 1938 to 1945, Communist musicians in Yan’an, the residency of headquarters of the Communist Party, carried out experimentation to investigate and integrate Chinese and Western materials for the new kind of revolutionary music.\textsuperscript{12} The main active composers include Xian Xinghai (1905-1945), Lü Ji (b.1909), Ma Ke (1918-1976), Xiang Yu (1912-

\textsuperscript{12} Peter Chang, pp. 51-52.
\textsuperscript{13} The music career of Xian Xinghai (1905-1945) and his approach to composition had been regarded as a model for musicians by the Communist Party. Xian was born into a poor fisherman family and studied the violin with Paul Oberdoeffer and composition with Vincent D’Indy and Paul Dukas in Paris Conservatorie in the early 1930s. After returning to China in 1935, Xian joined the anti-Japanese movement through writing a large number of mass songs. While teaching composition at Lu Xun Institute of Arts in Yan’an,
In addition to a large number of mass songs, the prominent large-scale works during this period are the productions of Yellow River Cantata (1939), which is better known in the West in its 1969 piano concerto rearrangement, and the opera The White-haired Girl (1945-1952), which is known nationwide by its ballet version performed during the Cultural Revolution (1966-1976).

During the Second World War in 1943, the nationalist leaders also sought to boost the morale of the army and the masses with Confucian ethics by establishing the Institute of National Rites and Music, which was responsible for researching, compiling, and implementing Confucian ritual music as representative of Chinese national music. Although from different ideological bases, these two approaches from the Communists and Nationalists in the course of politicizing music have one concept in common: Chinese musical materials were the dominant components for nationalistic Chinese composition.

Another weak trend in China in the late 1940s was the introduction of twentieth-century techniques. In 1946, Tan Xiaolin (1911–1948), who studied with Paul Hindemith at Yale University, returned to his hometown Shanghai and served as composition professor for two years until his death. Tan taught and composed with

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14 The text and music of this cantata were written by Guang Weiran and Xian Xinghai, respectively. See A Dictionary of Chinese Music (1984), p.424.
15 The libretto of The White-haired Girl was written by He Jingzhi and Ding Yi, the music was composed by Ma Ke, Zhang Lu, Qu Wei, Li Huanzhi, Xiang Tu, Chen Zi, and Liu zhi. See A Dictionary of Chinese Music (1984), pp.11-12.
17 Peter Chang, pp. 52-53.
the techniques he learned from Hindemith, especially his system of tonality, in which the arrangement of chords according to their degree of tension becomes the guideline of harmonic undulation. One of his students, Luo Zhongrong (b. 1924), developed a special interest in the music and writings of Hindemith and translated his book *A Concentrated Course in Traditional Harmony* from English into Chinese (Shanghai Wenguang Express, 1950). Sang Tong (b. 1923) was another student of Tan, and also studied with W. Fraenkel and J. Schloss, two former students of Schoenberg and Berg. He developed a passion for Western atonal music and a firm command of compositional techniques. Sang’s *From Far Away* (1947) for piano and *Night Scenery* (1948) for violin and piano were the first and, for several decades, the only atonal works produced by a Chinese composer in China. The practice along this line was soon forbidden due to the replacement of the government and the restriction on the educational and artistic policies.

Shortly after the founding of the People’s Republic of China in 1949, when the Communist Party replaced the Nationalists as the leader of the country, the Central Conservatory of Music was established in 1950. It was first located in Tianjin and moved to Beijing in 1958. Other conservatories around the country were founded thereafter. As a faithful follower of the Soviet Union, the new government systematically introduced “socialist realism” as an ideological doctrine that governed

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22 *Socialist realism* is an artistic doctrine that was conceived in the early 1920s in the Soviet Union. It was originally associated with literature, but soon found its way into other artistic disciplines. The application
cultural and artistic fields, while “formalism”—a pejorative term referring to music that employed modern techniques, or music written for its own sake rather than the sake of the people—was banned during the period from the 1950s to 1970s. Musical education operated under the Soviet model: students received strict training in the tradition of Chinese music and Western classical and romantic music; composers were encouraged to go to rural and remote areas to collect indigenous musical material. This kind of “fieldwork” (gathering original folk material), as a tradition handed down through centuries, was institutionalized in Chinese conservatories. At the end of each school year, the composition students were required to go to the countryside or remote areas inhabited by the minority people and collect folk and original music material.

The leading composers of this period were regarded as the third generation. Some of them studied in the Soviet Union, such as Wu Zuqiang (b. 1927), Du Mingxin (b. 1928), and Zhu Jian’er (b. 1922). They and composers of the second

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24 Peter Chang, p. 54: “The Chinese have a long tradition of collecting musical material from the people by court officials. … The ‘folk’ materials were refined to suit the taste of the court.”


26 Du Mingxin (b. 1928) started his piano lessons at the age of eleven with He Luting and studied at the Tchaikovsky Conservatory in Moscow from 1954 to 1958. He taught composition at the Central Conservatory of Music after returning to China. Known primarily as a composer of music for ballet, film and orchestra, Du's music emphasizes the melody and colorful instrumentation, and his harmonic
The third generation of composers directly influenced the practice of their students, known as the fourth generation.
Among the works in the “nationalistic” style written by the fourth generation of composers, the violin concerto *Liang Shanbo yu Zhu Yingtaï* (*The Butterfly Lovers*, 1959-1960), composed by He Zhanhao\(^{30}\) and Chen Gang,\(^{31}\) became the representative work of modern Chinese music known throughout the world.

The “nationalistic style” was the only officially sanctioned form of composition, and composers were forced to avoid contemporary Western music, which was viewed with suspicion by the communist authorities and even considered “non-music.” Composers who violated this restriction were subjected to severe punishments, such as prohibiting composing, losing their job, or being sent to exile, as happened to Sang Tong and Wang Lisan. Sang Tong was forced to modify his idiom considerably. His *Mongolian Folk Songs* (1953) are reminiscent of Bartók's piano pieces for children, while *Caprice* (1959) for piano displays a Prokofievian brutality. Sang tried to resist the growing pressure of politics on musical life in Shanghai, but eventually lost his job as a music teacher at the conservatory in 1955.\(^{32}\) Studying composition at the Shanghai Conservatory with Ding Shande, Sang Tong and Arzamanov in 1951, Wang Lisan (b.1933) was one of the audacious composers who provoked a sharp political response in the 1950s. By experimenting with broken

\(^{30}\) He Zhanhao (b. 1933) worked in the orchestra of a traditional Chinese *yueju* opera troupe before he entered the Shanghai Conservatory to study composition with Ding Shande and the violin in 1957. He directed an experimental group called “the Chinese violin school” and taught composition after his graduation. He combined Western with Chinese instruments in many innovative ways and his music embraces a wide range of historical and traditional themes from both Chinese and Western sources. See Jonathan P.J. Stock, “He Zhanhao,” in *The New Grove Dictionary of Music and Musicians*, 2nd ed. (2001), Vol. 11, p. 478.


or suspended tonality along the lines of Debussy, or even with dissonant harmonies approaching the language of Bartók, he believed that this newly explored harmonic territory complemented well the floating nature of Chinese pentatonicism. Under severe political pressures, however, Wang was branded a rightist in 1957 and was exiled to the far north of China to work on farms in 1959.\footnote{In 1963, Wang became a teacher of composition at Harbin Normal University, where he resumed his career as a composer after the Cultural Revolution. See Frank Kouwenhoven, “Wang Lisan,” in \textit{The New Grove Dictionary of Music and Musicians}, 2\textsuperscript{nd} ed. (2001), Vol. 27, pp. 80-81.}

During the period of the Cultural Revolution (1966-76), almost all the categories of music were banned and the music conservatories, like all other educational institutions, ceased operations. The composers, especially those leading composers of the second and third generations, underwent not only an attack on their compositional approaches but also physical punishments. For example, He Luting’s views bought him into serious conflict with anti-Western populists and provoked violent attacks on him and his family. Sang Tong was tortured by Red Guards, resulting in partial deafness,\footnote{By the 1980s, when it finally became possible for composers in China to pursue new directions in music, Sang Tong had lost his creative powers. He was elected Director of the Shanghai Conservatory (1984-1991) and became an influential writer on harmony and contemporary compositional theory. See Frank Kouwenhoven, “Song Tong,” in \textit{The New Grove Dictionary of Music and Musicians}, 2\textsuperscript{nd} ed. (2001), Vol. 22, p. 245.} and Luo Zhongrong was harassed and imprisoned.\footnote{Frank Houwenhoven, “Luo Zhongrong,” in \textit{The New Grove Dictionary of Music and Musicians}, 2\textsuperscript{nd} ed. (2001), Vol. 15, p.316.} The professors and students of conservatories were sent to the factories and the countryside to serve as common laborers, and all their intellectual and creative pursuits had to be conducted completely informally, without government sanction and without benefit of any external resources or influences.
Instead of professional performance, an emphasis was placed on amateur music making. Rather than being performed by experts, the masses themselves took full part in their own cultural lives. The only official musical activity for professional musicians was the performance of newly composed mass songs and a limited number of revolutionary Beijing operas and ballets selected and supervised by the government. In order to refine and develop the traditional art form of Beijing opera, a small number of composers were allowed to combine Western instruments with traditional accompanying instruments of Beijing opera for the first time. As a result, they produced a sound effect that greatly expanded the musical expression of the Beijing Opera. Along the same line, a new pattern of cross-cultural fusion—singing of the Beijing opera accompanied by the piano—emerged, as a version of the modern-setting Beijing opera *The Red Lantern* with piano accompaniment (1968) by pianist Yin Chengzong (b. 1941). In addition, young instrumentalists in Beijing opera troupes began to get acquainted with Western orchestration, and were eventually attracted to composition. Many of the fifth generation of professional composers were the direct product of the popularization of Western instruments and composition techniques.

Although the compositional means were confined to a relatively monotonous range under the political restriction, composers obtained opportunities to explore rich and varied Chinese musical traditions more seriously and systematically. The quality of the cross-cultural fusion has therefore improved tremendously. Whereas the typical pattern of the fusion still drew on the Western functional harmony and sectional form

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37 Peter Chang, p.58.
was incorporated with Chinese folk melodies, in which cultural and artistic connotations had been carefully studied, the Western principles had been melded into Chinese music, becoming an organic and inseparable component.

The third period of the development of Chinese modern music started from the early 1980s when the educational system was reestablished in 1977 and the policy of an “open-door to the West” had been carried out in the late 1970s. A small number of composition students were allowed to enter the conservatories, where they were strictly trained, as before, in the traditions of both Chinese music and Western classical music. Foreign musicians and composers, such as Chou Wen-chung, Alexander Goehr, George Crumb, Toru Takemitsu, and Isang Yun, were invited to the conservatories and lectured about contemporary compositional techniques. Among these visiting professors, Chou Wen-chung offered new directions to Chinese composers by illustrating his personal approach to composition, in which he combined philosophical and aesthetic ideals of Chinese visual and literary arts with the Varèsean ideal of the sound in his music.³⁸

By broadening the scope of the fusion process, many of the students in this group began to incorporate post-tonal techniques with some aspects of the traditional arts and music that have not been explored, such as the mannerism of the Beijing opera, the dynamic flow of ink in calligraphy, the funeral chanting style of the peasants, the timbre of the ocarina, and the tradition of Chinese percussion ensembles. Their music has started to attract international attention. For example, Tan Dun (b. 1957)³⁹ drew inspiration from

³⁸ Peter Chang, p. 36.
nature, Chinese philosophy and his childhood memories and discovered a wide range of
formerly suppressed twentieth-century music. His string quartet Feng Ya Song (1982)
won an international prize in 1983. Ye Xiaogang (b. 1955)\(^{40}\) attracted international
attention with his Xi jiang yue (‘The Moon Over the West River’, 1984), a subdued,
contemplative work for chamber orchestra. Qu Xiaosong (b. 1952)\(^{41}\) demonstrated a
concern for nature and a respect for Chinese folklore and folk music. His representative
work Mong Dong (1984) is a sonic manifestation of the indigenous art of the Wa people
in Yunnan province. Blending an expressive human voice with instruments, this work
reveals an affinity to Crumb’s Ancient Voices of Children (1970).\(^{42}\) This group of
composers was regarded as the fifth generation of Chinese professional composers, also
known as “the new wave composers” or “the avant-garde of the 1980s.”\(^{43}\) Besides the
three composers mentioned above, the leading composers of this generation also include
Guo Wenjing (b. 1956),\(^{44}\) Chen Yi (b. 1953), He Xuntian (b. 1953),\(^{45}\) Peng Zhimin (b.
1955),\(^{46}\) and Xu Shuya (b. 1959).\(^{47}\)

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\(^{43}\) Zhou Jinmin, “New Wave Music in China;” Zhang Que, “Akkulturationsphanomene in der gegenwartigen Musikkultur Chinas: Die musikalische Avantgarde der achtziger Jahre (The acculturation phenomenon in contemporary Chinese music: The avant-garde of the 1980s)” (Ph.D. Dissertation, Freie U., Berlin, 1991). “The new wave composers” and “the avant-garde of the 1980s” are not standard terms in Chinese musical history; both of them were borrowed from Western literature to describe this group of composers.

\(^{44}\) Guo Wenjing began his music career as a violinist in a song and dance troupe in Chongqing for seven years before studying composition with Li Yinghai and Su Xia at the Central Conservatory of Music in 1978. In 1983, after his unauthorized marriage to a fellow student, he was forced to return to Chongqing, where he produced numerous scores for film and TV. In 1990 he returned to the Central Conservatory of Music and became a teacher of composition. His work She Huo (1991) and his chamber opera Wolf Cub
The preliminary and bold experimentations of these “new-wave” composers shocked the Chinese audiences greatly, since their music emphasized dissonant sonorities and unusual performance techniques, and intentionally avoided the idiomatic expression of melody. Their experiences along this line led to serious contention in the fields of culture and arts. The positive view considered that they broke a fixed pattern for reconciling the Chinese and Western musical elements that lasted since the beginning of the twentieth century, and opened multiple paths for the manner of the cross-cultural fusion. The opposite commentary considered that their experimental works merely imitated the newly learned techniques and ideas without speculating in depth about the appropriateness of the musical styles they integrated.

Some composers from previous generations, especially those who received instruction in Western contemporary techniques from Tian Xiaolin and other foreign musicians, supported the experimental works of the fifth generation composers. They also joined the exploration of fusing Chinese elements with post-tonal compositions; Luo Zhongrong and Yang Liqing (b.1942) are two prominent figures among them. When Luo Zhongrong took up composition again in 1979, his affinities with Western

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45 He Xuntian worked as a sailing laborer on the Yang-Tze River during the Cultural Revolution and entered the Sichuan Conservatory of Music in Chengdu in 1978. He became the chair of composition department at Sichuan Conservatory of Music in the early 1990s and began to teach composition at Shanghai Conservatory of Music in 1992. He is the winner of several international and national composition competitions. See Zhou Jinmin, “New Wave Music in China;” p. 298.

46 Peng Zhimin entered the Wuhan Conservatory of Music in 1978 and was the winner of a national composition competition. He became the chair of composition department at Wuhan Conservatory of Music in the 1990s. See Zhou Jinmin, “New Wave Music in China;” p. 298.

47 Xu Shuya learned to play the cello at fifteen and entered the Shanghai Conservatory in 1978. Concentrating on symphonic works, he is the winner of an international composition competition. In 1989, he went to France, studying at Conservatoire National Supérieur de Musique in Paris. See Zhou Jinmin, “New Wave Music in China;” p. 298.
music shifted from Hindemith to Schoenberg. He wrote several song cycles and chamber works applying serial techniques, and frequently stressed the coincidental but striking relationship between Western rhythmic or timbral serialism and the structural principles of shifan luogu, a genre of Chinese percussion music. Although his musical style fluctuates between Debussian Romanticism and serialism with a distinct pentatonic flavor, he encourages bolder innovations in the younger generation. He is held to be the spiritual father of modern Chinese music by many young composers in Beijing and Shanghai. Yang Liqing (b. 1942) was the first Chinese composer to be sent abroad for study after the Cultural Revolution in 1980. After his study in Germany his compositions veered stylistically between Romanticism and modernism, and he combined traditional Chinese instruments with colorfully scored Western orchestra in his large-scale works. Yang has received many grants and commissions from institutions worldwide and his orchestral pieces have been performed in Asia and Europe. As a key figure throughout China in promoting repertory and techniques of contemporary music, Yang has consistently supported and encouraged young Chinese composers and lectured internationally on Chinese contemporary music.

Although they brought a drastic impact on Chinese culture and arts, the composers of the fifth generation never dominated the Chinese musical scene since most of them went abroad for their further study in the middle of the 1980s. Residing in

the United States, Australia, and Europe, they continued to develop more sophisticated ways of integrating elements of traditional Chinese music with those of contemporary Western techniques. Composers such as Tan Dun, Sheng Zongliang (Bright Sheng), Zhou Long, Chen Xiaoyong, Chen Qigang, Su Cong, Ye Xiaogang, and Yu Julian continued to experiment with blending traditional Chinese elements with contemporary Western techniques. Each composer brought their unique perspective to this fusion, resulting in a rich tapestry of new musical expressions.

50 Tan Dun came to the United States for his further study in 1986 and earned the doctorate from Columbia University in 1993. Among his numerous honors are the Glenn Gould International Protégé Award, the Grawemeyer Award and commissions from organizations worldwide. Describing himself as a composer ‘swinging and swimming freely among different cultures,’ Tan has drawn inspiration from nature, Chinese philosophy, and his childhood memories, a combination that lends his work qualities of timelessness, spirituality and mysticism. See Joanna C. Lee, “Tan Dun,” in The New Grove Dictionary of Music and Musicians, 2nd ed. (2001), Vol. 25, p.64 -65.

51 Sheng Zongliang (Bright Sheng, b. 1955) studied the piano at the age of four, and worked in a folk music and dance troupe in Qinghai province for seven years before entering the Shanghai Conservatory in 1978. After moving to New York, he studied at Queens College, CUNY (MA 1984), and Columbia University (DMA 1993). He joined the composition department at the University of Michigan, Ann Arbor in 1995. His many honors include Guggenheim (1990), Naumberg (1990), and A Kennedy Center award (1995). See Weihua Zhang, “Sheng, Bright” in The New Grove Dictionary of Music and Musicians, 2nd ed. (2001), Vol. 23, p.252.


54 Chen Qigang (b. 1955) was among the first students of the Central Conservatory of Music in Beijing in 1978. He came to Paris in 1984 and studied with Malec, Jolas, Castérède, and most influentially, Olivier Messiaen, who became a staunch supporter of his music. He obtained the doctorate in musicology at the Sorbonne in 1989 and remained in Paris to work independently as a composer. See Frank Kouwenhoven, “Chen Qigang,” in The New Grove Dictionary of Music and Musicians 2nd ed. (2001), Vol. 5, p. 566.

(Jingjun), and Chen Yi, have gradually emerged, attracting attention from the Western world as well as their motherland and receiving widespread critical acclaim.

Confronting more and more compositional techniques, the choices of proper ones for distinct compositional goals become crucial for Chinese composers, both in China and abroad. The audiences for their compositions are different in cultural background, and the immediate goals are differentiated between modernizing the existing Chinese contemporary music in China and introducing Chinese musical culture into the Western world. The historical and cultural requirements for Chinese composers, however, stay the same: to pursue a distinct Chinese music that reflects not only the contemporary compositional language, but also a thorough understanding of Chinese cultural heritage.

**Family Influence and Early Working Experiences**

Chen Yi’s parents were lovers of Western classical music and raised their three children to love music and to be trained as professional musicians. For her parents’ musical ability and the routine musical activity of her family, Chen Yi recalled:

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“Although my parents were medical doctors, my mother played the piano at a professional level, and my father played the violin with great passion and sensitivity, at an intermediate level, and sang many European folk songs and songs from Hollywood movies. They collected numerous records of classical music, ranging from solo instrumental and vocal pieces to orchestral works and operas, and the whole family listened to these records every evening.”

Living in a metropolitan center in the south of China, Chen Yi’s parents often took their children to local weekly symphonic concerts and other performances, appreciating famous soloists' recitals, ballets of France, England, and the Soviet Union, and the song and dance shows of Congo, Japan, and Romania.

Chen Yi’s older sister Chen Min was a child prodigy and had performed piano on stage and on radio since she was three. Chen Yi grew up listening to her sister’s practice every morning. Chen Yi started playing piano at the age of three by having a weekly one-hour private lesson. She also began to study the violin intensively at age four, having two and, in some years, three one-hour private lessons a week. Over about twenty years, Chen Yi played through all of the standard violin repertoire in classical music, including concertos of Mozart, Beethoven, Mendelssohn, Brahms, Tchaikovsky, Wieniawski, Sibelius, and Prokofiev, concert pieces of Sarasate and Saint-Saëns, 24 Capricci of Paganini, and six unaccompanied suites of J. S. Bach. Chen Yi described her feeling when she was practicing: “I got drunk by practicing and performing all of these

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59 Chen Min (b.1951) began to play the piano at three and studied at the Affiliated Middle School of the Central Conservatory of Music in Beijing from 1962 to 1966. She worked as a pianist in two army song and dance troupes in Beijing from 1972 to 2001 and now is a pianist of China Philharmonic Orchestra. The biographical information of Chen Min is provided by Chen Yi.
works, and just enjoyed the beauty and the spirit behind the sound and notes.” In order to understand Western music in its cultural context, she read all the available biographical books about classical composers as well as European novels and stories from which the librettos of operas were produced. Through listening and playing these masterpieces of Western music, she was impressed with the logic of motivic development in Bach’s Chaconne, good melodic writing and effective instrumental groupings in Tchaikovsky’s piano concerto and opera Eugene Onegin, and structural techniques and instrumentalized melodic writing in Brahms’s Violin concerto.

The idea for Chen Yi to become a composer was a wish of her father, and the approach—to treat composition as a carrier of Chinese culture—was suggested by Chen Yi’s first theory teacher. Chen Yi remembered:

“One day, when I was a kid, as we listened to the recordings of Heifetz and Kreisler who played their own compositions, my father told me that it would be great if one day I could play my own works like them. And when I was a teenager, my father invited Mr. Zheng Zhong to teach me music theory and Chinese folk songs. This important mentor told me that, since I was born and growing up in China, I could understand Chinese culture better, and then should be able to carry on this culture through the music I write and share it with more people. Mr. Zheng’s words impressed me deeply and influenced my whole life. Later on, I started to do what he suggested, and I have continued to work along this line till now.”

During the Cultural Revolution (1966-1976), Chen Yi’s parents, like all the intellectuals in China, were subjected to cruel political persecution. Chen Yi’s family was forced to separate for several years. Her mother was kept as a prisoner at the hospital, her father went to the countryside, her sister was sent to a remote farm in the

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61 A Phone Interview with Chen Yi on December 9, 2001 transcribed by Xin Guo.
North, and her younger brother Chen Yun was taken to the home of their violin teacher Mr. Zheng Rihua, brother of Mr. Zheng Zhong. Mr. Zheng Rihua became the closest friend of Chen Yi’s family since he not only took care of the daily life of Chen Yun, but also voluntarily offered him free daily violin lessons.

From 1968 to 1970, Chen Yi was sent to the suburbs of Guangzhou to do heavy labor, which was a kind of political punishment for the children of intellectuals. It was, however, an important period for Chen Yi as she established her approach to life and composition. Through working with simple and honest peasants, she learned to overcome hardship under the political pressure, to share her feelings and thinking with them, and to live optimistically. In her spare time, she played the violin for poor country kids, peasants, and soldiers, although only the revolutionary songs were allowed to be played. She added double stops and fast passages that she had learned from Paganini when she played the popular tunes of those revolutionary songs. It was the first time for Chen Yi to synthesize Western techniques into Chinese music, and from this time, she recognized the cultural differences between Western and Chinese music and started to think how to create her own music. She explains: “In the countryside, I found that when I translated my own as well as peasants’ languages into music, it was not the same as what I was practicing everyday! For this reason, I believed that I really needed a deeper and more extensive study in order to find a way to express my feeling through a real fusion of Chinese and Western music. The resulting music should be a natural

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63 Chen Yun (b. 1955) started to play the violin at four and was a violinist in Beijing Opera Troupe of Guangzhou from 1970 to 1978. He studied at the Central Conservatory of Music in Beijing from 1978 to 1982. He worked as concertmaster at Singapore Symphony from 1989 to 1995 and at Macao Symphony from 1995 till now. He has served as co-Concertmaster at the China Philharmonic Orchestra in Beijing since 2000. The biographical information of Chen Yun is provided by Chen Yi.
integration of both cultures, but not an artificial or superficial combination.”

This deeper and extensive study was soon executed when Chen Yi joined the Beijing Opera Troupe in Guangzhou and worked as concertmaster in the orchestra from 1970 to 1978. During this period, Chen Yi had an opportunity to come into contact with Beijing opera, to practice selected Western repertoire as technical training, and to orchestrate and compose music for this orchestra, which was a combination of Western and Chinese instruments. By arranging operatic arias, she was aware that the melody is actually an exaggerated language and is imbued with its unique cultural connotation. Understanding and mastering the syntax of Chinese language is the key to creating a good melody. Through transcribing or realizing the music for traditional Chinese instruments into Western notation, Chen Yi familiarized herself with the range, techniques, timbres and expressive effects of each of those Chinese instruments. While orchestrating the interludes and music for the scenes of acrobatic fighting in Beijing opera, she taught herself Western music theory and employed Western structural techniques to organize musical materials. By dealing with this non-standard, mixed orchestra, she developed a timbral sensitivity to the instrumental groupings, from which the equilibrium of timbral blend or special sound effects can be produced through varied combinations of Western and Chinese instruments.65

The environment created by her parents made Chen Yi a music lover, and the preliminary ability she acquired from her early musical education in Western music prepared her to be a professional musician. Although her regular education was discontinued for about twelve years due to the political upheaval, the tribulation and

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65 A Phone Interview with Chen Yi transcribed by Xin Guo (December 2001).
hardship she underwent actually facilitated and promoted her desire to become a composer. She had cast away impractical illusions about her future career through getting close to ordinary Chinese people in spirit, and had a mixed orchestra to acquire proficiency in orchestration and examine constantly the feasibility of her musical thinking and creativity, which would have been difficult to obtain if she were a regular music student in the conservatory. The early decisive working experiences in the countryside and in the Beijing Opera Troupe, therefore, settled a foundation for Chen Yi’s compositional style with cross-cultural fusion in approaches and techniques.

Musical Education and Working Experiences in the United States

After the Cultural Revolution ended in 1976 and the educational systems resumed in 1977, Chen Yi was one of the first-group composition students to be admitted into the Central Conservatory of Music in Beijing in 1978. She was also accepted as a violin major at that time, but eventually she decided to take composition as her major because it had been her dream as well as her father’s wish and her early theory teacher’s desire.

During her five years of undergraduate study, she received strict training in both Western and Chinese musical systems. The curriculum of the Western music still followed the model set before the Cultural Revolution, including the study of functional harmony, counterpoint and fugue-writing, musical form and analysis, and orchestration, plus ear-training and sight singing and a heavy-loaded assignment for piano literature. Although this training was confined within the tonal composition of Western
common-practice period and no subject in this field was untouched to Chen Yi, her skill in part-writing was further regularized, her understanding on the nature of Western musical culture was deepened, and her compositional thinking was improved. Chen Yi’s treatment of linear motion in her orchestration, for example, was enlightened by the concepts of the invertible counterpoint and double canon in the style of Bach. In a global scale of her composition, she is accustomed to expressing a main idea by a lengthy melodic line with designed conjunct and disjunct as well as ascending and descending motion, and this melodic contour can be thickened by parallel motion of a group of instruments. In a small scale, she creates multiple linear motions that follow the principles of the invertible counterpoint. This manner of dealing with multiple linear motions has been emphasized and developed in her later works, thereby becoming a prominent feature of her compositional style.

The study of Chinese music, however, really opened Chen Yi’s mind since she had not had a chance to get into this vital artistic treasure before. The curriculum of this part includes the study of folk songs, musical storytelling, local theater, and traditional instrumental music. The composition students were required to memorize folk songs and arias of the local theater in local dialect, to compose melodies in various local styles, and to survey playing techniques like bowing, plucking, and blowing for traditional instruments. By memorizing a large number of Chinese folk melodies within a rather short period, she accumulated a great deal of perceptual knowledge, from which she later induced several principles as the grammatical and syntactical representatives of Chinese musical language and applied them to her compositions. The

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66 A Phone Interview with Chen Yi transcribed by Xin Guo (December 2001).
melodies of folk songs and local theater arias have in this way enriched Chen Yi’s musical vocabulary and have always been a source for her creative inspiration. She was also deeply impressed with the unique structural principles of traditional Chinese instrumental music, especially for the use of number sequences in the ensemble of percussion instruments. These structural principles combined with those of Western music comprise Chen Yi’s essential formal approach in her composition. An example is her early work, the Viola Concerto *Xian Shi* (1983), in which the numerical addition and subtraction are applied to the groupings of beats as a basic structural means.\(^{68}\)

Chen Yi studied composition with professor Wu Zuqiang during her undergraduate and graduate periods. Wu’s rigorous thought on motivic development, keen insight in music analysis, emphasis on the correspondence between technical means and the natural unfolding of human emotions, and the enthusiasm for exploring and carrying forward Chinese cultural heritage influenced Chen Yi profoundly. Chen Yi’s approach to the cross-cultural fusion was also strengthened when Wu encouraged her to find her own way to integrate Chinese musical culture and Western techniques. Wu strongly recommended her to treat yearly fieldwork seriously since it was a good opportunity to learn more about Chinese ordinary people and to learn and understand more Chinese culture in its original form.\(^{69}\) Through these eight years of professional training, Chen Yi further formalized her compositional procedures: always plan the formal structure first, and then write down all the main musical ideas that match what she wants to express, allocate instruments and organize the materials, and adjust the

\(^{69}\) A Phone Interview with Chen Yi transcribed by Xin Guo (December 2001).
details in the progress of actual composition. After the introduction of Western contemporary music in the early 1980’s and the lesson on post-tonal techniques taken with the first foreign visitor Alexander Goehr, a British composer and professor of Cambridge University, Chen Yi broadened her compositional thought that was once confined within the tertian based tonality and began to speculate on her own manner of fusing Chinese culture with Western contemporary techniques. While pursuing her MA degree from 1983 to 1986, Chen Yi analyzed the entire set of Bartók’s string quartets in detail under the instruction of professor Wu Zuqiang, and studied the available music scores of contemporary composers. She admired especially Bartók’s manner of integrating folk elements with contemporary techniques, and came to understand the superficiality if a folk tune is simply incorporated into composition without exploring its unique syntax in the cultural context. Meanwhile, she appreciated Berg's approach to twelve-tone tonality in his piano and violin concerto, and felt that the lyricism and the emotional power transmitted from the cello concerto of Witold Lutoslawski perfectly matched what she wanted to express. She then realized that musical works could be distinguished by their grammatical and syntactical characteristics derived from their own culture, while

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71 Since contemporary music was banned for three decades, no music scores or recordings were imported from foreign countries into China until Chou Wen-chung’s visit in 1977. Chou brought scores of Edgard Varèse, Robert Lewis, George Crumb, Philip Smiley, Mel Powell, Ralph Shepey, and Chou himself and gave them as gifts to the library of the Central Conservatory of Music in Beijing. In 1980, British composer Alexander Goehr gave scores of Debussy, Stravinsky, Schoenberg, Webern, Carter, Messiaen, Boulez, and Goehr himself to the Central Conservatory of Music in Beijing when he visited China. Thereafter, Zhong Zilin, professor of the Central Conservatory of Music, brought back scores and recordings of Webern, Ives, Schoenberg, Bartók, Berg, Witold Lutoslawski, Arthur Honegger, Krzysztof Penderecki, György Ligeti, Milton Babbit, and Luciano Berio after his visit to the United States in the early 1980s (see Jinmin Zhou, "New Wave Music in China," pp. 99-102). All these scores comprise the sources for Chen Yi’s study at that time.
72 A Phone Interview with Chen Yi transcribed by Xin Guo (December 2001).
the underlying principle of making the music acceptable was to follow the psychological responses that were common in human nature despite cultural differences and varied expressive means. To express human emotions by the idioms of Chinese musical language, therefore, became the goal of Chen Yi’s composition. From this point of view, she found the compatibilities between the singing-speaking of Cantonese opera and Sprechstimme in Schoenberg’s Survivor from Warsaw (1947), and discovered the similarities in the treatment of rhythm and meter as the basis of form between the music of Stravinsky and Messiaen and those of traditional Chinese percussion ensembles. She was very interested in the music of Stravinsky for his irregular pulse or accent distribution, which results in a kind of psychological expectation and thus creates a momentum in music.\(^{73}\) All these discoveries were absorbed into her practice and her compositional principles of the cross-cultural fusion had then been firmly established.

As a result of this compositional approach, Chen Yi won several awards and earned a national fame during the period of her study. Among her awarded works, String Quartet (1982) won the first prize in the National Composition Competition of String Quartet in 1982 and Duo Ye for piano solo (1984) won the first prize in the Fourth National Composition Competition in 1985. As an awarded work, Duo Ye reflects all influences Chen Yi received from her musical education in China, such as the pursuit of folk flavor, the emphasis on the expression of emotion, the late-Romanticist single-movement cyclic form and developing process on thematic ideas, the pan-tonal harmonic language, the ostinato movement and multi-leveled writing, and

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the metric-rhythmical structure based on a numerical sequence.\textsuperscript{74} This work became one of her most frequently performed works and was also arranged and transcribed into several instrumental forms, such as \textit{Duo Ye} for chamber orchestra (1985), \textit{Duo Ye No. 2} for full orchestra (1987), and \textit{Duo Ye} for pipa solo (1995). When she received her master's degree in 1986, she offered an evening concert of her orchestral works, including \textit{Sprout} for string orchestra, which was a polished version selected from the assignments of the course of polyphony and fugue-writing, \textit{Duo Ye} for chamber orchestra, viola concerto \textit{Xian Shi}, and \textit{Symphony No. 1} for full orchestra. This event, held in the Beijing Concert Hall and performed by the Central Philharmonic Orchestra,\textsuperscript{75} was jointly sponsored by the Association of Chinese Musicians, the Central Conservatory of Music, and the Central People's Broadcasting Station in Beijing, and received an enthusiastic acclaim and positive commentary.\textsuperscript{76}

After coming to the United States in 1986 and studying at Columbia University from 1986 to 1993, Chen Yi learned more sophisticated contemporary techniques, mainly in dealing with dissonance, and then further broadened her views on melodic writing and sonic design. It was very natural for her to adopt the free-atonal language because it enabled her easier to notate peasants’ improvisational singing, to translate people's speaking into music, and to exaggerate reciting tunes in the style of Beijing opera. By learning the twelve-tone techniques, she has been able to handle new pitch relationships with dissonant intervals and noises, thereby extending the scope of her

\textsuperscript{75} Resembling the performance in Carnegie Hall in New York, the performance in Beijing Concert Hall usually symbolizes the standard for both performers and composers at the highest level in art.
\textsuperscript{76} Pineiro, “An Interview with Chen Yi,” July 26, 2001.
expressive means in pitch structure. She considers that her approach to pitch structure is a fusion of tonality and atonality as well as consonance and dissonance. The result of this fusion sounds to her like speaking in Chinese, but is written in idioms of Western music.\textsuperscript{77}

Touching upon the music making via electronic and computer technology, the tenet of the sound generation—the contour of a waveform being changed in amplitude, pitch, or timbral characteristics over time—aroused Chen Yi’s thought on dealing with orchestral sonorities as flowing trends of sound. She was also influenced by Chou Wen-chung’s thought on the principles of music structure in relation to those of other arts in China, especially for the calligraphy, in which “the controlled flow of ink creates a continuum of motion and tension in a spatial equilibrium through the interaction of movement and energy, the modulation of line and texture.”\textsuperscript{78} Similar to the overall layout in calligraphy, Chou considered that in his music, “line, mass, and their interaction, together with such elements as articulation, duration, intensity, and timbre, were organized into an integrated body of sound that ebbs and flows—in the manner of a tonal brushwork in space—with ever-changing motion, tension, texture, and sonority.”\textsuperscript{79} The affinities between Chou’s thought on the movement and energy of sound and the tenet on the sound generation inspired Chen Yi to create tension or momentum in her composition through the movement of flowing sound trends that were produced by the orchestra. The main concern of the compositional process under this approach is therefore shifted from

\textsuperscript{77} Ibid.  
\textsuperscript{79} Ibid., pp. 310-311.
handling individual pitch relationships in great detail to bringing all the acoustic means into play, in which the distribution of timbral groups and directions of sound movement as melodic contours are pre-designed and strictly controlled.\textsuperscript{80}

The excitement generated by complex rhythmic organizations always attracted Chen Yi because she considered that these elements could help her to create more dramatic effects in her music. The rhythmic structures in the minimalist music inspired her to treat such rhythmic structures as extensions of ostinato in her \textit{Sparkle for octet} (1992).\textsuperscript{81} In this work, an organic blending of Western and Chinese cultures is exemplified by the perpetual rhythmic motion, the continuously flowing melodic line, which was combined by the fragments of a Chinese tune and Western twelve-tone techniques, and the creation of a climax associated Western sectional formal principles and underlying phrase structures of a Chinese folk tune.

Chen Yi’s open-minded study, goal-directed approach to music creation, and plentiful compositional experiences accelerated her progress in composition. A portion of her works written during her study period has been performed frequently as her representative works, such as \textit{Woodwind Quintet} (1987), \textit{As in a Dream} for soprano, violin and cello (1987), \textit{Near Distance} (1988), \textit{The Points} for pipa solo (1991), and \textit{Sparkle} for octet (1992), among others. She started to receive commissions from professional orchestras before her graduation, such as the \textit{Piano Concerto} (1992), which was commissioned by the Brooklyn Philharmonic Orchestra, New York in the season of 1991-92 and was premiered in October 1994 at the Next Wave festival presented by the Brooklyn Academy of Music.

\textsuperscript{80} A Phone Interview with Chen Yi transcribed by Xin Guo (December 2001).
\textsuperscript{81} Ibid.
In addition to the education she received from Columbia University, Chen Yi has assimilated many useful elements into her composition from her living and working environments in New York City, San Francisco, Baltimore, and Kansas City. Living in these metropolitan cities with substantial exchanges in culture and arts, Chen Yi had opportunities to attend concerts and performances from the United States and other countries in the world, thereby enriching her knowledge of different cultures and inspiring her thought on music creation. Her orchestral work *Ge Xu* (Antiphony, 1994), for example, was a direct result of her attending an African-American dance concert. She was very excited by the drumming and the energetic dancing, and then she returned home to compose with the passion and excitement of that concert lingering in her head. She even wrote a special cadenza for a whole percussion group in this work. \(^{82}\)

While working as a composer-in-residence and then as a professor, she has always been ardent in disseminating Chinese culture through her music activities, offering lectures on Chinese music for the students of universities and middle schools as well as arranging Chinese folksongs for American performers, such as *A Set of Chinese Folksongs* (1994) performed by the male choir Chanticleer. On the other hand, she has been apt to learn more from preparations of new courses, and from sharing and exchanging her thoughts and feelings with her audiences and students. The book *Debussy in Proportion* by Roy Howat which she read for teaching the course “Debussy’s Orchestral Works” at the Peabody Conservatory, for example, helped to improve her thought on the design of formal structure through the ‘golden mean’ proportion, resulting in her mixed quartet *Qi* (1997).

\(^{82}\) Pineiro, “Interview with Chen Yi,” July 26, 2001.
Unlike her Chinese predecessors, whose music educations were often interrupted by social transformations and their approaches to composition were affected by political instabilities, Chen Yi was able to concentrate on her music study without interruption and developed her compositional ideal without political restrictions. She approached composition from a multi-cultural perspective by studying the music and performance practices of various cultures and by attempting to subsume structural procedures from different styles of music into her own works. Carrying forward the tradition of her Chinese predecessors in composition with the cross-cultural fusion, she increasingly committed to the use of music to express human emotion and experience and the emphasis on sympathetic responses from her audiences. She believes that although musical grammar may differ from culture to culture, the emotion it conveys can be understood and accepted by audiences of any cultural background.

**Analytical Procedures**

Since coming to the United States in 1986, Chen Yi has focused on four aspects of musical structure: pitch, rhythm and proportion as determinants of form, timbre, and textural process that governs the placement and duration of events in time. She has developed a personal style that successfully melds elements of Chinese traditional music with those of Western post-tonal composition. The analyses of Chen Yi’s nine instrumental works in Chapters 3, 4, 5, and 6 will demonstrate these developmental processes in detail.

Basically following the chronological order, the selected compositions are divided into four categories with different emphasis on the aspects of musical structure.
In the first category, *Woodwind Quintet* (1987) and *Near Distance for flute clarinet, violin, cello, piano and percussion* (1988) concentrate on Chen Yi’s exploration of pitch structure; in the second category, *Sparkle for octet* and *Piano Concerto* both composed in 1992, and *Qi for flute, cello, percussion, and piano* (1997), reveal her employment of a Chinese folk tune *Baban* as a model of formal structure as well as the source of pitch material. The third category includes *Ge Xu (Antiphony) for chamber orchestra* (1994) and *Cello and String Quartet* (1998), demonstrating her exploration of the potential of Western instruments to translate the sound and expressive idiom of Chinese instruments and her sensitivity to the physical energy and color of the sound through her skillful orchestration. In the last category, *Symphony No. 2* (1993) and *Momentum* (1998) illustrate Chen Yi’s ability to govern the entire range of time spans from the smallest level (moment to moment) to the largest (encompassing the entire composition). In this case, the compositional focuses are not restricted to pitch, but related to tempo, dynamics, register, texture, instrumentation, formal succession of events, and degrees of performance freedom.

The explanation of the analytical concepts or systems for particular aspects will open each of these chapters. The analysis of each work includes a brief statement of Chen Yi’s own intention and pre-compositional scheme, and an identification of pitch constructions and their development, formal structure, instrumental distributions and timbral combinations, and textural arrangement. A summary identifies the specific technical innovations and explains how disparate structural elements are interconnected within the piece.
CHAPTER THREE

ABSORB WESTERN TECHNIQUES IN PITCH STRUCTURE

Woodwind Quintet (1987) and Near Distance (1988) were composed when Chen Yi was studying twelve-tone and free atonal techniques at Columbia University. These two pieces illustrate not only her exploration of post-tonal approaches to pitch structure, but also some basic stylistic characteristics and procedures in pitch construction that recur in her later works.

The analytical subject of these two pieces will focus on pitch logic,\(^1\) including any systems Chen Yi chooses. The twelve-tone system and set theory are used to identify pitch constructions and to elucidate the manipulation of the twelve-tone row and small pitch-class (pc) sets, while the Chinese modal system is used to identify the source of pitch materials and as a reference to describe the transformation or distortion of original pentatonic melodies. The analysis of the Woodwind Quintet focuses mainly on Chen Yi’s manner of applying twelve-tone techniques, while Near Distance demonstrates her employment of free-atonal techniques.

\(^1\) Pitch logic is one of seven terms proposed by Elliott Schwartz and Daniel Godfrey in Music Since 1945 (1993). In explaining the term, they state: “Today’s composers work with possibilities that would scarcely have been imaginable a century. They may use any intonation system within the octave and may fashion a scale from any arrangement of pitches they wish. One pitch may function as a key center, or all pitches within the collection might be entirely equal significance. Alternatively, a composer may choose to give little or no priority to pitch logic, or may decide to compose with sounds that have no identifiable pitches.”
In addition, the organizations of musical events in these two compositions will be elucidated through the principles of sectional form, based on the manner of arranging pitch materials.

*Woodwind Quintet* (1987)

Inspired from the booming tide of the Chaoyin Cave in the Putuo Mountain located in the Southeastern China, Chen Yi intended to express the dull chanting from the Buddhist nunnery through twelve-tone techniques, and to imitate the sounds of Chinese wind instruments: the reciting tunes of the *Xiao* (or hsiao)—a vertical bamboo flute—played by the oboe, and the rude roaring of the Changjian—a Tibetan low-ranged bronze horn—played by the French horn.²

**Pitch Constructions and Their Treatment**

The principal pitch materials are a twelve-tone row, a number of smaller pitch-class collections that are derived from segments of the row but used as unordered sets, and a fragment from a Chinese tune, which is also related to a row segment. Subsets formed by the initial two, three, four, and seven pitch classes of the row are the basic pitch-structural units of the piece (Figure 3-1).

Dyads:

\[ \begin{array}{cccc}
F^\# & F & G & C^\# \\
E^b & D & E & B^b \\
B & C & B & G^\#
\end{array} \]

Structural trichords:

\[ [0 \ 1 \ 2] \quad [0 \ 1 \ 2] \quad [0 \ 1 \ 2] \]

Structural tetrachords:

\[ [0 \ 1 \ 2 \ 6] \quad [0 \ 1 \ 2 \ 6] \]

Septachord:

\[ [0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6] \]

Figure 3-1. Structural subsets of the twelve-tone row in *Woodwind Quintet*.

In Figure 3-1, the first two discrete pairs of dyads in the row form interval classes (ics) 1 and 6, respectively; the remaining discrete dyads are all ic 1. The first trichord forms set-type [0 1 2], and this set occurs twice more in the row—once in transposition and once as a retrograde-inversion of the original. The initial tetrachord is set-type [0 1 2 6], and the next four pcs are an ordered transposition of the same set. The pcs of the first septachord make up a segment of the chromatic collection that covers the range of a tritone. The ics 1 and 6 therefore serve not only as the constructional basis of the row itself, but also as elements that integrate all the other pitch materials.

The unordered smaller pc sets used in the *Woodwind Quintet* vary in cardinality from three to seven, and all are contained within the range of a tritone. Figure 3-2 identifies several occurrences of these smaller sets and illustrates their close affinity with the row-segments shown in Figure 3-1.

In Figure 3-2, three sets of different cardinalities in the first column occur successively, forming a process in which an incomplete set is gradually replenished by adding pcs until the complete septachordal set emerges. This septachordal set, another
septachordal set in the second column, and the other three sets that occur simultaneously in the third column, are all closely related to row-segments: the chromatic septachord is bounded by a tritone, and other sets are based on combinations of pcs related by ics 1 and 6 in either linear or vertical arrangements.

The fragment of a Chinese melody that is used in this piece is made up of a perfect fifth, with a grace note located a half-step below each of the two principal notes; the four notes together form set type \([0 \ 1 \ 5 \ 6]\). Chen Yi uses this set in its original form, and also in a modified version in which the interval between the two principal notes is reduced from 7 to 6 (Example 3-1). The resultant set-type \([0 \ 1 \ 6 \ 7]\) is more thoroughly saturated with ics 1 and 6 and therefore more closely connected to the construction of the row. The only other material that is adopted from Chinese music is a single glissando tone played by the horn in its low range; it is not a pitch-structural element, but is associated instead with the rhythmic activity of the piece.
Example 3-1. Fragment of a Chinese melody and its modified version.

These subsets—the [0 1 2] trichord, [0 1 2 6] or [0 1 6 7] tetrachords, septachord, and the ics 1 and 6—are present in all three of the sources of pitch material and serve as important musical ideas in this piece, occurring not only in the linear dimension, but also as the basis of vertical constructions (Figure 3-3).

Figure 3-3. Structural sets in vertical formations.

These principal pitch materials are treated in three ways: 1) linear presentations of the row, sometimes in paired statements with certain pcs exchanged between row-forms and sometimes articulated by timbral shifts or timbral modulation; 2) a vertical presentation of the row, which is divided into several segments in different parts; and 3) the simultaneous presentation of the unordered pc sets in a rotational order in different parts. The single-line presentation consists of repetitions of the twelve-tone row
extended by an appended row segment (notes 3-10) in consistent eighth notes. Phrases are punctuated by replacing certain notes of the appended segment by an eighth rest (Figure 3-4).

In contrast to the long single-line presentation, the paired presentations appear as two simultaneous ic1-related transpositions ($P_0$ and $P_{11}$) with an exchange of pcs between them (Figure 3-5).

Figure 3-5. Paired presentation of the row.

The timbral articulation of the row forms a kind of timbral melody (**Klangfarbenmelodie**), in which one instrument begins a line and the other instrument continues it; adjacent pcs may be overlapped and played by two instruments as a pivot in the timbral modulation (Example 3-2).
Example 3-2. Row with timbral shifts and modulation. mm. 77-81

In the vertical presentation, the row is divided into five segments; these segments are presented simultaneously in different parts, each with its own rhythmic pattern (Example 3-3).

Example 3-3. Vertical presentation of the row.

mm. 118-119

In the rotational treatment of smaller pc sets, three sets are presented simultaneously with specific pc orderings and rhythmic patterns. These sets are then exchanged among the voices in different textural inversions, so that each set appears in turn in each of the
voices. The initial pcs of these sets—C, B, and B♭—occur together at the beginning of each statement (Figure 3-6).

The beginning of these three sets is indicated by boxed pcs, and the beginning of the second half of these sets is indicated by circled pcs, which are also constructed by C, B, and B♭ as a trichord [0 1 2] and occur together.

Figure 3-6. Rotation of smaller pc sets.

**Relationship between Form and Pitch Structure**

The form of the *Woodwind Quintet* is clearly divided into three sections plus a coda (Figure 3-7). These divisions correspond to the treatments of pitch materials described above. Within each section, formal subdivisions are determined by contrasts in texture.

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<td>a a a c--------</td>
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<td>a---- a-------- a------ a----</td>
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a = twelve-tone row; b = smaller sets; c = Chinese melodic fragments; the dotted box indicates a single row articulated by different instruments.

Figure 3-7. Formal structure of the *Woodwind Quintet.*
Section I focuses on linear presentations of the twelve-tone row and undergoes a gradual process of intensification through three stages: first, the recurring single-line presentation; second, the increase of textural density, accomplished through the use of a heterophonic texture, in which different parts present the same melodic line simultaneously but at different speeds; and finally, the use of three distinct textural strata—the flute and clarinet, the oboe, and the horn. This process leads to the first climax at measure 32.

In its character and simplicity of pitch treatment, Section II functions as a period of repose in this piece. It restates the incomplete twelve-tone row in different transpositions, maintaining a connection to Section I, and at the same time it introduces new material—the fragment of a Chinese melody, initially in its modified version as set type [0 1 6 7]. These two types of material alternate throughout this section which, with its consistently sparse texture, stands in sharp contrast to Sections I and III.

Section III serves as an altered restatement of Section I, employing more rhythmic, timbral and registral contrasts among the various pitch materials: the restatement of the twelve-tone row uses the timbral articulation with the sixteenth note as the basic rhythmic unit, and semitone-related vertical combinations of the Chinese melodic fragments in the middle register alternate with presentations of the twelve-tone row both above and below it. The increase in dynamic level brings about the second climax at measure 118, where the tension is intensified in three steps: first, the vertical combinations of the twelve-tone row; second, the twelve-tone row plus its appended segment (as it appears in Section I), which alternates with the Chinese tune fragment in
different registers; and finally, the rotational presentation of smaller sets against the Chinese tune (this time in rhythmic augmentation).

The presentation of pitch material in the coda is similar to that at the beginning of the piece: the single-line twelve-tone row with its extension, followed by a four-voice imitative texture plus one free voice. The transpositional intervals between the first three voices—$P_0, P_{11}$ and $P_1$—correspond to the ordered pc intervals of the initial three pcs in the twelve-tone row ($F^\#$, $E^\#$ and $G:-1+2$). The initial pcs of the entire five voices form a chromatic collection with $F^\#$ at its center. The rhythmic interval between voices participating in the imitation varies; successive entries occur only where the initial pc of the new voice forms ic 1 or 6 with other voices at the point of entry. The piece ends on a five-note cluster which, like the starting pcs for the preceding row-form, is centered on $F^\#$.

In this piece, the development of pitch materials takes place principally in the linear dimension, depending upon the expansion and contraction of phrase lengths, increase and decrease in the number of melodic lines, changes in rhythmic activity, and different timbral combinations and registral dispositions. Since vertical combinations are essentially a product of the confluence of lines, vertical pitch constructions at specific points in time are not rigorously managed, producing a kind of aleatoric texture.
Near Distance (1988)

Chen Yi provides a subtitle for this piece as “lost in thought about ancient culture and modern civilization,” which reveals her compositional intention. The contrast made by varied performance techniques embodies the differences in concepts of tone expressions as well as in eras and cultures between ancient China and modern West, and is a determinant of formal division.

Connections between Pitch-Class Sets

Whereas the pitch material in the Woodwind Quintet is presented principally in long lines, pitch material in Near Distance (for flute, clarinet, violin, cello, piano and percussion) derives from the manipulation of small pc sets in which the pitches are presented in close proximity to one another. The primary pitch materials include a twelve-tone row, a five-note contiguous chromatic segment, and two types of simultaneities. Ics 1 and 6 play a significant role in the piece and are also important as a means of extending the smaller sets. Although the complete twelve-tone row is represented only once in the second half of this piece, its trichordal subsets have structural importance from the very beginning. This complete row is shown in Figure 3-8.

The first three discrete trichords are set-type [0 1 3], while the last one forms [0 2 5]. Set [0 1 3] is the more important generating element: it initiates the piece and recurs in various ways within phrases; it is also extended into different types of
tetrachords and pentachords in the developmental process. Among these extensions are the tetrachords [0 1 2 4], [0 1 3 6], [0 2 3 6] and the pentachord [0 2 3 4 6]. The tetrachords are formed by the addition of ic 1 or 6 to the basic [0 1 3] trichord, and the pentachord is constructed by a conjunct symmetrical display of [0 1 3] (Figure 3-9).

The five-note contiguous chromatic segments are usually displayed or subdivided as two conjunct subsets: [0 1 2] plus either [0 1 3] or [0 1 4]; this set is sometimes reduced to a tetrachord by the omission of a pitch, or its subset [0 1 2] is extended into a [0 1 2 4] tetrachord by the addition of ic 4 (Figure 3-10).
Two types of simultaneities, \([0\ 1\ 3\ 7]\) and \([0\ 1\ 4\ 8]\), appear in invariant pitch content. They are arranged as trichords (\([0\ 3\ 7]\) or \([0\ 4\ 8]\)) plus an appended note that is related by ic 1 to some pc within the trichord (Figure 3-11).

Ics 1 and 6 also appear as independent dyads, either separately or combined as set type \([0\ 1\ 6]\). Example 3-4 includes three excerpts in which ic 1 or 6 is used alone or as an initial gesture. In the first one, the violin and cello play double-stop glissandi formed by ic 6. The second is a series of flute tremolos on ic 6-related pitches, and in the third excerpt, the violin plays a melody that consists of several gestures separated by rests; the initial two pitches of each gesture are made up of ic 1, with one exception.
Example 3-4. Ic 1 or 6 in pitch constructions.

1. mm. 11-14, violin and cello

The two excerpts in Example 3-5 demonstrate how ics 1 and 6 combine to form [0 1 6]. In the first excerpt, a double-stop (B⁴ and F♯⁴) played by the violin and F⁴ played by the cello form a [0 1 6] trichord; in the second excerpt, the piano plays tremolos on ic6-related pitches with ic 1 added intermittently to form [0 1 6].

Example 3-5. Combination of ics 1 and 6 in pitch constructions.

1. m. 6, violin and cello  
2. mm. 9-10, piano
Treatment of Pitch Materials

The pitch materials described above are treated in two different ways. The first one emphasizes the avoidance of pitch-class repetition, either within individual lines or in contrapuntal combinations of parts. This approach also extends to the use of contrasting timbres, so that even when a pitch class does reappear, it tends to occur in a different instrumental combination. The second method focuses on producing sound effects, especially on individual pitches, by changes in timbre, an approach similar to the concept of Klangfarbenmelodie.

Two excerpts in Example 3-6 illustrate how pitch-class repetition is avoided within a single line. The first excerpt includes two procedures: the primary set [0 2 3 6] is extended first by addition of ic 1 at the beginning of the set, forming [0 2 3 4 6]. (One exception is the set that adds ic 5 instead.) Then the sets are connected by different pitch intervals in different directions, as {+1−3+3} shown by dotted lines beneath pcs. In this case, more repeated pcs are involved, such as three appearances of B♭ and A and two appearances of G♯ and F♯; the sense of pc repetition, however, is avoided since these repeated pcs are separated in wide spaces with different time values and within different rhythmic groupings. The boxed ic 5 denotes the exception to the prevailing expansion by ic 1. In this piece, Chen Yi tends to use same small sets consistently, but assigns these sets in different time value and organizes rhythmic groupings to avoid any regular rhythmic pulse. For instance, A♭ is grouped as an added pc to extend the set [0 2 3 6], but does not belong to the sixteenth-note rhythmic grouping that precedes it. The second except contains five groups of pcs played by the
piano. These pcs are formed by conjunct or extended $[0 \ 1 \ 3]$ sets; each pair of adjacent pcs is widely spaced in different registers in order to avoid the sense of pitch repetition.

Example 3-6. Avoidance of pitch repetition in individual lines.

(a) mm. 43-44  Cello

(b) mm. 36-38  Piano

The two excerpts in Example 3-7 illustrate the avoidance of pitch repetition in combinations of paired instruments not only by placing pcs in different registers but also by assigning them to different rhythmic groupings with different articulations.

Example 3-7a is a combination of the flute and clarinet. The melodic line played by the flute consists principally of conjunct motion in legato segments, while the line played by the clarinet contains large leaps, covers a range of over three octaves, and includes staccato articulations. Example 3-7b is a combination of violin and cello, in
which row fragments are played by both instruments a half-step apart within the same register; these two lines are presented through a technique similar to mensuration canon and are distinguished through different rhythmic groupings. In this piece, each pair of instruments or voices forms a stratum, and the vertical combination of these three strata yields a texture that is extremely complex with regard to pitch constructions and rhythmic ratios.

Example 3-7. Avoidance of pitch repetition in contrapuntal combinations.

Even where a pc is repeated, the repetition is normally concealed by timbral variation through different instrumental doublings (Example 3-8). In measure 33, the cello plays a pizzicato glissando that slides between $D^2$ and $A_{b2}$, and a pizzicato $E^2$.  

---

3 The system recommended by the Acoustical Society of America (e.g., middle C = $C^4$) is employed to describe registral dispositions.
The $A^\flat_2$ and $E^2$ are doubled by the piano to reinforce these two bass notes. In the same measure, the clarinet plays a gesture from $G^5$ to $F^\#_5$, which is doubled by the piano at an octave higher and lower, respectively. The doubled $G^6$ and another pitch $B^\flat_6$ played by the piano are sounded together with $F^\#_6$ and $A^6$ played by the flute; these two pairs of pcs are a semitone apart with an accent on each of them to create a clash. The same procedure continues in the next measure. More complicated doublings are used in measure 35: each individual pitch is doubled by two different instruments either at pitch or an octave above or below. The gesture $D^\#_5$, $B^5$ and $C^\#_6$ played by the flute, for example, is doubled by the piano at pitch and reinforced by the violin with a double-stop on $C^\#_5$ and $B^5$. In this way, every pitch is doubled, but always with timbral contrast.

Example 3-8. Timbral combinations of individual pitches in Near Distance (mm. 33-35).
The second approach to the treatment of pitch materials focuses on different performance techniques involving individual or combined instruments. The flute and clarinet play a wide vibrato (covering a half-step) from slow to fast frequency, and bend the tone downward with the lip; both techniques are used to imitate effects played by Chinese wind instruments. The violin and cello have half-step or whole-step tremolos with frequently changing bowing, and trill glissandi. The pianist plays two sustained tone clusters with the forearms. A percussion instrument—the fourth Tom-Tom—has the instruction “use a thumb to stop the membrane and move from side to the center then back to side while using a stick to play the beats”.

These extended techniques serve to increase the range of timbral contrast, especially as it applies to individual pitches.

Example 3-9 illustrates how a single sustained pitch C#5 is exchanged among four instruments. In measures 110 - 121, this C#5 is the basis of the pitch content; it is played first by the violin and sustained until the end of the piece. The clarinet, flute and cello join in with the same pitch at different points and shift between C#5 and D5. After measure 115 all four instruments play long sustained pitches; two of them remain on C#5 and the other two play D5 to produce a half-step clash. In this way, the timbre of C#5 is subtly changed through different instrumental combinations and through its conflict with D5.

---

Example 3-9. A single sustained pitch $C^\#5$ produced by four instruments.

Connections between Form and Pitch Structure

The form of this piece is divided into two parts, which correspond to different treatments of pitch materials: the first part concentrates on the avoidance of pitch repetition and the second focuses on different methods of playing individual pitches. Each part contains an introduction and subsections. They are connected by a transition, which also serves as a codetta for the first part (Figure 3-12).

Figure 3-12. Formal structure of *Near Distance*.

<table>
<thead>
<tr>
<th>Part I</th>
<th>Introduction</th>
<th>Subsection I</th>
<th>Subsection II</th>
<th>Subsection III</th>
<th>Codetta or Transition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-6</td>
<td>6-21</td>
<td>21-32</td>
<td>32-52</td>
<td>52-61</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part II</th>
<th>Introduction</th>
<th>Subsection I</th>
<th>Subsection II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61a</td>
<td>62-90</td>
<td>90-121</td>
</tr>
</tbody>
</table>
In the first part each subsection, including the introduction, is made up of a single, complete “shape,” although the method of creating the shape varies from one subsection to another. The introduction and subsection I differ in length, but both are shaped through an accumulation of four textural strata (the flute and clarinet, the violin and cello, the piano, and the percussion). This accumulation produces a crescendo to a climax, followed by a solo melodic passage played by woodwinds that serves to release the tension created before. Subsection II is shaped through a solo melody played by the violin accompanied by other instruments. Subsection III undergoes a rather complicated shaping process. It begins with a straightforward presentation of material in which individual pitches are colored by a combination of instruments playing in rhythmic counterpoint. This leads to an increase in pitch density and rhythmic activity. The range expands and the texture incorporates densely spaced simultaneities played by the piano and cello (quadruple-stops with three open strings). After the climax, the range rapidly contracts from over seven octaves to four. Simultaneously, the texture thins out: most pitches are placed in the low register; the dense pitch material scatters in time and space; the paired instruments are disjoined; and the thick and heavy simultaneous sound effect is reduced to solo statement by individual instruments. This passage serves as a transition to the next part, preparing the mood and introducing the different treatment of pitch materials.

The second part is characterized by thin texture, widely scattered pitches, and sustained individual pitches. Subsection I begins with solo statements played by each instrument in turn, continues with materials played by paired instruments that increase pitch density, and concludes with a sustained, vertical chromatic collection played by
the woodwinds and strings. In Subsection II, the pc content centers on C#5; all instruments converge onto this pitch by different approaches, such as the cello’s glissando trill from below or the violin’s from above. The clarinet embellishes this pitch with a tremolo on the tritone C#5 and G5, and the flute embellishes it by shifting between C#5 and C#6. The complicated rhythm is gradually simplified by the prolongation of this pitch. Some materials used in the first part are restated in the second part but function differently. For example, an excerpt first played by the piano in measures 39-41 reappears in measures 108-110. This excerpt is not used in a structural context in the second part, but rather as an embellishment of the sustained C#5.

In this piece, since small pc sets serve as the basis of pitch structure, both linear connection and vertical combination become equally important. The linear connection is achieved through transposition, expansion, and conjunction of the small sets, whereas vertical combinations of sets are organized into four strata, three formed by paired pitch instruments plus one consisting of non-pitched percussion. The individual strata are conceived in disparate rhythmic groupings with composite durational patterns and contrasting articulations, while the superimposition of all four strata produces a seemingly aleatoric texture, in which there is no sense of a regular pulse or meter.
CHAPTER FOUR

ADAPT STRUCTURAL PRINCIPLES OF A CHINESE FOLK TUNE

Both *Sparkle* and the *Piano Concerto* were composed in 1992 when Chen Yi turned her attention to the more systematic employment of rhythmic grouping and proportion principles to create both small- and large-scale formal structures. Along the same line, the formal divisions of *Qi* (1997) were calculated precisely under the proportions of Golden Section divisions.

As a formal principle, Golden Section divisions, in which proportions of length are controlled by the number of beats or measures, tend to occur naturally and coincidentally in the shaping of musical climaxes in traditional Chinese music as well as in Western classical music, and have been re-explored in twentieth-century Western music, notably in the music of Bartók.¹ Chen Yi discovered that the music played by several traditional Chinese folk ensembles is all derived from a single Chinese folk tune—*Baban*, whose structure reflects the proportions of Golden Section divisions. The structural method of *Baban* inspired Chen Yi to design the formal structures of *Sparkle* and the *Piano concerto*. She describes the structural methods of the *Piano Concerto* in detail in her dissertation titled “Piano Concerto”² and provides the formal designs of *Sparkle* and *Qi* for this study.

In addition, rhythmic patterns or groupings controlled by numbers play important roles in formal structures of these works. In contemporary compositional practice, numbers have become important not only as rhythmic patterns, but also as determinants of phrase structure, dynamics, intervals, pitches, and instruments.\(^3\) Chen Yi obtained these ideas from traditional Chinese music, particularly in percussion ensembles, and from contemporary Western music as well.

*Sparkle* for Octet and the *Piano Concerto* (1992)

**Rhythmic Groupings and Proportion as Determinants of Form**

Both *Sparkle* and the *Piano Concerto* are based on a Chinese folk tune, *Baban* (Eight Beats), which serves as a model of formal structure as well as a source of pitch material. The groupings of beats and phrases in *Baban* observe the proportions of Golden Section divisions that correspond to numbers in the Fibonacci series.\(^4\) These divisions also serve as the basis for many different Chinese instrumental ensemble pieces, which typically consist of variations involving proportional enlargement and decoration of the melodic patterns found in *Baban*.\(^5\)

---


\(^4\) The Golden Section is a means of dividing a line (or other magnitude) such that, if we identify the longer segment as \(a\) and the shorter segment as \(b\), then \(b:a=a:a+b\). The mathematical ratio of \(a\) and \(b\) is, like \(\pi\), an irrational number approximating 0.618. Similarly in the Fibonacci Series, the proportion of adjacent numbers approximates to 0.618, the approximation becoming closer as the series progresses (e.g., 3:5=0.6; 5:8≈0.625; 8:13≈0.615; 13:21≈0.619;…).

The original *Baban* comprises eight phrases, each of which has eight beats (a quarter note gets one beat) except the fifth phrase, to which four additional beats are added. The entire *Baban* therefore has sixty-eight beats (8 x 8 + 4 = 68). The beats in each phrase are divided into several rhythmic groups, which are defined as a sequence of eighth notes terminated by a quarter note; four different rhythmic groupings are irregularly assigned to these eight phrases. The first, second and fourth phrases are grouped as 3+2+3; the fifth, which contains the additional beats, as 3+2+3+(4); and the seventh, 5+3. The rest of the phrases, the third, the sixth and the eighth, are grouped evenly as 4+4. The additional four beats of the fifth phrase, which form the climax, occur at the Golden Section point and divide the piece according to a proportion that matches consecutive members (5:3) in the Fibonacci series (Example 4-1).  

*Sparkle* and the *Piano Concerto* are organized formally on similar principles. *Sparkle* is cast in an overall $A B A^I$ design, which contains seven sections arranged in an arch form (Figure 4-1). Both $A$ and $A^I$ include two sections (I and I'), each of which comprises two subsections—two enlarged *Baban* forms, each twice the length of the original. The sum of the beats in each subsection, therefore, becomes (8 x 8 + 4) x 2 = 136, with a quarter note as the basic rhythmic unit. The difference between parts $A$ and $A^I$ is that the order of the two sections in part $A^I$ is reversed to complete the arch form. The varied meters of $A$ and $A^I$ correspond exactly to the rhythmic groupings in *Baban*. For example, the first phrase of *Baban* is grouped as 3+2+3; in *Sparkle*, this grouping is replaced by a sequence of different meters, 6/4, 4/4, 6/4, which double the beats of the

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6 Ibid., pp. 14-16.
Example 4-1. Phrases and Rhythmic Groupings of the Original Baban.

Baban (Eight Beats)

Chinese Folk Tune

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Number of Beats</th>
<th>Gouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8</td>
<td>3+2+3=8</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>3+2+3=8</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>4+4=8</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>3+2+3=8</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>3+2+3+4=12</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>4+4=8</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>5+3=8</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>4+4=8</td>
</tr>
</tbody>
</table>

Total Beats: \(8 \times 8 + 4 = 68\)

original rhythmic groupings. These subsections are clearly differentiated through changes in texture. The way of enlarging Baban in this piece remains constant: each subsection in parts \(A\) and \(A'\) is twice as long as the original, using the same tempo and the same meter changes that reflect the corresponding rhythmic groupings in the original Baban.

---

7 This example is quoted from Chen Yi’s dissertation “Piano Concerto,” p. 17.
<table>
<thead>
<tr>
<th>Parts</th>
<th>A Exposition</th>
<th>B Middle Section</th>
<th>A' Recapitulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sections</td>
<td>I two enlarged Baban</td>
<td>II Transition</td>
<td>III Climax (Axis)</td>
</tr>
<tr>
<td>(Pitch materials)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subsections</td>
<td>A B C D E F G H</td>
<td>I J K L</td>
<td></td>
</tr>
<tr>
<td>(Rehearsal Marks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total beats</td>
<td>68x2 68x2 68x2 68x2</td>
<td>64 125 56 + 28</td>
<td>68x2 68x2 68x2 68x2</td>
</tr>
</tbody>
</table>

Figure 4-1. Formal Structure of Sparkle.
\textit{B} is a contrasting part with different pitch material—a twelve-tone row and a formal structure that does not depend on \textit{Baban}. Three sections in part \textit{B} create an arch form with section \textit{C} at the center as the climax, which serves as the axis for the entire piece.

In the \textit{Piano Concerto}, an introduction is followed by two parts, each of which is made up exclusively of an enlarged \textit{Baban} form. Although the \textit{Baban} form is used only twice, the means of enlargement are more complicated than those in \textit{Sparkle}; they include changes of meter, tempo and, most importantly, more complex proportional relationships. As shown in Figure 4-2, each phrase of the original \textit{Baban} is extended into a section; each part therefore consists of eight sections. The two \textit{Baban} forms are enlarged in different proportions: beginning at Part I, Section \textit{B}, the quarter-note groupings of \textit{Baban} are increased by a factor of twelve as the grouping 3+2+3 is presented as 36+24+36. This enlarged proportion does not change until Section \textit{H} (the seventh phrase in \textit{Baban}) at measure 358. Here, the beat is eight times longer, since the three beats in \textit{Baban} are increased to twenty-four. This proportional relationship extends through the first half of Part II, up to Section \textit{N}. At \textit{N}, the beat is increased twenty times, as the grouping 3+2+3+4 becomes 60+40+60+80.

The changes of tempo are closely related to the changes of proportions. Figure 4-2 illustrates that when the tempo is shifted between \(\textit{q} = 132\) and \(\textit{q} = 88\) from measure 16 to 357, the enlarged proportion is twelve times the number of beats in the original \textit{Baban}. When the tempo slows to \(\textit{q} = 60\) at measure 358, the proportions are reduced to eight times the original; and finally, when the tempo increases to \(\textit{q} = 176\), the proportions are expanded again to a factor of twenty. The principle underlying these
tempo changes is “the faster the tempo goes, the more beats to be presented as one
Baban beat, so that the proportion of one phrase (eight beats) per minute is maintained
in the entire work.”\(^8\) As shown in Figure 4-3, the composer designates three average
tempos: \(\dot{\mathbb{B}} \approx 120\)\(^9\) is the “average tempo” between \(\dot{\mathbb{B}} = 132\) and \(\dot{\mathbb{B}} = 88\); \(\dot{\mathbb{B}} = 70\) is the
average tempo of \(\dot{\mathbb{B}} = 60\) and \(\dot{\mathbb{B}} = 80\); and \(\dot{\mathbb{B}} = 180\) is the average tempo of \(\dot{\mathbb{B}} = 176\) and
\(\dot{\mathbb{B}} = 184\). Approximately the same duration (about seven seconds) of each beat in the
underlying Baban and of one Baban phrase (about one minute) are thus maintained
through the adjustment of these average tempos within the enlarged proportions.\(^10\) In
addition, the three tempos also correspond to those of the three movements in a typical
Western Classical-period concerto: Allegro, Adagio, and Presto.\(^11\)

The climaxes take place at two levels: “a small climax in each part and a big
climax for the whole work. Just the same as in the Baban, the two small climaxes are
located at the fifth section of each part, while the big climax is at the dividing point 5:3
in the whole piece.”\(^12\) The points of climax, despite the surface changes of tempo and
enlarging proportions, are calculated precisely by multiplying the total number of the
underlying Baban beats (quarter notes) by 0.618 for each part and for the sum of both
parts together (the number of measures is irrelevant due to their variable time
signatures). Figure 4-4 illustrates how these points of climax are calculated: the two
small climaxes come after the forty-second beat in Baban (68x0.618=42), while the

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\(^8\) Chen Yi, Correspondence with Xiaoman Zhang Wardell, October 6, 1995.
\(^9\) \(\dot{\mathbb{B}} = 120\) is not the correct average tempo between \(\dot{\mathbb{B}} = 132\) and \(\dot{\mathbb{B}} = 88\) if one divides the sum (220) of these
two tempos by 2 (220 ÷ 2=110). Dividing the total number of beats (684) by the duration (380") gives 1.8
beats per second (684 ÷ 380" = 1.8); then 1.8 x 60" = 108 (beats per minute), so that the actual average tempo
should be close to \(\dot{\mathbb{B}} = 110\).
\(^10\) Chen Yi, p. 30-33.
\(^11\) Chen Yi, Correspondence with Xin Guo, March 5, 1997.
\(^12\) Xiaoman Zhang Wardell, p.43.
**Introduction**

<table>
<thead>
<tr>
<th>Baban Phrase</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section (Rehearsal mark)</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Measure numbers</td>
<td>1-7</td>
<td>8-15</td>
</tr>
<tr>
<td>Meter</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Tempo</td>
<td>Slow, free</td>
<td>Piu mosso</td>
</tr>
</tbody>
</table>

**Part I**

<table>
<thead>
<tr>
<th>Baban Phrase</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section (Rehearsal mark)</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
<td>F</td>
<td>G</td>
<td>H</td>
<td>I</td>
</tr>
<tr>
<td>Groupings in Baban</td>
<td>3+2+3</td>
<td>3+2+3</td>
<td>4+4</td>
<td>3+2+3</td>
<td>3+2+3+4</td>
<td>4+4</td>
<td>5+3</td>
<td>4+4</td>
</tr>
<tr>
<td>Beats after enlargement</td>
<td>36+24+36</td>
<td>36+24+36</td>
<td>48+48</td>
<td>36+24+36</td>
<td>36+24+36+48</td>
<td>48+48</td>
<td>60+24</td>
<td>32+32</td>
</tr>
<tr>
<td>Measure numbers</td>
<td>16-63</td>
<td>64-111</td>
<td>112-159</td>
<td>160-207</td>
<td>208-279</td>
<td>280-327</td>
<td>328-358-363</td>
<td>364-379</td>
</tr>
<tr>
<td>Meter</td>
<td>2/4</td>
<td>4/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tempo</td>
<td>( \cdot = 132 )</td>
<td>( \cdot = 88 )</td>
<td>( \cdot = 132 )</td>
<td>( \cdot = 60 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Part II**

<table>
<thead>
<tr>
<th>Baban Phrase</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section (Rehearsal mark)</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
<td>O</td>
<td>P</td>
<td>Q</td>
</tr>
<tr>
<td>Groupings in Baban</td>
<td>3+2+3</td>
<td>3+2+3</td>
<td>4+4</td>
<td>3+2+3</td>
<td>3+2+3+4</td>
<td>4+4</td>
<td>5+3</td>
<td>4+4</td>
</tr>
<tr>
<td>Beats after enlargement</td>
<td>24+16+24</td>
<td>24+16+24</td>
<td>32+32</td>
<td>24+16+24</td>
<td>60+40+60+80</td>
<td>80+80</td>
<td>100+60</td>
<td>80+80</td>
</tr>
<tr>
<td>Meter</td>
<td>4/4</td>
<td>2/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tempo</td>
<td>( \cdot = 60 )</td>
<td>( \cdot = 80 )</td>
<td>( \cdot = 176 )</td>
<td>( \cdot = 184 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4-2. Formal Structure of the *Piano Concerto*.\(^{13}\)

---

\(^{13}\) This example follows the same format as in Xiaoman Zhang Wardell’s dissertation, but makes some adjustments of items and corrects some mistakes in calculation.
<table>
<thead>
<tr>
<th>Measure numbers</th>
<th>1-15</th>
<th>16-97</th>
<th>98-255</th>
<th>256-357</th>
<th>358-402</th>
<th>403-443</th>
<th>444-563</th>
<th>564-803</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tempo</td>
<td>Free</td>
<td>$\text{q}=132$</td>
<td>$\text{q}=88$</td>
<td>$\text{q}=132$</td>
<td>$\text{q}=60$</td>
<td>$\text{q}=80$</td>
<td>$\text{q}=176$</td>
<td>$\text{q}=184$</td>
</tr>
<tr>
<td>Average Tempo</td>
<td>$\text{q}=120$</td>
<td>$\text{q} \approx 120$</td>
<td>$\text{q}=70$</td>
<td>$\text{q}=180$</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarter notes</td>
<td>12</td>
<td>8</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of Beats</td>
<td>8x5+12+5=57</td>
<td>3+8x5=43</td>
<td>8x3+12=36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Numbers of beats in Piano Concerto (grouped according to different tempos)</td>
<td>164 + 316 + 204 = 684</td>
<td>180 + 164 = 344</td>
<td>240 + 420 = 720</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximate Duration in seconds</td>
<td>30&quot;</td>
<td>380&quot; (6'20&quot;)</td>
<td>300&quot; (5')</td>
<td>240&quot; (4')</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximate duration per Baban beat (Duration ÷ Sum of Baban beats)</td>
<td>6.67&quot;</td>
<td>6.9&quot;</td>
<td>6.67&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baban Beats per minute</td>
<td>9.2</td>
<td>8.6</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4-3. Proportions of enlargement and tempo changes in the *Piano Concerto*.\(^{14}\)

\(^{14}\) This example follows the same format as in Chen Yi’s dissertation, but adds or adjusts some items and makes some corrections in the calculations.
corresponding measures in the Piano Concerto are 274 and 544; the big climax comes after the eighty-fourth of the total number of beats in two Baban forms

\[ (68 \times 2) \times 0.618 = 84 \], which corresponds with measure 412 of the Piano Concerto.

Unlike the clearly divided sections for the enlarged Baban form in Sparkle, the sectional boundaries in the Piano Concerto are intentionally broken or blurred. The changes of texture, as well as changes of meter, tempo and proportions, sometimes do not correspond to the groupings of the enlarged Baban form, although the organization of instrumental combinations is designed in accordance with those groupings. The texture can be changed either before the end of a section or after the beginning of a section in order to obscure the sectional boundaries. For example, the woodwinds that dominate section F are foreshadowed in the preceding section first by a solo presentation, then by combinations of several instruments, while the strings that dominate the preceding section (Section E) are extended two measures across the boundary into section F.\(^\text{15}\) At measure 358, as described above, the meter, tempo and proportion are all changed simultaneously, although measure 358 is neither the beginning nor the end of a section.

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### A New Approach to Pitch Structure

These two pieces maintain the same essential principles of pitch construction found in Woodwind Quintet and Near Distance, as ics 1 and 6 form discrete dyads or adjacent pcs in a twelve-tone row, and serve as the boundaries of small sets, as well as the outermost pcs of simultaneities. The primary pitch materials used in these two

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\(^\text{15}\) Chen Yi, p. 63.
Figure 4-4. Climaxes (Golden Section divisions) in Piano Concerto.
pieces include (1) two twelve-tone rows, one for each piece; (2) the Baban melody, in part or on a whole; and (3) a smaller pc set, called the Chen Yi Theme (CY) by the composer, used in the Piano Concerto. The two twelve-tone rows share some significant constructional characteristics (shown in Figure 4-5a), and the Chen Yi Theme is closely related to, or is generated from, the twelve-tone row in the Piano Concerto (see Figure 4-5b).

Figure 4-5a illustrates constructional similarities between the twelve-tone rows used in Sparkle and the Piano Concerto. First, most of the adjacent pcs in the rows are related by ics 1 and 6. Both rows begin with ic 6 followed by ic 1; the notes from the sixth to the seventh and from the eighth to the ninth of the rows are all formed by ic 1; and the last note is connected to the first by ic 1. The second similarity is that the third through the sixth pcs are the same, with the order of the fifth and sixth notes reversed.

Figure 4-5b illustrates the constructional relationship between the twelve-tone row used in the Piano Concerto and a smaller set—the Chen Yi Theme. As the arrows indicate, the notes of the Chen Yi Theme are derived principally by taking every other note of the twelve-tone row. The Chen Yi Theme itself also features prominently ics 1 and 6, as shown beneath the pcs of the theme.

The constructional similarities of these two pieces are also reflected in the vertical dimension. In Sparkle, the basic vertical pitch construction is a stack of notes that are related by ics 1 and 6 (Figure 4-6). The piano part presents these simultaneities, with individual pcs doubled by other instruments. This constructional principle is maintained throughout, although individual pitches within the patterns change periodically in correspondence with different rhythmic groupings derived from the
a. Twelve-tone rows used in \textit{Sparkle} and the \textit{Piano Concerto}.\footnote{According to Chen Yi, the row in the \textit{Piano Concerto} has a specific constructional character: the construction of the row refers to the numbers in the Fibonacci Series. If the row is expressed by the integer notation (shown below), the sums of four discrete trichords are 17, 16, 16, and 17. The sum of the first half pcs of the row is the same as the second, both resulting in 33. The sum of the first and the last, or two outside, trichords is 34, which matches the ninth number in the Fibonacci Series; while the sum of the second and the third, or two inside, trichords is 16, which is twice as the sixth number (8) in the Fibonacci Series (Chen Yi, p. 47).}

\begin{enumerate}
\item \textbf{Sparkle:}
\[
\begin{array}{cccccccc}
6 & 1 & (2) & 1 & 1 & 1 & 1 \\
A & E^b & C^\# & D & A^b & F^\# & G & F & E & B & C & B^b & (A)
\end{array}
\]
\[
\begin{array}{c}
[0 2 6] \\
[0 1 5 7]
\end{array}
\]
\item \textbf{Piano Concerto:}
\[
\begin{array}{cccccccc}
6 & 1 & (2) & 1 & 6 & 1 & 6 & 1 \\
B & F & D^b & D & F^\# & A^b & A & E^b & E & B^b & G & C & (B)
\end{array}
\]
\[
\begin{array}{c}
[0 2 6] \\
[0 1 5 7]
\end{array}
\]
\end{enumerate}

Dyads made up by pcs 1 and 6 are shown above the rows. The symbol $\leftrightarrow$ indicates adjacent pcs common to both rows. The common trichordal and tetrachordal sets shared by both rows are shown below the rows.

\begin{enumerate}
\item \textbf{Chen Yi Theme:}
\[
\begin{array}{cccccccc}
B^b & C & C^\# & F^\# & A & (B^b)
\end{array}
\]
\end{enumerate}

\begin{enumerate}
\item \textbf{Chen Yi Theme:}
\[
\begin{array}{cccccccc}
B^b & C & C^\# & F^\# & A & (B^b)
\end{array}
\]
\end{enumerate}

\section*{Baban form.} The figuration and instrumentation of this pitch construction change in correspondence with the sectional divisions.
Measures 1 - 6, Piano

\[
\begin{array}{cccccccc}
& & & & & & & \\
& B & D^b & A & E & G^b & D & \\
& A^\# & C & A^b & D^\# & F & C^\# & \\
& E & D & G & A & G & C & \\
& F & E^b & F^\# & B^b & A^b & B & \\
\end{array}
\]

Figure 4-6. Vertical pitch construction in *Sparkle*.

In the *Piano Concerto*, the simultaneities are constructed by the stacked *Chen Yi Theme*, and the combination of the *Chen Yi Theme* with additional notes related by ics 1 and 6; the outermost pcs of the *Chen Yi Theme* and the combinations are formed by ic 1 (Figure 4-7). This constructional principle is retained throughout the piece with some individual pcs within the simultaneities doubled by different instruments.

\[
\begin{array}{cccc}
& & & \\
m. 94 & m. 101 & m. 106 & m. 110 \\
Ics & 6 & 1 & 6 & 1 & 6 & 1 & 6 & 1 \\
& B & F & C^\# & D & \\
& F & B & G & A^b & G & \\
& E & A^\# & F^\# & E & \\
& A & E^b & B & C & \\
& F^\# & C & G^\# & A & \\
& D^b & G & E^b & A & \\
& C & F^\# & D & E & \\
& B^b & E & C & D^\# & \\
\end{array}
\]

Pcs above the dotted line are the added ics 1 and 6, while pcs below the dotted line are the *Chen Yi Theme*.

Figure 4-7. Vertical pitch construction in the *Piano Concerto*.
These two pieces mark a turning point in Chen Yi’s treatment of pitch materials although they maintain the constructional principles established in her earlier works. Instead of avoiding pitch repetition, as in Woodwind Quintet and Near Distance, repeated pitch configurations in Sparkle and the Piano Concerto are presented as ostinati or fixed figurations that may extend across several sections. A single construction may be doubled by all the instruments or by an entire instrumental choir. For example, in Sparkle, the principal climax is created by the succession of the twelve-tone row, which lasts fifteen measures and is played by seven of the eight instruments, doubled at pitch or at the octave below. In the Piano Concerto, a melody is played by the string choir in unison from Section M to N. The unison and octave doubling of melodic statements becomes a powerful means of creating a climax or for building up intensity within an entire section. In both these pieces, therefore, the complex contrapuntal texture of the earlier works is replaced by pitch repetitions in both vertical and horizontal dimensions.

Both pieces adopt the Baban melody for some of their pitch material, but treat it in different ways. Sparkle retains the melodic contour of the Baban segments while displacing certain pitch classes within that contour, or alters the melodic contour while maintaining the individual pitches (Example 4-2). The segment of the Baban melody used here is its initial five pitches - B♭ E♭ A♭ G♭ and D♭. These five pitches first appear in Sparkle in G Pentatonic mode Gong (mode Do) with the same melodic contour as in the original Baban, but omitting the repeated pitch and original rhythmic groupings. Then, through the C that acts as a linking pitch, this melodic segment is shifted to G♭ Pentatonic mode Gong in its retrograde version with the omission of the last two pitches.
Example 4-2. Treatment of Baban melody in Sparkle.

mm. 37-44, cello

![Music notation]

The corresponding original Baban melody.

(the initial two pitches in the original). This retrograde version is shifted again to E\textsuperscript{b} Pentatonic mode Gong, and then is connected through a tie to the next segment, which is the initial four pitches of the original Baban melody in D\textsuperscript{b} Pentatonic mode Gong. The pitch F, shared by the last two segments in different keys, functions as a common tone between them.

In the Piano Concerto, the entire original Baban melody appears twice; these two appearances are tritone-related with one in G\textsuperscript{b} and another in C. Along with the enlargement of rhythmic groupings, the melody is disjoined into its individual pitches—a total of 230 (115\times2) notes including both quarter-note and eighth-note rhythmic values. These individual pitches are woven into the texture, played by different instruments with unrelated intervening material. The Baban pitches are emphasized by their placement in the most important positions, such as the beginning of a new texture or in featured solo parts, as well as the highest, the strongest, the longest and the most frequently used notes in the texture.\textsuperscript{17}

\textsuperscript{17} Chen Yi, p.36.
The two twelve-tone rows in both pieces are used mainly as transitional figures. The consecutive transpositions or other variations of the rows share two significant features: the overlap of two different transpositions that share a common tone (the last note of the preceding row is same as the initial note of the following row), and transpositions related by ic 1 (Figure 4-8).

**Sparkle: mm.126-127**

\[
R_6 \\
\begin{array}{cccccccc}
E & G & F & A^\# & B & D & C & D \\
A^b & G & A & E^b & F & E & A & B^b \\
C & B & C^\# & G & F & G^\# & D & E^b
\end{array}
\]

**Piano Concerto: mm. 62-65**

\[
RI_{10} \\
\begin{array}{cccccc}
A^b & D & B & E & F & B & C & D & F^\# \\
G & E^b & A & B & E & C & D & B & F & G & A & B & D & E^b
\end{array}
\]

Figure 4-8. Connections between twelve-tone row-forms used in Sparkle and the Piano Concerto.

The combination of the Baban melody and the twelve-tone rows is used in both pieces in the same way. The notes from the Baban melody are treated as grace notes, while the notes from the rows are used as principal notes (Example 4-3).\(^{18}\)

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\(^{18}\) Chen Yi, p.45.
Example 4-3. Combination of Baban melody and the twelve-tone row in Sparkle and the Piano Concerto.\textsuperscript{19}

\textit{Sparkle}: mm. 178-180, piano

\textit{Piano Concerto}: mm. 364-365

Since the compositional focus is shifted from local relationships between individual pitches to the building up of the large-scale formal structure through the organization of rhythmic groupings, both these pieces are much longer than the two earlier pieces (\textit{Woodwind Quintet} and \textit{Near Distance}). Instead of clearly displayed melodic lines, these pieces emphasize repeated pitch constructions presented as ostinati or as fixed figurations extending across several sections, along with normal rhythmic pulses and irregular metrical shifts. Because both pieces are sectionalized by changes in timbral combinations rather than through the contrast between pitch materials, timbral combination and differentiation become the principal means of formal delineation, and the larger number and variety of instruments provide more possibilities for creating diverse sound effects.

\textsuperscript{19} The example of the Piano Concerto is taken from Chen Yi’s dissertation “Piano Concerto,” p.45.
Qi (1997)

Qi is a mixed quartet for flute, cello, percussion and piano commissioned by the New Music Consort of New York, the San Francisco Contemporary Music Players, and the Los Angeles Philharmonic Association with a grant provided by the Meet The Composer/reader’s Digest consortium commissioning program. Qi (air) is an element of nature and conceptualized by Chinese painters and calligraphers as an ability to create a continuum of motion and tension in a spatial equilibrium while painting or writing. Chen Yi uses an unusual combination of Western instruments to translate her understanding of the qi into musical language, which flows quite slowly and freely in tempo, but conveys strong human emotions.

As mentioned in Chapter 2, Chen Yi calculates all the large- and small-scale formal divisions under the proportional principles of Golden Section divisions, which, associated with the numerical changes of rhythmic groupings and carefully designed timbral effects, help to create dramatic and expressive qualities of music.

Proportional Divisions and Rhythmic Function

The form of this piece is a compound rounded binary (Figure 4-9). The entire piece is divided into two parts of equal length, plus a coda. Each part is sub-divided into two sections, and each section contains its own climax. The starting point of the

---

climax for each section corresponds to its Golden Section division. All these divisions fall into four levels which begin with either the positive or negative part.\(^{21}\)

\begin{figure}
\centering
\includegraphics[width=\textwidth]{image}
\caption{Proportional divisions of \textit{Qi}.}
\end{figure}

The arrival of each climax is accompanied by an increase in dynamic level, a change of texture or tempo, and an increased concentration of pitch material. For example, the principal climax \([70 \times 2 + 140) \times 0.6 = 168, 168 \div 2 = 84]\(^{22}\) of the entire piece extends from measure 85 to measure 130. At its starting point (measure 85), the tempo is twice as fast as before, with the quarter-note value becoming a half-note (\(\frac{\text{d}}{\text{s}}\)). The Golden Section division of measures 85 - 130 is measure 117 (130-84=46, 46\times0.618=33), and measures 99 - 117 are the pinnacle of the climactic passage, where

\(^{21}\) Erno Lendvai, \textit{Bela Bartok: An Analysis of his Music}. p.21 “(about the Golden Section division) Let us call one of the possibilities positive: long section followed by the short one–and the other negative: short section followed by the long one.”

\(^{22}\) Chen Yi, notes in the score of \textit{Qi}. 0.6 is an approximation of 0.618, and all the other calculations about golden section divisions are approximations.
the texture changes: a group of metal percussion instruments in this section maintains the intensity of the climax until measure 113, where a melodic bridge brings about another textural change at measure 117. Crotales are introduced at this point to continue this climax.

In this piece, the smallest formal unit is a “shape.” Section A, for instance, has two sub-divisions, each of which forms its own shape. The first shape is the initial statement of pitch materials--the melody stays mainly in the middle range, and the vertical sonority extends from the middle range to an extremely high range. The apex of this shape at measure 8 is created by the combination of percussion and piccolo. The second shape (measures 13-25) is a varied repetition of the first one, and in the process of creating the shape the range is expanded in both directions, together with a crescendo from ppp - fff.

A shape can be created not only by the melodic contour, expansion and subtraction of the range, and changes in dynamics, but also by organized rhythmic groupings. As an important formal determinant, rhythm helps to direct the motion toward and away from points of climax. Various rhythmic techniques are employed in this process: rhythmic “telescope,” notated acceleration, the rearrangement of rhythmic groupings from a Chinese folk tune (Baban), and polymeter.

In a rhythmic “telescope,” a repeated small group of notes functions like a set of cylinders that slide into one another, becoming shorter as the number of repetitions

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23 “Telescope” is not a standard term applied in the literature. Chen Yi uses this term to describe the recurrence of a rhythmic pattern that increases or decreases proportionally. The idea of the rhythmic “telescope” is directly derived from a Chinese percussion ensemble (Shifan Luogu), in which a rhythmic kernel appears repeatedly with progressive expansion or contraction, thereby becoming a structural element that comprises a formal section.
decreases. In Section B, for example, the entire crescendo (mm.25-53) occurs concomitantly with a rhythmic telescope. The recurring group of notes is a quintuplet ostinato figure, a quarter-note in duration, which is interrupted by a septuplet; the number of repetitions of the ostinato figure between these one-beat interruptions decreases by two each time: 13+1, 11+1, 9+1, 7+1, 5+1, 3+1, 1+1. Two occurrences of this complete rhythmic cycle with different instrumentation serve to build momentum toward the point of climax.

Another type of rhythmic telescope appears in the approach to the principal climax (mm.72-82). Its basic pattern is shown in Example 4-4a. The gradually decreasing density of notes, together with increased rests and the staggered entrances in the different parts, build momentum toward the climax. This telescopic process is associated here with another rhythmic technique—notated acceleration, in which the rhythmic pattern, shown in Example 4-4b, is employed in a lengthy crescendo, to form different rhythmic layers. The combination of these two rhythmic techniques produces a progressive intensity that leads towards the principal climax.

Example 4-4. Rhythmic telescope and notated acceleration in Qi.

![Rhythmic telescope and notated acceleration in Qi.](image)

Some of the rhythmic patterns are derived from Baban (See Example 4-1). The rearrangement of the rhythmic groupings in this tune becomes an important component of rhythm in Qi. Example 4-5 shows the rearranged rhythmic groupings of this tune, in
which the basic value is an eighth note in place of a quarter note in the original tune.\textsuperscript{24}

The rhythmic groups are punctuated by a percussion-like attack, and within the rhythmic group the sub-division is separated by an eighth rest. The rhythm of the original tune therefore is blurred by these attacks and rests. Two occurrences of this complete, rearranged rhythmic cycle occupy the crucial formal position--one in measures 117-128 (the last stage of the principal climactic passage), and another in measures 157-168, preceding the restatement of the melodic material in measure 169, which is the starting point of the Golden Section in Section A\textsuperscript{1}.

Example 4-5. Rearranged rhythmic groupings of Baban in Qi (mm. 157-168).

The technique of polymeter in this piece involves nonsynchronous relations achieved by various pulse groupings in a stratified texture. Measures 85 - 99 (Example

\textsuperscript{24} According to the composer, the adoption of the eighth note as the basic rhythmic unit is based on similar patterning in American jazz music.
4-6) comprise the first stage of the principal climax, where the texture is clearly divided into three layers: flute and cello, percussion, and piano. The flute-cello layer is actually free-metered, while each of the other two layers has its own pulse groupings: the sixteenth notes of the percussion are organized into duple groupings with eight notes in a pulse group, and the sixteenth notes of the piano are organized into groupings of three. Both pulse groupings are equal-timed, recurring regularly throughout this passage, but they are not synchronized with the flute-cello layer.

Example 4-6. Polymeter in Qi, mm. 85-90.
Construction and Transformation of Pitch Materials

In the piece, the basic pitch materials are constructed in two dimensions: a freely metered melody (i.e., one that is not influenced by the notated 4/4), and a simultaneity built from a series of stacked intervals, along with its variant – an ostinato figure in which the simultaneity is dispersed within a short time span.

The opening five measures played by the cello comprise a complete statement of the melody, which can be divided into three parts (Example 4-7). The initial motive, F-B-G, is a [0, 2, 6] trichord, which includes the interval classes (ics) 6 and 2. The presentation of this motive is consistent throughout the piece: its ordered pitch intervals are \{+6 -4\}, and its rhythm consists of two very short note values succeeded by a long sustained pitch (e.g., \(\text{\begin{tikzpicture} \draw[thick] (0,0) -- (0,1); \end{tikzpicture}}\) in measure 1).

Example 4-7. Melody in mm. 1-5 in Qi.

The second part of the melody is a gradually unfolding contiguous chromatic segment. It first appears as [0, 1, 2, 3, 4], in which five pitch classes (G G\# A A\# B) are subdivided into two three-note segments (A-G\#-G-A and B-A\#-A-B), identical in rhythm and in modes of articulation. The second segment is a transposition (at T_2) of the first; both the first pitches and the last pitches of these two segments form ic 2.
Another distinctive element of this part of the melody is a descending half-step slide between the first two pitches of each segment, which is used frequently also as a feature of melodic development, even in the first statement (i.e., the repetition of B-A# in the entire third measure). The number of pitches in this chromatic segment varies in sub-segment statements, from a minimum of two to a maximum of six, but the most frequent number is four, in the order 1 3 2 4 or its retrograde 4 2 3 1; in this case, the localized ic 2 pairs (1-3 and 2-4) rise and fall by chromatic steps. The third and final part of the melody is a quick descending gesture followed by ascending motion; it is a pentachordal whole-tone subset, [0, 2, 4, 6, 8]. This pentachord also includes ics 2 and 6.

A different ic 3 is introduced by the second statement of the melody--first as B-G# in measure 17 and then E-C# in measure 18. The combination of ic 3 and ic 2, which is an interval shared among the three groups of pitch classes mentioned above, appears in the melodic development throughout the remainder of the piece.

In the melodic development, these three parts are not always presented in the same order, nor with a fixed intervallic relationship. They may be disjoined, transposed, reordered, extended and transformed. These three parts can be identified by either their melodic contour or their rhythmic pattern. Example 4-8 illustrates some of the melodic alterations of the original melody.

The melodic material as it is used throughout the piece is not tonally focused on any specific pitch class, and many of the gestures are whole-tone sonorities. There are also frequent pentatonic fragments, however, which more directly reflect the underlying pentatonic source for the melody as a whole. In Example 4-9, the melodic fragments
shown on the upper staff illustrate the relationship between the basic pentatonic fragments and the parts of the opening melody, given on the second staff. The initial motive [0, 2, 6] is a transformation of [0, 2, 5], a pentatonic subset, accomplished by expanding ic 5 to ic 6; the concluding gesture [0, 2, 4, 6, 8] is derived from another pentatonic subset ([0, 2, 5, 7]) by displacing certain pcs within a similar contour.

Example 4-8. Melodic alterations in Qi.

Example 4-9. The melody of Qi and its pentatonic origin.
The principle of vertical pitch construction in Q1 is that the outermost pair of pcs forms either ic 6 or ic 1. The basic simultaneity is first displayed in measure 6 by the piano in combination with the harmonic of the cello; it is then taken over by the piccolo (Example 4-10). This constructional principle is reflected mainly in the piano part, but it is supplemented by similar relationships in the other instruments. The ic 6 is formed by the outermost pc pair of the piano part (1-7), while ic 1 is formed by the outermost pairs of each staff (1-2 and 6-7). The normal form of the complete set of pitch classes in measure 6 is \{1, 2, 5, 6, 7, 9, 11\}, with an octave duplication of pc 2 and a unison doubling of pc 7. The pcs that form ic 6 are 1-7 and 11-5, and the pitch classes that form ic 1 are 1-2 and 6-7. In the process of development, the pitches that form these ics may be either closely or widely spaced.

The variant of this simultaneity--a pentachord ostinato figure--is constructed according to the same principle. Seven different combinations of pitch classes played by the piano appear in measures 25 - 38. They are listed in the order of succession in Figure 4-10a, and all contain ics 1 and 6 as indicated. The primary set-type is \[0, 1, 2, 3, 6\] with two exceptions (\[0, 1, 2, 6, 7\] and \[0, 1, 2, 4, 6\]), which are the result of a practical consideration: for these sets to be the same as the others, the piano would have to play notes that are out of its range (i.e., below A\(^0\)); in these instances the composer simply substitutes A\(^0\) for the note that would continue the pattern, so that the lowest possible sound is still included in the sonority. The other variants listed in Figure 4-10b are similarly constructed of paired pcs related by ic 1 or 6. The first two are made up of pcs with the same prime form as the original one (\[0, 1, 2, 6, 7\]) in different spacings, and the last one (\[0, 1, 2, 3, 7, 8\]) is a symmetrical construction.
Example 4-10. Vertical pitch constructions in Qi

Simultaneity

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<tr>
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<tr>
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- **a. Ostinato Figures**

  mm. 25-38

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<td>0</td>
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  [0, 1, 2, 6, 7] [0, 1, 2, 3, 6] [0, 1, 2, 3, 6] [0, 1, 2, 4, 6] [0, 1, 2, 3, 6] [0, 1, 2, 3, 6]

- **b. Other Variants**

  m. 47

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  m. 113

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<td>10</td>
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<tr>
<td>11</td>
<td>6</td>
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</table>

  [0, 1, 2, 6, 7] [0, 1, 2, 6, 7] [0, 1, 2, 3, 7, 8]

Figure 4-10. Vertical pitch constructions in Qi
Timbral Design in Relation to Registral Distribution

The orchestration of Qi concentrates on Chen Yi’s exploitation of an unusual combination of solo instruments. The choice of these instruments is based on the variable timbral qualities of each instrument and their capacity to blend with other instruments. The flute, with its clear, brilliant sound quality, carries the melody, while the cello, with its wide range and expressive sound quality, is used as a melodic instrument in its high and low registers as well as for accompaniment. The piano, covering the entire range of all these instruments, blends with the flute in its high register and with the drums and cello in its lowest register.

A set of percussion instruments comprises three timbral groups: one is made up of the high wood block, bongos and maracas, which produce dry and penetrating sounds with short decay, little resonance, and rapid rhythmic articulations; another consists of the crotales, triangle, high suspended cymbal, and the small Beijing Opera cymbal, all of which possess bright and high-pitched sounds with longer decay, more resonance, and slower rhythmic articulations; the last includes the bass drum, tom-tom, Beijing Opera gongs, and tam-tam, which have dark and low-pitched sounds with long durational decay and rich resonance, and slow rhythmic articulations. The sound effects vary due to different ways of striking the instruments, such as using different mallets, striking different positions of the gongs and the drumheads, or producing a roll. The bright timbral quality of the crotales and triangle can readily be blended with those

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of the flute and piano in their high registers, and the dark quality of the third group can be blended with those of the cello and piano in their low registers.

The scoring is governed by a homophonic texture, which is arranged to emphasize the melody, to create shapes through spacing and registral distribution of material, and to achieve balance among the various timbral combinations and contrasting registers. The melody is assigned to the flute and cello, either in solo or in combination. The solo statements in different registers correspond to the formal divisions. For example, the initial part of the melody is stated by the cello in its middle range at the beginning of the piece, while the piccolo, instead of the flute, restates it in its high range in measure 134-138 in conjunction with cello harmonics at the beginning of Section A\(^1\). Three statements of the flute-cello combination in different spacings create different sound effects, corresponding to the points of climax. The first combined statement (measures 32-38) is spaced two octaves apart with the flute starting on B\(^{b5}\) and the cello on B\(^{b3}\), producing an open and spacious effect. The second, appearing in the first half of the principal climax at measures 84-99, is more closely spaced at one octave with the flute starting on B\(^5\) and the cello on B\(^4\), and both in their most effective range; the tone quality is strengthened through this octave doubling. In their last combined statement (measures 169 - 181), both instruments are assigned to the same register around C\(^4\). They alternate at first, producing clashes with overlapping semitones; later they play in unison with the cello in its most resonant middle register and the flute in its weaker low register, so that the timbre of the flute melds with the cello, adding a slightly metallic quality.
The emphasis on melodic timbre in this piece requires special attention to spacing. The register of the accompaniment is placed either below or above that of the melody, especially when the melody itself is doubled in a wide space. The space left vacant between the melody and accompaniment is filled in by non-pitched percussion instruments in order to achieve timbral and registral balance. For example, in measures 25-39, the melody is played by the flute in its low register between D⁴ and C⁵; the cello joins in from measure 25 in the same register to reinforce the melody at the end of this phrase. The piano’s accompanying ostinato is located in its lowest range (between A⁰ and G⁴), leaving a space of almost three octaves that is filled in by the non-pitched small Chinese cymbals at the ends of melodic phrases (Example 4-11). In measures 170-184, the accompaniment is played by the piano in its highest register (B⁶ - C⁸), while the melody played by the flute and cello lies between F³ and C⁵. The remaining space is again filled in by the small Chinese cymbals. In both examples, the melody, played in a more resonant timbre, always stands out over the dry sound of the piano that serves as a background. The muffled sound of the cymbals adds a different color to the existing timbres in order to balance this timbral combination, distinguishing between the foreground melody and its background accompaniment by its darker timbre and different rhythmic articulation.

The overall registral organization is closely related to the creation of shapes. These shapes usually begin in the middle or low register, continue with an expansion of range, reach the highest register at the point of climax, and then drop rapidly to the lowest register through a sawtooth melodic movement, which is usually produced by the piano, occasionally in combination with the cello (Figure 4-11).
Example 4-11. Spacing between melody and accompaniment in Qi.

mm. 23-26.  

Figure 4-11a shows the registral arrangement of an entire shape. In measure 13-18, the cello begins from its lowest range (C\textsuperscript{2}) and rises gradually to its high range (F\textsuperscript{#5}). Overlapping the cello’s last sustained note (F\textsuperscript{#5}), the flute and piano enter in their high registers (E\textsuperscript{6} - B\textsuperscript{6}) to continue this shape toward the climax. At the point of the

\footnote{The cello plays a passage from its low to middle register (between C\textsuperscript{2} and F\textsuperscript{#5}) to introduce the melody played by the flute, producing an impetus to the entrance of the melody that is relatively weak in the low range of the flute.}

139
a. mm. 13-23.

b. mm. 53-55, cello.

Figure 4-11. Relationships between “shape” and register in Qi.
climax in measure 21, the piano plays tremolos in its highest register (C♯6-B♭7), and drops rapidly to the lowest register (A⁰-A¹), completing this shape. Figure 4-11b begins at the climactic point of another shape: the cello drops from its high to lowest register (C²) through a sawtooth-like melody to complete this shape.

In addition to the rise in register, and the usually concomitant increase in dynamic intensity, the percussion instruments, in their timbral and rhythmic content, also participate in the creation of a climax. For example, in the progression towards the principal climax (measures 71 - 130), the percussion instruments create a driving force in two stages: first, two fixed rhythmic patterns—a quintuple played by the combination of the bass drum and bongos and octet played by the high tom-tom—extend through rehearsal letters F and G; second, at letter H, the climax is intensified exclusively by the percussion timbres: the drums, Beijing opera gongs, cymbal, triangle, and crotales produce a sequence of progressively brighter timbres, and create a notated accelerando through their progressively faster rhythmic articulations. The other climaxes of the various shapes are all intensified by the high wood block with its dry, penetrating, and high pitched rolling sound, which augments the timbral intensity of the three solo instruments playing in the high register.

Some specific scorings create subtly blended sound effects. For example, in measure 8, the accent played by the bongo is followed by the combination of the crotales and the flute, in which the flute doubles the crotales an octave below at C⁷. The sound of the flute strengthens the extremely high, bright and light sound quality of the crotales, while the sound of the crotales covers and softens the shrill quality of the flute. Another special effect occurs in measure 130, where the crotale reaches its highest pitch
(C⁸) with the timbral strengthening and support of the flute at B⁶. The harmonic G⁶ played by the cello enters at the very moment of the last crotale pitch; this enhances the bright, metallic sound, causing it to linger for a time and submerging the cello’s sound into that of the crotales.

Three structural elements—pitch, form and timbre—are carefully integrated in this piece. Pitch material is generated by the same constructional principles as the earlier work: ics 1 and 6 are the basis of both linear and vertical sonorities. The principal pitch material in Qi is treated as a motive with a fixed melodic contour and rhythmic pattern, maintaining its structural importance throughout the piece. The overall form is clearly sectionalized into precisely calculated Golden Section divisions, and the internal formal divisions are governed by “shapes” of different sizes, in which any structural element can create a crescendo. The sense of symmetrical, equal sections is concealed by different rhythmic patterns and changes of tempo. The scoring not only presents diverse instrumental colors, but also dominates the musical development through the spacing of melodic doublings, the registral arrangement of melody and accompaniment, and the organization of the percussion instruments in the process of creating climaxes.
CHAPTER FIVE
ADOPT IDIOMATIC EXPRESSIONS OF WESTERN INSTRUMENTS

*Ge Xu* (Antiphony, 1994) and *Sound of the Five* (1998) demonstrate Chen Yi’s ability to deal with Western instruments in their idiomatic expressions. In traditional compositional thinking, melody, harmony and rhythm are the primary defining elements in the character of a musical work. In recent decades, however, other elements have elevated their importance in composition. *Sound color*, as one of these ‘other elements,’ has become a principal field of exploration;¹ Chen Yi is one of the contemporary composers who have devoted their intelligence and creativeness to this field. The analysis of sound color in Chen Yi’s compositions involves mainly two aspects. The first aspect is concerned with instrumentation, referring to specific sound effects produced by the established or extended techniques for Western instruments, playing styles drawn from Chinese instruments, and relationships between the choice of range for distinct instruments and their functions in music expression. The other aspect is concerned with orchestration, pertaining to the spacing and balance of designed timbral combination, registral distribution, differentiation of textural strata, arrangement of timbral groupings as developmental process in music, and functions of textural differentiation and timbral groupings in the clarification of formal structure.

The analysis of *Ge Xu (Antiphony)* focuses on the adaptation of Chinese folksongs into idiomatic expressions of Western instruments and exploration of orchestral potentiality, while *Sound of the Five* concentrates on the Western instrumental re-interpretations of the sound effects produced from Chinese instruments.

*Ge Xu (Antiphony)* for Chamber Orchestra (1994)

*Ge Xu (Antiphony)* was commissioned by the Women’s Philharmonic in San Francisco and completed in 1994. The Chinese word *Ge Xu* denotes a kind of singing gathering, which is a social custom of the Zhuang people, a minority in Guangxi province of southern China. For celebrating the Lunar New Year or Mid-Autumn, the Zhuang people usually get together in the threshing ground or outside the village, singing folksongs in the forms of solo, chorus, or antiphony. The contents of the singing relate to common knowledge or love. In the antiphonal singing, distinct groups or individuals make up texts on the spot in the style of antithetical couplets (pairs of balanced verses); the singers of both sides compete with each other by showing off their wits and singing talents.  

2 This vivid scene inspired Chen Yi to compose this piece and ‘antiphony’ is therefore given as an annotation on the title.  

3 Chen Yi, notes of *Ge Xu (Antiphony)* for Chamber Orchestra (Bryn Mawr, PA: Theodore Presser Com., 1994).

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3 Chen Yi, notes of *Ge Xu (Antiphony)* for Chamber Orchestra (Bryn Mawr, PA: Theodore Presser Com., 1994).
Adaptation of Original Folk Tunes

The principal melodic materials in this piece are an adaptation of three original Chinese folk tunes, which are selected from three different minorities in southern China. According to the order of presentation in this piece, the first folk tune is a *Mountain Song* (Fei Ge) for the Miao people, a minority in Guizhou province. The second one is a piece of folk instrumental music played by the *shuangxiao*, a wind instrument with double vertical bamboo flutes prevailing in the Bouyei people, who live in Guizhou province. The third piece is called *Song of Tiaoyue*, which is a kind of dancing music for the young Yi people in Yunnan province. Girls usually sing the song when their dancing reaches a climax. The distinct pitch constructions of these three pieces provide not only elements compatible with Western tonal systems or post-tonal pitch structures, but also the instrumentalizing potential for the performance of Western instruments.

As shown in Example 5-1, the *Mountain Song* (Fei Ge) of the Miao comprises four phrases, with the same initial melodic contour except different rhythmic distribution for the last phrase and the same descending gesture at the end of the second and fourth phrases. The melody is built up basically on a single triad—G major triad, which is alternated with a G minor triad. According to the principles of Han modal theory, the mode of this piece can be defined as D Pentatonic mode Zhi (mode Sol). The practice of alternation between G major and minor triads, however, is similar to the alternation between parallel major and minor modes or modal mixture on G in Western traditional practice. The difference from the application of Western modal mixture is
that this folk melody has no implied harmonic progression. Its musical motions—create a question mark in the first phrase, approach to a climax in the last phrase, and relax at the end of the second and fourth phrases—come from the directional changes in the melodic contour, the acceleration and deceleration in tempo, and the sparseness and density in rhythmic distribution.

Example 5-1. *Mountain Song* (Fei Ge) of the Miao.

The triadic-based construction makes this melody rather convenient to be modernized for the performance of Western instruments; Example 5-2 presents this process in three steps. The first step is to assign the initial part of this melody in $A$ major at the Violin’s high register on the E string, which is the most effective range for the violin to produce bright and brilliant timbre, and suitable to express the singable, lyric melody. The second step is to add decorating notes to enrich the pitch content of the

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4 The song is taken from *Chinese Folk Songs*, compiled by Chinese Music Institute, (Beijing, Music Press, 1959), p. 17.
melody, as G♯ A♯ F♯ placed above E (the fifth of A major triad) in measure 3, indicated by arrows. In the same measure, the original sustained chord tone, scale degree 5 (E), is naturally replaced by the scale degree 6 (F♯). The third step is to shift A major to F♯ major through the introduction of an interval class 6 (E to A♯) in measure 4. The Chinese character is also reflected through the employment of a glissando from C♯5 to E5 in measure 2, which is a customary performing technique taken from a Chinese string instrument—erhu (two-string fiddle). Chinese composers have applied this playing method for several generations, as in the violin concerto *The Butterfly Lovers* (1959) by Chen Gang and He Zhanhao (discussed in Chapter 2). In addition, although this rearranged melody is notated in quadruple meter, material is spaced irregularly within the meter so that the existence of a constant pulse is not aurally perceptible.

Example 5-2. Adaptation of *Mountain Song* of the Miao in Ge Xu.

The music shown in Example 5-3 is the second Chinese folk tune that Chen Yi adapts for this piece. The original music reveals three prominent features. First, the melody is presented by two voices simultaneously. Second, the music is limited in a narrow range from F4 to B4 with both voices presenting four tones—F4, G4, A4, and B4. The dissonant simultaneities—made by intervals of second and tritone—are produced by these two voices, sounding throughout the entire piece. This sound effect is closely related to the construction of the instrument. The Chinese word *shuang* means two and
the *xiao* means the vertical flute. To put these two words together, *shuangxiao* means two bamboo flutes as one instrument played by a single player. In this way, two tones can be produced simultaneously. Since each of the player’s hands holds one flute, only the second, third and fourth fingers of both hands can cover the holes of the flutes. The range and playable tones are therefore very limited, the tempo of the music is rather slow, and grace notes are frequently used to give more prominence to the sustained notes. The clash of the second and tritone produced by this playing manner conforms to the sound effects of Western post-tonal pitch construction, which emphasizes dissonant pitch relationships.

Example 5-3. Music for *Shuangxiao* of the Bouyei.\(^5\)

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The adaptation of this melody for Western instruments carries forward the stylistic features of the original music in three aspects. First, the melody is assigned to the horn in its upper-middle range, which can bring out the brightest and the most powerful metallic sound. Second, the effect of grace notes in the original music is exaggerated through a *glissando*, by which the sound slides from the grace note to the principal note associated with the timbral change from stopped tone (+) to non-stopped tone (o). Finally, the dissonant sound effect is stressed through both linear and vertical dimensions. Example 5-4a illustrates the recurrence of interval class 6 in the linear direction for the first presentation of this adapted melody, while Example 5-4b demonstrates the vertical ics 1 and 6 produced by the at-pitch imitation of four horns. In this circumstance, the durational extended grace note E\(^4\), played by the fourth horn, sounds together with the principal note F\(^4\), played by the third horn, forming a clash of ic 1; the sustained F\(^4\) and B\(^4\) from different voices form ic 6. The vertical combination of ics 1 and 6 intensifies the dissonant sound effect.

Example 5-4. Adaptation of *Shuangxiao* Music in *Ge Xu*.

The music is notated on the written pitch for the horn in F, sounding a fifth lower.
The melody of *Song of Tiaoyue* in Example 5-5 is constructed on a single major triad with the root on D. The mode can be defined as $F^\#$ Pentatonic mode Jiao (mode Mi) with the keynote on D, according to the principles of Chinese Han modal theory—the final defines the mode. Similar to the *Mountain Song* of the Miao, this melody has no implied harmonic progression, and even has no changes in melodic contour, rhythm, and tempo. The bouncy, lively and ardent character of this song is created by the constantly changed permutations of three pitches in the first three beats of each measure, and the same leap of the sixth in the last two beats, in which the sixteenth rests on the down beat of the fourth and fifth denote inhaling air from both sides of the singer’s tongue.

Example 5-5. *Song of Tiaoyue* of the Yi.  

![Example 5-5. *Song of Tiaoyue* of the Yi.](image)

The numbers 1, 3, and 5 correspond to the scale degrees 1, 3, and 5.

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6 This song is taken from *Chinese Folk Songs*, compiled by Chinese Music Institute (Beijing: Music Press, 1959), p.29.
Like the *Mountain Song* of the Miao, this melody used in this piece is also in *A* major, and played by the string, woodwind, or brass section alternately. The constantly changed permutations of three pitches in the original melody facilitate the adaptation of the pitch content to a more flexible degree in the arrangement of pitches. Example 5-6a illustrates a comparison, in which the original and adapted pitches are boxed in order to show the differences. As long as the rhythmic pattern and the tertian-based pitch construction remain constant, the stylistic feature of the original music is preserved. In addition, the arrangement of the key—*A* major—is also convenient to connect or combine the *Mountain Song* of the Miao either linearly or vertically, since both melodies are built on a single major triad. In Example 5-6b, the adapted *Song of Tiaoyue*.

Example 5-6. Comparison of the original and adapted *Song of Tiaoyue*.
*Tiao-yue* (in the upper staff) is superimposed with the adapted *Mountain Song* (in the lower staff). The pitch relationship between these two melodies can be described as third extensions above or below the triad A C♯ E. The boxed pitches A C♯ E G♯ B in measure 72 form a tertian-based ninth chord, in which G♯ and B are the third extensions above the A major triad. In the second half of measure 73, the boxed pitches F♯ A C♯ E form a seventh chord, in which F♯ is the third extension below the A major triad, becoming the root of this seventh chord.

Example 5-7 presents another manner of adapting this tune: placing the durational pattern in 5/4 meter into a 4/4 metrical framework. The rhythmic regularity in 5/4 meter maintains, which can be identified by the accent on the first note of each short phrase, while the barline loses its function in a coherent sense of motion. This metrical distortion occurs when superimposing another melody, which might be more suitably expressed in 4/4 meter.

Example 5-7. Metrical distortion on the third Chinese folk tune (*Song of Tiao-yue*).
Stylistic Coordination of Pitch Materials

The three adapted Chinese folk tunes discussed above are not the only pitch material in this piece. Four auxiliary materials are designed to connect the principal melodies and to serve as a stratum in texture as well. Since the Chinese folk tunes possess both tonal and atonal tendencies, these auxiliary materials also function partially as stylistic coordinators in the musical coherence of the entire piece. The possibilities for stylistic coherence actually exist in the construction of the three Chinese folk tunes, such as the employment of tritone and no implied harmonic motion. These auxiliary materials magnify and carry forward the features revealed from these folk tunes.

The first auxiliary material is the interval class 6, which is presented as a sustained sonority in the lower register as a bass background. For example, the timpani plays an unmeasured tremolo on F# and C extending through measure 4 to 36. During this period, the first and second adapted Chinese folk tunes with connecting passages between them are presented over this sustained bass background. The same F# and C tremolo played by the timpani appears again at the end of the piece as the bass background.

The second auxiliary material is a special sound effect produced by an instrumental combination—flute, harp, vibraphone, and violin—in the high register. The combination appears twice in the piece, symbolizing quiet scenes in the early morning with vivid birdsongs, or after the hubbub of an exciting singing gathering (Example 5-8).
Example 5-8. The second auxiliary material in *Ge Xu*.

The third auxiliary material is an atonal passage (measures 21-36) presented by the woodwind section in a three-layer texture. From the top to the bottom in the texture, two flutes present the first layer within the range between $E^b_5$ and $B_7$; their vertical combination forms ics 1 and 6 mainly (Example 5-9a). Two oboes comprise the second layer within the range of $G^4$ to $E^6$, presenting two atonal fragments alternately: the first oboe plays fragments in the order of 1 and 2, while the second oboe plays fragments 2 and 1. In this way, fragments 1 and 2 are always vertically combined (Example 5-9b). Two clarinets imitate three fragments cyclically in a half-note time interval within the range of $G^4$ to $E^6$ (Example 5-9c). The oboes and clarinets also exchange their materials in the second half of this passage since they occupy the same range. The superimposition of these three layers results in an aleatoric texture. The effect of this
Example 5-9. The third auxiliary materials for the woodwind section.

a. The first layer played by flutes.

b. The second layer played by oboes.

c. The third layer played by clarinets.
texture blurs not only clear relationships between pitches, but also the rhythmic regularities, becoming a web knitted by multiple timbral lines within a limited range and acting as a suitable intermedior between Chinese folk tunes with tonal and atonal tendencies. This atonal passage is first presented as a foreground event to connect two different Chinese tunes, and then is used as a cyclic repeated pattern that is part of the accompaniment when the second Chinese folk tune comes in. This passage appears again (measures 121-136) in the piece as a timbral group and a textural stratum to enrich and strengthen the entire orchestral sonority during the movement toward the climax. At this time, the layer of the flutes also presents the imitative fragments that appear in the oboe and clarinet layers.

The fourth auxiliary material is another atonal passage in the low register between F² and A♭³ presented initially by the double bass. This passage is constructed on the repetition of a sixteen-note pattern, which is featured by its 1 and 6, presented in eighth triplets, and punctuated by an eighth rest (Example 5-10). The succession of several big leaps in the pattern increases the tension of the line within this limited range, while the continuity of even triple division regulates the rhythmic pulse, which contrasts greatly against the free-metered rhythmic character of other auxiliary materials. This material is used for three times in the piece. The first presentation (measure 36 to 50) of this passage played by the double basses exclusively is treated as an accompaniment for the second Chinese folk tune. The second appearance (measure 81 to 95) is thickened by the doubling of the cellos and bassoons in the low register as the accompaniment of the third Chinese folk tune, which is also overlapped with the first Chinese folk tune. Its strong atonal tendency does not affect the statement of the
third and first Chinese folk tunes due to the registral separation and timbral
differentiation: the first Chinese folk tune is played by the high strings and high
woodwinds in the high register, the third Chinese folk tune is played by the brass
section in the middle register, this auxiliary material is presented by the combination of
the bass strings, bassoon, and horns in the low register. The third occurrence of this
passage is played by the entire string section and doubled by the bassoons and horns as
a textural stratum against the stratum made up by the third auxiliary material and
played by the high woodwinds (measure 127 to 141).

Example 5-10. The fourth auxiliary material by the double bass, mm. 36-41.

All these auxiliary materials are presented at a fixed range with fixed pitch
classes and fixed instrumental combination. Their timbral features and the entirety of
sonority are more prominent than the individual pitch relationships. The combination of
these auxiliary materials with the adapted Chinese folk tunes does not affect the musical
style of Chinese tunes, but enriches them in timbre and texture. The unity of the musical
style relies heavily on the organization of the tempo and rhythmic density, as well as the
complexity of textural strata.
Determinant Elements in Formal Structure

The form of this piece is modeled by the organizational principles of traditional Chinese instrumental music, which is unified by the change of tempo—free-metered (no regular durational patterns in a slow tempo), slow, medium, fast, and free-metered. The gradual acceleration of tempo associated with the setting of durational patterns becomes an impetus in the music, and the arrangements of principal and auxiliary materials are closely related to the change of tempo. As shown in Figure 5-1, different tempos arranged from slow to fast comprise five main sections of this piece, and the acceleration of the tempo promotes the music to the climax at the section of the fast tempo. Two additional sections built by using Western formal concepts—a cadenza for percussion instruments and a transition—are inserted in between the medium and fast tempos in order to help creating a climax more effectively.

The acceleration of the tempo is not only reflected through the increase beats per minuet as indicated by the change of tempo mark, but also affected by the density of durational patterns (rhythmic groups) per measure through the technique of notated acceleration. The percussion instruments play an important role in this notated acceleration. The initial free-metered section extends from measure 1 to 35 with the tempo mark \( \text{♩} = 66 \) and is associated with an unmeasured tremolo played by the timpani throughout without any indication of rhythmic regularity. Although the adapted Chinese folk melody is notated in quadruple meter and presented above the extended tremolo, the material is spaced irregularly within the meter so that the existence of a
Figure 5-1. Formal structure of *Ge Xu* (Antiphony).
coherent sense of pulse is not aurally perceptible. The section of the slow tempo starts from measure 36, the tempo accelerates to $\text{l}=126$ and a regular rhythmic motion played by the bass drum and crashed cymbals enters, grouped at a half-note interval for each measure, which indicates a $2/2$ meter. Played by the tom-tom from measure 46, the number of notes in the durational pattern increases into eight in an eighth-note interval, which denotes a $4/4$ meter. This denser distribution within rhythmic groups accelerates the tempo without the change of the number of beats per minute.

The section of the medium tempo is divided into two subsections with the same tempo mark $\text{l}=144$. The tempo of this section, however, is kept accelerated through increasing the number of note per measure. In the first subsection (measures 66-80), the durational pattern, played by the percussion ensemble including the bass drum, tom-tom, crashed cymbals, is grouped in eighths, with ten notes per measure in $5/4$ meter and eight notes in $4/4$ meter. In the second subsection from measure 81, the rhythmic pattern is increased to twelve eighth-triplet notes per measure. Over this regular durational pattern, a pair of conga drums is introduced to present a more complicated rhythmic pattern that is mainly made up by sixteenth notes. The acceleration of tempo is therefore achieved by a double layer of rhythmic activity.

The cadenza is divided into two subsections and presented exclusively by the percussion ensemble. In the first subsection (measures 100-108), the rhythmic pattern played by the congas is grouped as twenty-four sixteenth-sextuplet notes per measure. The technique of the notated acceleration terminates at this point since it reaches an extreme along a single line—increasing the density of durational patterns. From the second subsection (measures 109-115), the different rhythmic patterns played by each
performer in the percussion ensemble result in a vertically complex rhythmic texture. Although the technique of the notated acceleration is still used, such as from eighth triplets to sixteenths per beat for the transition and the section of the fast tempo, the continuous accumulation of energy toward the climax also relies on other orchestrational devices, such as the contrast between irregular and regular durational patterns or the strength of the tone quality for each timbral combinations.

The principal materials—three adapted Chinese folk tunes, labeled A, B, and C respectively—are assigned to the five main sections according to their qualities in musical expression as well as timbral design and performance manner. The first Chinese folk tune, Tune A, is used at the beginning and the end of this piece with a pure timbre played by either a single instrumental part (violin I) or a solo instrument (bassoon). When this tune is superimposed with the third Chinese folk tune, Tune C, in the medium tempo section, its lyrical singing character conveyed through longer melodic lines and the on-the-string bowings of the violins and violas become a musical complement to the bouncy, short-phrased dance music of Tune C.

The second Chinese folk tune, Tune B, is located in between Tunes A and C in terms of its prominent sustained notes and more weighted metallic sound quality produced by the brass instruments. The instrumental style of the tune makes it function as an intermediator between the lyrical Tune A and the dancing Tune C, and its overlap with Tune C greatly strengthens and supports Tune C in the linear dimension.

Tune C is placed in the center of the piece as well as in the area of the climax due to its distinct regularly asymmetrical rhythmic pattern and the lively dancing character. This tune is also featured by its mixed timbre, which is always presented by
combined instrumental groups, such as the high strings and the high woodwinds, or the brass section with the bass strings. As mentioned above, this tune is not presented alone, but overlapped with either Tune A or Tune B in different sections in an effort to attenuate a latent monotonous effect resulting from the brief and repetitive musical idea of Tune C.

The first and second auxiliary materials, labeled $w$ and $x$, are used twice according to their specific sound effects and the free-metered rhythmic features. They are placed at the beginning immediately after the principal Tune A for the first time, and at the end right before the principal Tune A for the second time. The third and fourth auxiliary materials, labeled $y$ and $z$, are used not only as an accompaniment of Tune B, but also as a major component in the section of the transition to compete each other with nonmetrical vs. metrical rhythmic qualities and to create motion towards the climax.

**Idiomatic Expressions in Orchestration**

Following the Western tradition, the orchestra is divided into four instrumental sections: strings, woodwinds, brass and percussion. The instrumental arrangement of both principal and auxiliary materials conveys a careful consideration of strengthening and weakening the sound entity and clarifying the formal structure. The strings are treated as the melodic carrier, presenting Tune A and C with a brilliant timbre in their high register. The solo performance of the woodwinds is rarely used except the bassoon at the end of the piece. The entire woodwind section is usually used as doublers to strengthen the tone quality of the melodies played by the strings. The winds are also
used alone to form a textural stratum as an accompaniment of the performance for the principal melodies. The brass section is treated as a melodic carrier, stating the principal melodies at their most effective range or forming a balanced counterpart against the melodies played by the combination of the strings and woodwinds. The percussion ensemble as an independent timbral entity obtains an equal position with the other three sections. It serves not only as the executor in the tempo acceleration, but also as the leading role in the cadenza and as a timbral stratum against the strings and woodwinds at the first half of the transition.

In addition to the treatment of the instrumental groupings as the divisions of formal structure and the employment of the most effective range for the presentation of main musical ideas, some specific orchestrational devices are used to produce special sound effects.

In order to enrich the sound color and strengthen the tone quality for the textural stratum made up by the woodwinds in the section of the slow tempo, a trill glissando (measures 31-36) played by the violins in their high register with the harmonics played by the violas is added when the horns enters to state Tune B. The pitch construction of this trill glissando emphasizes ics 1 and 6, such as B and F in the violin I and F♯ and G, A and B♭ in the Violin II. The combined timbre of the high-registral trill and harmonies forms a thin “fog” floating over the aleatoric texture of the woodwind section, softening their sound edges, especially when they play in the dynamic of forte.

The spacing, staggered entrance and withdrawal, and the balance of the entire sonority for simultaneities is one of the characteristics in Chen Yi’s orchestration, a typical practice is shown in Example 5-11.
Example 5-11. Spacing and staggered entrance of a simultaneity, mm. 13-16.

This simultaneity is used at the end of the free-metered section to create a small-size shape in a four-measure span (measures 13-16). The crescendo and decrescendo are realized through the dynamic changes and the registral expansion. The unmeasured
tremolos played by the strings and two flutes occupy the high register and are sustained from the downbeat of measure 13 to the downbeat of measure 16. The other instruments enter at different time points in the first beat of measure 13, and then all instruments execute a crescendo to the downbeat of measure 14. The harp joins in at the second half of measure 13, presenting a powerful downward sweep to reinforce the crescendo. At the loudest point, the downbeat of measure 14 is emphasized by the accent of the suspend cymbal and tam-tam. After this point, all instruments execute a decrescendo and withdraw at the different time points in either measure 15 or 16. The entire sonority is thickened and strengthened by the expansion of the register from high to low, and is thinned and reduced by the reverse process. The spacing principle is to array the instruments most densely in the high register and sparely in the low register. The clashing sound effect—semitone—is usually assigned to a pair of same instruments, such as F♯5 and G5 played by two trumpets, and B3 and C4 played by the two bassoons. The balance of the sonority is reflected from the control of volume. For example, the brass section is assigned a softer volume (pp) than those of strings and woodwinds (p and mp), and the strings are softer (p) than the woodwinds (mp). In this manner, the sonority of the woodwinds is projected.

Example 5-12 shows another characteristic practice of Chen Yi’s orchestration. A short melody is assigned to six woodwinds—two flutes, two oboes, and two clarinets—which comprise six voices and are spaced a half-step apart to start the melody at B♭6, A♭6, A♭6, G♭6, G♭6, and F♭6, respectively. A thick melodic band is therefore formed. This high registral placement of these wind instruments results in less conflict in overtones, so that the sound effect is not so muddy.
Example 5-12. Thickened melodic line (melodic band).

In this piece, the modernization of Chinese folk tunes with several auxiliary atonal pitch materials unifies the musical style, which conforms to a Western contemporary flavor of appreciation and transmits the distinct features of Chinese folk music to Western audiences as well.

The orchestration follows instrumental idioms in Western tradition, emphasizing the multiple expressions of the strings. The woodwinds are used to strengthen the sonority of the strings and serve as the sonic intermeditor between the strings and the brass. The difference from the traditional Western orchestration is the prominent employment of the percussion instruments, which promote the emotional development in the music, and replace the important role of harmonic progression in this quasi-tonal piece.
Sound of the Five was commissioned by the Eastman School of Music, University of Rochester in New York, through the generosity of Dr. Henry Hwang and the Far East National Bank of Los Angeles, California. It was composed for Mimi Hwang and the Ying Quartet. This work consists of four movements, which reproduce or re-interpret the sounds and styles of Chinese traditional instruments—lusheng, set bells, xiao (hsiao) and qin (ch’in), and drums, respectively. Chen Yi explains the construction, playing methods, and functions in social life for each Chinese instrument. She also provides the aspects she intends to re-interpret through the Western string instruments. The analysis traces these indications to explore specific structural devices and methods of reinterpretation for each movement.

I. Lusheng Ensemble: Motivic Development and Registral Contrast

The first movement is titled Lusheng Ensemble, in which Chen Yi re-interprets the sound and performance ritual of the Chinese instrument lusheng through multiple performance techniques of the strings and through motivic development of the main idea. The wind instrument Lusheng is an aged, bamboo reed mouth organ, popular in various minorities in southwestern China, notably the Miao, Yao, Dong, Zhuang, Yi, and others in Guizhou, Guangxi and nearby provinces. The lusheng has a narrow wind-chest made of carved wood and a long, straight blowpipe extending from one end. Six bamboo pipes of varying lengths pass through the wind-chest; each pipe has a triangular
reed of bamboo or bronze enclosed within the wind-chest and a finger hole exposed above the wind-chest. The reed is activated upon closing of its finger hole and either exhaling or inhaling through the blowpipe. The player is able to cover several finger holes by holding the instrument with both hands and to produce several tones at the same time. The tuning of the *lusheng* is pentatonic in any of seven modes. In the performance, some tones might be maintained while others are changed, presenting a sound effect similar to that of the Western bagpipe, in which a melody accompanied by two ‘drone-notes.’ In the ensemble, the instruments from the *lusheng* family are arranged from bass (23 feet long) to soprano (about 12 inches). In traditional practice, the *lusheng* is usually played by young men while dancing in festivals or dancing associated with courtship. The leading player performs with the smallest *lusheng*, dancing in complicated movements around the ensemble, and the ensemble responds him with colorful pentatonic harmonies as the background.

In this movement, the blowing characteristics of this wind instrument and the combination of the drone-note and melody are interpreted by a group of short motives and the bowing in double-stops for all the string instruments. The relationships between the leading *lusheng* player and the ensemble are interpreted by the dialogue and competition between the solo cello and the string quartet and reflected through the registral contrast.

This movement is developed on a single main idea, which is made up of three parts. As shown in Example 5-13, the entire main idea is confined in a limited range,

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8 Chen Yi, program notes of *Sound of the Five*, 1998.
from G₃ to C♯⁴ within a framework of a tritone (interval class 6). The initial part is a repetitive descending minor third with a four-note contiguous chromatic segment (A B Bᵇ C) inserted in between the repetitions. [The presentation of this descending minor third with its distinct short-long rhythm is consistent throughout the entire movement as the core motive of the main idea.] The second part is another four-note contiguous chromatic segment (A G♯ B Bᵇ), which progresses in the opposite direction. The third part is a six-note contiguous chromatic segment (A B Bᶜ C B C♯). All these three parts are accompanied by an open-string A as a drone-note, which is placed in the same range and results in clashing sound effects. The design of such a limited range facilitates the playing on two strings simultaneously, a bowing technique termed double-stops. The arrangement of three short parts symbolizes the inhaling and exhaling of the player when blowing the lusheng (the sound can be made by both inhaling and exhaling). This main idea is initially presented in the opening three measures played by the solo cello.


In the melodic development, these three parts are usually disjoined, transposed, and transformed. They are discernable through either their melodic contour or their rhythmic pattern. Example 5-14 demonstrates several typical methods of motivic development.

In Example 5-14a, the entire main idea is initially displayed with the starting note at B♭ and then the core motive is transposed twice a half step above and below at B♭ and A♭ respectively. The drone-note remains on the open-string A throughout this excerpt; its intervallic relationships with the melody are therefore altered. Example 5-14b is the extension of the third part of the main idea. This six-note contiguous chromatic segment in measure 37 is extended in a continuously ascending motion to produce a crescendo, while the ascending motion with the drone-note in measure 32 is
interrupted by a big downward leap to form a sawtooth shape. The excerpt in measure 41-42 presents a variant of this six-note segment. By extending the pattern from six to twelve notes, the intervallic relationships between notes are changed mainly by the repetition of a downward minor third. The five instruments play a sequence of this pattern in unison to create a crescendo toward the climax. The combination of this variant and the original six-note pattern appears in the second half of this crescendo, as shown in measures 47-48. At this time, the same melodic line is played in four different octaves (the solo cello and cello in C^3, the viola in C^4, the second violin in C^5, and the first violin in C^6). In Example 5-14c, the drone-note is not displayed in a sustained form, but melted into a single melodic line as a hidden voice. From measure 6 to 8, the entire main idea is presented in the low register with a different drone-note at the open-string C. Example 5-14d shows several pitch alterations of the core motive. In this case, the pitch constructions are altered in direction and intervallic relationship, while the rhythmic feature—short-long pattern—is preserved.

The form of this movement can be described as the creation of a large shape through five phases. The first three phases consist of the process of a lengthy crescendo, the fourth phase is the area of the climax, and the last phase is the falling part of the shape. Since this movement is based on a single melodic material and played by the instruments from the same family, which possesses a homogeneous tone color, the formal structure is not divided through the contrast of different materials and different timbres. Instead, the contrast of register, types of melodic statement, and versatile playing techniques become the determinants of the formal structure. Figure 5-2 shows the overall form with divisions pertaining to the structural elements mentioned above.
Figure 5-2. Formal Structure of *Lusheng Ensemble*.

The first phase (measures 1-13) is presented by the solo cello exclusively. The main idea is stated three times in the middle, higher, and low ranges successively. A crescendo from the middle to the high range terminates the statement of the solo cello. The fluctuating movement of the melodic contour, the on-the-string bowings, and the drone-note assigned to different open strings produce a momentum in the music. Figure 5-3 demonstrates the registral distribution and fluctuating melodic contour.
In the second phase (measures 14-27), the quartet succeeds the solo cello in a higher register around $B^b_5$. The first violin plays the main ideas while the other three strings respond in the same range between $G^4$ and $E^5$. A pizzicato passage played by the solo cello in the low register forms a contrasting part against the quartet in register and playing method. In this phase, the quartet plays a dominant role in presenting music ideas while the solo cello as an accompaniment fills the temporal space left by the long-durational notes of the quartet.

The third phase (measures 27-41) presents a competition between the solo cello and the quartet, and both parts in this case become equally important. The competing manners include: 1) the linear motion of the solo cello is punctuated by the simultaneities of the quartet ensemble, and 2) the short non-legato passage played by the quartet in unison contrasts with the double-stops on two lower open strings of the solo cello. Along with the competition between these two parts, the dynamics are increased and the music is greatly intensified. This phase reaches the climax at the end when the main idea is played by the solo cello in its highest range around $B^5$.

The fourth phase (measure 42-54) is the area of the climax, which is characterized by a running-note passage that is constructed by evenly distributed sixteenth sextuplets and presented by the tutti of all five instruments. This passage starts in unison and then splits into four octaves, and a bold melodic line with strengthened tone quality is thus produced. At the end of this phase, the melody drops from the highest to the lowest register by the dovetailing of the five instruments. Figure 5-4 illustrates the change of the registral distribution of this phase.
Like the restatement in the traditional ternary form, the last phase (measures 53-82) starts with the presentation of the main idea played by the solo cello but in its lowest range. The melodic contour, similar to that in the first phase, again becomes the main impetus. Fluctuating in different registers, the melody played by the solo cello is restated by the quartet in a wider but stable range. Since this phase functions as the falling part of a shape, the sonority is controlled in a rather soft volume, which is continuously reduced until ppp when the music progresses. The employment of *con sordino* (with mute) for the quartet helps not only to reduce the volume of the sonority, but also to change the timbre. This movement ends in a contrast of register between the sustained double-stops of the solo cello and the rapid running melodic fragments of the quartet. Figure 5-5 demonstrates the registral distribution of this phase.
Solo Cello: register without dotted box; Quartet: register with dotted box.

Figure 5-5. Registral distribution of Section V in *Lusheng Ensemble*.

In this pure-string piece, the arrangement of bowing techniques becomes an important device to create different timbres and present varied dynamics. The bowings of the string used in this movement can be divided into two main categories: on-the-string bowings, which include détaché (separate), portato, staccato, and marcato, and off-the-string bowings, which include spiccato. Coloristic effects can also be produced by trills, tremolo, pizzicato, glissando, natural or artificial harmonics, and with mute. Bowings with the contrast of registers have been discussed in the structure of the form, whereas the intensification and change of dynamics in music are also reflected through the number of slurred notes on a single bow stroke (the slurs here are used to designate
the notes to be performed on one bow). For example, in the first phase, four slurs are assigned to the statement of the main idea in the opening three measures uses, shown in Example 5-13. In this rather slow tempo (♩ = 84), the slurs for two or three beats with four to eight notes in step motion indicates a medium dynamic. With the slur for two or three notes within one beat in a wider intervallic span, the dynamic is increased accordingly, as shown Example 5-14c, measure 3 to 6. The bowing of détaché, which denotes a change in direction of up- and down-bow for every note, is very effective in producing an intensified sound, and especially for a crescendo. In the fourth phase, the area of climax, all the strings are assigned this détaché bowings with an accent added to each note in order to strengthen the tone quality, as seen in Example 5-14b.

II. *Echoes of the Set Bells*

*Effects of Harmonics and Pizzicati*

The second movement, titled *Echoes of the Set Bells*, reflects Chen Yi’s recreation on the sound of the set bells from ancient times through the combination of harmonics and pizzicati of the strings. Bells made of bronze first appeared during the late Shang dynasty (13th – 11th centuries BCE). The bell known as zhong has a leaf-shaped cross-section (oblative ellipsoid), concave mouth and a slightly expanding profile from the crown outward. Zhong bells are normally grouped from three to sixty-four as a set, so-called bianzhong (set bells). These bells are suspended mouth downward by loops in an elaborately decorated frame, and struck externally with a beater. Treated as melodic instruments, the set bells are tuned by maintaining uniform thickness while
varying the size (smaller bells producing a higher pitch). They span a range from two to five octaves with limited or full chromatic capability in the middle octaves. Two pitches, commonly (but not always) a minor third apart, can be produced by striking at the different positions on each bell. The solemn and dignified quality produced by the melodic performance in slow tempo had made the set bells (bianzhong) become more or less standardized in ritual ceremonies since the Song dynasty (960-1279).9

In this movement, the performance characteristics of the set bells are re-interpreted mainly through the combination of two specific playing techniques for the strings. The first one is pizzicato, by which detached tones are produced through plucking the string. The attack of tones is therefore projected, symbolizing the strike on the bells with tones produced one by one. The second playing technique is artificial harmonics, by which a fluty and silvery sound is produced. A mysterious effect created by this technique stands for the resonant phenomenon after striking on the bells and signifies the distance in eras as well. These two playing techniques are combined to produce tones one by one through doubling at pitch. A five-note pc set is manipulated via this combination extending throughout the entire movement, becoming the core musical idea. Other pitch materials are all derived from this idea.

The pitch content of this five-note set includes F♯ G A B C, which are framed by ic 6 (F♯ - C) with A as the center. F♯ G and B C as two groups of ic 1 are symmetrically placed in both sides of A, the adjunct pcs to A—G and B—form two ic 2, as shown in Figure 5-6. This set is arranged by ordered pitch intervals {+ 2 – 11 + 6 – 11} and identical with this fixed intervallic relationships, while interval classes 1, 2, and 6 play

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dominant roles in the melodic development. As mentioned above, this five-note pc set is displayed mainly by the combination of pizzicato and harmonics; Example 5-15 illustrates its initial statement and several variants in this movement.

Example 5-15a is the initial statement of this five-note pc set. The solo cello plays this set in harmonics with the sounding pitches two octaves higher than written. Each pitch of this set is doubled at pitch by a different instrument through pizzicato, creating a “pointillistic texture.” The rhythm is evenly distributed between each two pitches in a half-note time interval. An accent mark is assigned to each pizzicato note in order to project the attack of the tone, which is the way to interpret the striking on the bells.

Example 5-15b is a variant of this set. In this case, the pizzicato notes are assigned to only one instrument—the viola—in an unevenly distributed rhythm. The other three instruments are pointillistically scored in harmonics. The doubling for this time is not at pitch, but two octaves apart from the sounding pitches of harmonics to the pizzicato notes. In this way, the tones produced by pizzicato are given more prominence.
Example 5-15. The five-note pc set manipulated in combination of harmonics and pizzicati.
Another variant of this set played by all five instruments is shown in Example 5-15c. Each of the five notes is displayed by the combination of harmonics and pizzicato with one octave apart in doubling. Alternating between pizzicato and harmonics, these five instruments are scored pointilisticstically with no repetition of a fixed instrumental combination for each note except the first two.

The variant shown in Example 5-15d is the retrograde of this set with four instruments involved. The method of the statement is slightly different from the other three discussed above. The pizzicato is used for the first three notes, while each harmonic is sustained throughout this excerpt after sounding. At last, four of the five notes are sounded together vertically. The disappearance of the pizzicato notes reduces the power of attack, while the increased dynamics balances the overall sound effect.

This five-note pc set is also used in varied scoring and methods of development. In Example 5-16a, the upper staff shows the part played by the first and second violins. The five-note pc set at T7 is assigned in an even eighth-note value, and repeated three times from measure 61 to 63. Then, this set repeats another three times at T8. The lower staff shows the part of the viola, in which this five-note pc set is inverted and repeated twice. In Example 5-16b, this set is presented in the form of its retrograde.

A pentatonic-type melody played by the solo cello is derived from this five-note pc set, identical through the emphasis of the initial two pcs—A and B. The development of this melody follows the principles in Chinese folk music—a melodic idea can be transformed by retaining the basic melodic contour with the same materials at the beginning and the end of the phrase while expanding the length in the middle of the phrase. Example 5-17a demonstrates the relationship between the five-note pc set and
Example 5-16. Varied transformations of the five-note pc set.

this melody as well as the manner of melodic development. The melody starts with pitches $A^4$ and $B^4$, which are the two initial notes of the five-note pc set, and repeats these two pitches three times. Through added pitches $D^5$ and $E^5$, the melody reaches its zenith $F^\#5$, and then emphasizes the {-11} descending leap from $B^4$ to $C^4$, which is the third pitch of the five-note pc set. The leap $B^4$ to $C^4$ is repeated twice and then reach $F^\#$ through $G^\#$. The last two pitches from $F^\#$ to $G$ form a big downward leap, which is the same ending as the five-note pc set. In this way, the melody keeps the original beginning and the end while extending in the middle to produce a longer phrase. This melody in Example 5-17b is further extended in the middle through repeating certain melodic fragments. The fragment in measure 53 is the repetition of measure 52, and measure 55 is the repetition of measure 54 with slight modification in the third beat. This melody is also extended before the ending $F^\# - G$ by repeating the melodic fragments in measure 52 an octave lower.
Example 5-17. A pentatonic melody and its development.

An eight-note sustained simultaneity and a four-note glissando harmonics comprise auxiliary pitch materials and are used to separate the main melodic statements. As shown in Example 5-18\(a\), the eight-note simultaneity is constructed by E C and D B, F\(^\#\) A and G B\(^b\), which are arranged by two pairs of sixths and thirds that are placed ic 1 apart except E to D. These pitches are placed in a close position within one octave. Special playing techniques—\textit{sul ponticello} with tremolo—make the timbre distinguished from the melodic statement. The four-note glissando harmonics are arranged by two pairs of ic 1, G with A\(^b\) and C\(^#\) with D, which are placed a tritone (ic 6) apart. By sliding down to A, B\(^b\), D\(^#\) and E respectively, the four-note harmonics form another two pairs of ic 1, as seen in Example 5-18\(b\).
Example 5-18. An eight-note simultaneity and a four-note glissando harmonics.

The form of this movement is closely related to the arrangement of pitch materials and playing methods. The overall formal structure is symmetrically arranged, as seen in Figure 5-7. The five-note pc set, labeled A, is placed in the beginning and the end, while the pentatonic-like melody, labeled B, is placed in the middle with the original statement and its three variations, each of which extends the length of the original statement. The climax is located at the second variation of the melody and extended by the variant of the five-note-pc set. The third variation of the pentatonic melody mirrors the original one by the same method of statement—harmonics. The statement of the five-note pc set reappears at the end with the retrograde order of pitches. The double-stop $D^b$ and $A^b$ played by the cello appear in the beginning and is responded at the end.
A = five-note pc set; B = a melody derived from the five-note pc set; x = eight-note simultaneity; y = four-note harmonic glissando

Figure 5-7. Formal structure of *Echoes of the Set Bells*. 
III. Romance of Hsiao and Ch’in

Continuity of Melodic Lines and Generation of Polyphonic Texture

Instead of exploring the same type of instruments in the previous two movements, the third movement, titled Romance of Hsiao and Ch’in, deals with the interpretation of two different types of Chinese instruments—xiao (hsiao) and qin (ch’in). The xiao is a vertical notched bamboo flute, which possesses a pure and ‘natural’ tone quality and embodies important associations with Confucian ethos and cosmology. The range of the xiao is usually about two octaves, suitable for the performance of lyrical melodies with frequent grace notes. The qin is a seven-string zither without bridges and played by both hands with no plectrums. The execution of slides, harmonics and special strokes produces rich and varied timbres. The qin has long been associated with Confucianism and Chinese scholarship, and traditionally was the symbol of ‘correct’ music, a means of purification and education, and an essential feature in ceremonies and rites. The xiao and qin are often played together, creating a good balance in sonority and timbre. The lyrical quality of these two melodic instruments and their concordance in performance are presented in this movement through continuously stretched melodic lines that are associated with polyphonic textures and through contrasts of varied string-playing techniques.

Rather than the manipulation of a short motive or a small pc set, the structural techniques of this movement are focused on stretching a single melody into the length of thirteen measures. The main techniques for extending the melody include: 1)

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repeating a short melodic fragment from the end of previous sub-phrases to avoid the sense of ending, and 2) wavering between modes or the position of keynote “Do” through the techniques of ‘borrowing note’ (Example 5-19).

Example 5-19. Main idea in Romance of Hsiao and Ch’ in.

By observing the final in Example 5-19, this melody can be defined as a septatonic Mode Gong (mode Do). Two melodic fragments, both of which appear initially in measure 2, play important roles in the extension of the melody. The first fragment, labeled $x$, is made up by a minor third followed by a major second in a descending motion. The note value may be changed in the extending process while the downward motion always remains. The second fragment, labeled $y$, is a three-note trill, grouped as two thirty-seconds succeeded by a longer note value. This rhythmic figure never changes except for the varied expansions of the last note value.

The first sub-phrase extends from measure 1 to 4, which is recognizable through a common four-measure length and a sustained ending note ($C^\#$). The second melodic fragment $y$ is presented twice in measures 2 and 3 with different transpositions. The
next sub-phrase executes the extending process in several steps. First, from measures 5 to 6, the second melodic fragment $\gamma$ recurs three times (including in the form of combined grace notes) in its transposed inversion: B-C$\sharp$-B instead of the original C$\sharp$-B-C$\sharp$. Then, a seventh upward leap is applied and dropped back down to reach the keynote A in measure 6. This two-measure melody seems to have a tendency toward repose, but the phrase is carried on by another repetition of this ascending gesture through an anacrusis, which is made of the first melodic fragment $x$, after the arrival of A on the second beat in measure 6. The next step starts at the end of measure 8: the melody blurs its keynote through the borrowing note G, which is a half step lower than the seventh scale degree G$\#$. The same anacrusis recurs at the end of measure 8 to bring out another two-measure extension. In measure 10, the first melodic fragment $x$ is displayed twice in its T$_5$, a perfect fifth lower than the initial statement. From measure 8 to 11, the frequent appearance of the fourth scale degree D implies the keynote is shifted from A to D, while the mode is wavered between F$\#$ septatonic mode $Shang$ (mode Re) and mode $Zhi$ (mode Sol). Finally, the fourth scale degree D is sustained after an over-octave leap in measure 11, and then leads the melody back to the original mode through the first melodic fragment $x$, ending on the keynote A in measure 13.

This melody as the main idea of this movement is usually companied with its counterpart, which is built up by either imitation or doubling of fragments taken from this melody. The melodic counterpart functions as musical complement of the main melody and is always presented in different registers in order to distinguish from the main melodic statements. The imitation of melodic fragments is commonly employed when the main melody has a tendency of repose that is often presented through a
sustained note, while the doubling of melodic fragments is usually used to address the ending point, such as in measure 6 and 10.

This lengthy melody contains rich developmental elements and is also complemented by its counterpart musically, so that it forms a rather independent formal section. The overall form of this movement can be viewed in two ways. The first view is to divide sections according to the completion of the melodic statements. In this way, several recurrences of the main melody are organized into an $A \ B \ A'$ ternary form plus a coda. Both Sections $A$ and $A'$ comprise two complete statements of this melody, which combines its counterpart without change in pitch content and rhythmic feature. Section $B$ starts to break down the main melody, and then introduces a developmental passage, which fully presents the virtuoso playing techniques for all the strings and leads the music to the climax. The second view is to divide sections according to the registral distribution and the instrumentation. In this way, the seven parts (six appearances of the main melody plus the virtuoso passage) are arranged symmetrically in an arch form with the virtuoso passage at the center as the climax, which serves as the axis for the entire piece.

As shown in Figure 5-8, the sections indicated on the top denote the first view of the form. The solo cello plays the main melody for a total of four times. Regarding to the registral distribution, both $a^1$ and $a^6$ start at $F^{#4}$, and $a^3$ and $a^4$ start at $F^{#3}$. The first violin leads the main melody twice ($a^2$ and $a^5$) in the same register, starting at $F^{#6}$. These two occurrences played by the first violin are coupled with the second violin staring at $F^{#5}$ for $a^2$ and the cello staring at $F^{#4}$ for $a^5$. Since $a^1$ paired $a^2$ and $a^4$ paired $a^5$ present the main melody and its counterpart completely with no change in pitch content,
and are played by normal on-the-string bowings, these two paired parts are treated as independent formal sections, \( A \) and \( A' \). The main melody in \( a^3 \) is not completely presented and is played by the solo cello through pizzicato with a different counterpart, which is played by the viola and enters in measure 25 before the end of the previous formal section. The main melody in \( a^6 \) is even shortened, presenting only the beginning, and is also played alone without its counterpart, thus functioning as a coda.

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Figure 5-8. The formal structure of Romance of Hsiao and Ch’in.

Section \( B \) can be divided into two parts regarding to the material presentation and playing techniques. The first part extends from measure 25 to 50 and the second part is from measure 51 to 69. Although this section starts with the same melodic
material as in Section $A$, the contrast is obviously shown in two aspects. First, the statement of the main idea changes its register one octave lower starting at $F^\#3$ instead of $F^\#4$ in Section $A$. Second, the playing method changes from bowing to plucking, using pizzicato to state the melody. The melodic statement is gradually discontinued, fragmented, and finally is replaced by the varied pizzicato playing, by which the strings are treated as an enlarged $qin$.\footnote{12} This part presents mainly the off-the-string techniques, including left-hand pizzicato, portamento, and right-hand pizzicato, as well as on-the-string harmonics and sustained trills (Example 5-20a and b).

Example 5-20. Off-the-string techniques.

The second part gradually switches the plucking to bowing in order to create an impetus toward the climax. This part presents several on-the-string bowing techniques, such as pizzicato played behind the bridge, the measured and unmeasured tremolo, bowed staccato, a series of repeated détaché notes to give more energy or volume to a tone, and double-stops in the low range (Example 5-21a and b).

\footnote{12} Chen Yi, program notes of Romance of Hsiao and Ch’ in, 1998.
Example 5-21. On-the-string techniques.

The symmetrical arrangement of parts indicated at the bottom of Figure 5-8 denotes the second view of the form. The virtuoso passage is treated as the center because of its tutti performance, spanning five-octave range, no special melodic material involved, and non-polyphonic texture. In both sides of the virtuoso passage, $a^3$ and $a^4$ as a corresponding pair are scored for the same instruments for the leader and counterpart—the solo cello and the viola. In $a^4$, counterpart II is added to create three-voice polyphonic texture, and this counterpart II is also doubled at fourth to thicken the melodic line. The corresponding parts of the next pair are $a^2$ and $a^5$, in which the main melody is played in a higher register and coupled by two instruments. The first violin as the leading instrument plays the main melody in the same range from $B^4$ to $A^6$, with the second violin doubled in $a^2$ and with the cello doubled in $a^5$. The outermost pair $a^1$ and $a^5$ corresponds in the melody played by the solo cello in the same range, beginning on $F^{\#4}$. 
IV. *Flower Drums in Dance*

**Rhythmic Groupings and Textural Process**

The fourth movement, as the title *Flower Drums in Dance* suggested, focuses on two interrelated aspects: the sound effects of percussion instruments and the strong rhythmic features in dancing.

The *flower drum* is a word-to-word translation of Chinese *hua gu*, whose meaning is two-fold: a percussion instrument – *yao gu* (waist-drum), and a dance tradition of the Han people in central and southern China. This kind of waist-drum has a wooden barrel-shaped shell that is about 34cm in length, its two open ends are covered with animal skin that is tacked around the circumference. Two iron hoops are inlaid on the body of the drum in order to fasten a belt, which is used for hanging the drum at the player’s waist from his shoulder. The player holds two stick beaters to strike the ends of the drum. For celebrating traditional festivals, a large group of male players hang the waist-drum and dance or march. Their movements are unified by beating a simple and repetitive rhythmic pattern, which is made up by beating the central end or the rim of the drum. A group of female dancers play the small gong and dance with them. The accompanying instruments include the big drum, big gong, big paired-cymbals, small gong, small paired-cymbals, and a pair of *suona* (a bronze wind instrument). The intensity and strength of the male players’ actions and the grace and liteness of the female dancers’ movements form a delightful contrast, and the

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atmosphere on the spot is bustling with happiness, passion, and excitement.

Inspired by this energetic dancing scene and rhythmic designs of traditional Chinese percussion ensembles, this movement creates a strong momentum through the dissonant percussive sound effect produced by varied double-stops and the well-knitted texture for executing the repetitions of simple rhythmic patterns.

Several short rhythmic patterns and rhythmic groupings associated with the metrical changes are the basic elements in the musical development as well as the determinants of the formal structure in this movement. These rhythmic groupings and patterns include an enlargement of Baban form in 3/4 meter, a four-measure percussive pattern in 2/4 meter, and two irregularly accented patterns in a series of shifted meters and varied length. The formal sections are divided by different manners to organize these rhythmic patterns and groupings.

As discussed in Chapter 4, the Baban has eight phrases and a total of sixty-eight beats; the rhythmic groupings of eight phrases are shown in Example 4-1. In this movement, the length of the original Baban is tripled. Each of the Baban beats is extended into three beats, which is displayed as one measure in 3/4 meter, so that the total sixty-eight beats of Baban are extended into sixty-eight measures. The rhythmic groupings are clearly divided through the changes of instruments. Figure 5-9 illustrates the enlarged Baban rhythmic groupings in relation to the instrumental distribution. The seven eight-measure plus one twelve-measure groupings and total sixty-eight measures correspond to the rhythmic groupings and total beats of the original Baban, except the order of the sixth and seventh groupings is reversed, and the last grouping is grouped as 3+2+3 instead of 4+4. This enlarged Baban form (labeled a) is placed at the beginning
of this movement as Section $A$. In Figure 5-9, an extended line with an arrow indicates the length of the fragment in rhythmic groupings played by each instrument. This section starts with only one instrument, gradually increases the number of the instruments and varies the instrumental combinations, thereby producing an ever-changing texture. For example, the first rhythmic grouping (3+2+3) is played by the second violin (3), the first violin (2) and the cello (3) in succession, while the second rhythmic grouping (3+2+3) is played by the switch of instrumental combinations between the first and second violins against the viola and cello. The fifth grouping (3+2+3+4) is first displayed by the combination of the viola and cello (3), succeeded with the combination of the first and second violin (2), and then these four instruments played together (3) against the solo cello (4). The last grouping (3+2+3) is presented by three combinations: the solo cello, the first and second violins (3); the solo cello, the viola and cello (2); and the ensemble of all five instruments (3).

The pitch structure for this section is rather simple, each instrument of the quartet is assigned a single dissonant double-stop, and the solo cello is assigned two different double-stops. The same constructions of these double stops are kept through until the seventh grouping, where the range of each instrument is raised one octave higher. As shown in Figure 5-10, these double-stops are all constructed by ics 1 or 6, such as F$^3$ and B$^3$, G$^2$ and F$^{#3}$ for the solo cello, A$^5$ and B$^{b5}$ for the first violin, D$^{#5}$ and E$^5$ for the second violin, and D$^3$ and C$^{#4}$ for the viola. The only exception is ic 4, C$^2$ and A$^{b2}$, assigned to the cello. This consonant sound effect, however, becomes dissonant while combining with other instruments, such as ics 1 (C$^2$ and C$^{#4}$) and 6 (A$^{b2}$ and D$^3$) formed by a vertical combination with the viola in measure 12. Furthermore, the
Figure 5-9. Instrumental distributions of the enlarged Baban form (Section A) in Flower Drum in Dance.

Figure 5-10. Pitch Constructions of double-stops in the enlarged Baban form (Section A).
vertical combinations of more instruments result in a more dissonant sound effect. Although each instrument is assigned only one or two double-stops in a fixed register, the varied combinations of these instruments counter the static pitch constructions.

All the strings are assigned measured tremolo with accents on the first beat of each grouping, and each instrument leads to the next grouping through a crescendo, which intensifies the music and creates a chasing effect as well. Since the measure numbers of the rhythmic groupings are unevenly divided, an irregular pulse in a higher or phrase level is formed.

Example 5-22. Rhythmic pattern and ostinato in Section B.
The second basic element is a four-measure rhythmic pattern (labeled \( b \)) that is directly taken from percussion ensembles (Example 5-22a). Designed for the on-the-string double-stops, this pattern is played rotationally by each of four instruments in the quartet, and accompanied by a two-measure ostinato pattern (labeled \( w \) in Example 5-22b). This ostinato pattern is played by the dovetailing of two instruments throughout this section and also rotated with different instrumental combinations. Sixteen recurrences of the ostinato pattern form Section \( B \). Figure 5-11 demonstrates the rotations of these two patterns. A bold line indicates the four-measure rhythmic pattern, while an oblique thin line denotes the ostinato pattern, which is always dovetailed by two instruments. The arrows indicate the directions of movements in either space or time. In addition to the execution of these two patterns, occasional pizzicato with either a single note or triple-stops are assigned to the two remaining instruments in order to fill the rests left by the four-measure rhythmic pattern. A texture with an even eighth-note rhythmic continuity and multiple timbres is tightly knitted in this way. The effects of cross-rhythm, the pizzicato partamento, and the triple-stops make this repetitive, and square-conceived (4x4) section full of energy.

The third basic element is two irregularly accented rhythmic patterns in shifted meters. One is shifted between 2/4 and 5/8 meters, as displayed in Example 5-23a, and another is shifted between 2/4 and 3/8 meters, the rhythmic pattern without pitch contents shown in Example 5-23b.

As shown in Example 5-23a, the steady pulse in duple meter presented by the viola and cello from measure 153 to 156 is disturbed by placing accents on weak beats played by the first and second violins. The pulse is further disturbed by the succession
The total number of measure in this section is $4 \times 16 = 64$.

→ indicates the rhythmic pattern $>>>>>>$ , which is four measures in length and played for four times by each instrument.

denotes to the ostinato pattern played by the dovetail of two instruments.

Figure 5-11. Instrumental distributions of Section B in Flower Drum in Dance.
Example 5-23. Two irregularly accented rhythmic patterns in *Flower Drum in Dance.*

of a two-measure composite meter 5/8 (duple plus triple). Although the regular cyclic
accents are played by the solo cello on the downbeat of each measure, as in measures
157 and 158, the uneven division of 5/8 meter and accents on the weak beats addressed
by the first and second violins blur the simple and clear duple pulses. Interpreting as the
dialogue in percussion ensemble, the frequent exchange between these two meters with
accented weak beats and the coordination of instrumental performance give a great
impetus to the musical development.

In Example 5-23b, the solo cello presents the pattern, which is supported through
simultaneity played by all other strings on the downbeat of each measure. This pattern
can be divided into two parts referring to the varied arrangements of meters. In the first
part, the meters are shifted frequently, each of 2/4 and 3/8 meters lasts for only one measure, as illustrated in measures 198 to 201 and 204 to 207. A two-measure one-beat rhythmic pattern with accents on weak beats is inserted in between the recurrences of the 2/4 and 3/8 pattern, preventing the music from falling into a regular cyclic pulse. The second half of this pattern is still shifted between 3/8 and 2/4 meters, but the order of shifted meters is reversed and the length of each meter is extended, with three measures in 3/8 and then two measures in 2/4 (the regular triplet two-beat pattern appears in Section B). The pitch contents may vary, while the same rhythmic patterns are identical.

Figure 5-12 illustrates the overall formal structure, which is built up by the succession of the rhythmic patterns and groupings described above. In addition to the different interior instrumental and textural arrangements for each section, several connections or transitional passages are also well designed. Unlike traditional tonal transitions, in which the transformation of melodic or motivic materials and modulation supported by functional harmonies play important roles, the connecting materials in this movement are relatively simple. Example 5-24 demonstrates several patterns that recur between main sections, and their function as transition is discernible in musical context.

Example 5-24a demonstrates a single sustained trill (labeled x), which connects Section A and B, and Example 5-24b and c illustrate two versions of a four-measure rhythmic pattern (labeled z), which is used twice to connect Section C and D (in 3/4 meter) by the solo cello first and then to connect Section D and E (in 2/4 meter) by the quartet. Another connecting passage (labeled y) is the derivation of a percussion ensemble played by the quartet. The term interim is used here in order to distinguish from the traditional sense of transition.
Although the melodic material is not given a prior importance in this movement, a distinct melodic fragment is introduced in the course of approaching the climax. This melodic fragment, shown in Example 5-25, is first presented by the solo cello in Section B, and then played by the first and second violins in Section E. This melody is an interpretation of tunes played by the suona in a Chinese percussion ensemble; a series of descending two-note gestures with trill on the first note display the performance idioms of the suona. The addition of this melody over the rhythmic patterns helps to produce a bustling atmosphere to the climax of this movement.

Example 5-25. Melody written in performance idioms of the suona.
Figure 5-12. Formal structure of *Flower Drums in Dance*.
The section after the cadenza resembles a recapitulation, since the fragments of all rhythmic groupings or patterns presented in the previous main sections, including interims, are presented here in a different order. This movement ends with double-stop tremolos of all strings with the loudest dynamics, which also corresponds the performance manner of Section $A$.

In this piece, the sound effects and performance rituals of different Chinese instruments are re-interpreted by rich and multiple bowings of the strings and the technical combination of Western melodic or motivic development, small-pc set manipulation, and composite metrical shifting with Chinese borrowing notes, phrase extension and varied rhythmic patterns and groupings.
CHAPTER SIX
ADEPT IN ACHIEVING COHESION THROUGH MANIPULATING TEXTURE

Symphony No. 2 was a commissioned work composed shortly after Chen Yi completed her doctoral degree in 1993, and Momentum was a commissioned work finished during her years as a faculty member at the Peabody Conservatory in 1997. In these works, the compositional processes are focused on the manipulation of texture, which is given greater importance than pitch and time, is closely related to the timbral design, and dominates the delineation of form and the creation of continuity in music.

In contemporary Western music, all musical elements tend to be interdependent in composition; various choices that composers may make with regard to pitch, time, or sound color inevitably have implications in the realm of musical texture.¹ The analysis of texture, therefore, involves a broader and more comprehensive approach to the organization of musical elements. The examination of pitch construction, rhythmic and temporal features, instrumental combinations, and registral placement are meaningful only by making clear their functions in the form of sound strands or sound mass. The treatments of textural density, complexity, and aggregation, growing or swelling and diminishing of sound strands are the main aspects to be investigated for elucidating the achievement of the structural cohesion.

Chen Yi absorbed the aleatoric techniques from the works of Lutoslawski and Penderecki and adopted the texture produced by the heterophonic variation of Chinese instrumental ensembles into her orchestration for the Western orchestra, since it is similar to the texture created by aleatoric techniques in contemporary Western orchestral practice.\(^2\) A more flexible structural principle in traditional Chinese instrumental music—the creation of *shape*\(^3\)—replaces the strict phrase and sectional structure in Western musical tradition, becoming the basis of small- or large-scale formal structure. The forms of *Symphony No. 2* and *Momentum* are structured under this principle. Besides the illustration of musical examples, the verbal description of textural analysis is aided heavily through varied diagrams and graphic charts.

*Symphony No. 2* (1993)

*Symphony No. 2* was commissioned in 1993 by the Women’s Philharmonic, San Francisco. This one movement work is a lament in memory of Chen Yi’s father, who devoted his whole life to the people in his motherland and encouraged and supported Chen Yi’s aspirations to become a musician. The loss of her father made Chen Yi meditated deeply on what she should do for the people in the world, and *Symphony No. 2*

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\(^3\) As explained in Chapter 1, a “shape” consists of a crescendo to a climax or apex, followed by a decrescendo. Any structural parameter—melodic undulations, rhythmic groupings, dynamics, the expansion and contraction of range, or changes of tempo—can create a shape, or generate a phrase.
presents her personal experiences of introspecting on the past, awakening to the reality, and yearning towards the future. She designs a powerful orchestral crescendo through the transformation between blocked sound masses and multiple melodic lines.

**Pitch Materials and Their Functions**

The four principal types of pitch material in this piece are adopted from Chen Yi’s earlier works: (1) a fragment of a Chinese melody that is used in *Woodwind Quintet*, (2) the *Chen Yi Theme* from the *Piano Concerto*, (3) a twelve-tone row, also from the *Piano Concerto*, and (4) tone clusters, stacked by ic 1 and outlined by ic 6, used as the basis of smaller pc sets and simultaneities in all seven of the earlier pieces analyzed above.

The fragment of a Chinese melody, as in the *Woodwind Quintet*, keeps the same basic intervalllic frame: a perfect fifth, C to G, in which C is embellished by its lower and upper semitone B and D♭, and G is embellished by its lower semitone F♯ (Example 6-1). The durations of the principal notes vary during the course of the piece, but the construction is easily identified by this basic intervalllic frame. This idea appears as a foreground event, always presented linearly by woodwinds and brass.

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4 Chen Yi, program notes of *Symphony No. 2* (1993).

5 According to Samuel Adler, the concepts of foreground, middleground, and background are important in discussing the distribution of material in an ensemble situation: 1) foreground—the most important voice, which the composer wants to be heard most prominently; 2) middleground—countermelodies or important contrapuntal material; 3) background—accompanyment either in the form of chords or polyphonic/melodic figures (Adler, p. 116). The textural descriptions of this thesis follow Samuel Adler’s definition; no implication of a relationship between this usage and that in Schenkerian theory is intended.
Example 6-1. Fragment of a Chinese melody.

![Fragment of a Chinese melody.](image)

The *Chen Yi Theme* maintains the same ic relationships between pitches as in the *Piano Concerto*, and it is usually arranged in an ascending pattern. It is presented in both linear and vertical dimensions, but with different functions. In the linear dimension, this theme is often repeated, and the melodic contour varies according to the registral placement of its pcs (Example 6-2a). Sometimes it is presented as an ostinato figure with a consistently repeated ascending contour and a recurring rhythmic pattern. This theme can also be combined with ics 1 and 6 to form a longer melodic line (Example 6-2b). The melodic expression of this theme is usually treated as a foreground event, but at other times it functions as a countermelody that alternates with the fragment of the Chinese melody.

Example 6-2. Different melodic contours of the *Chen Yi Theme*.

*a.* m. 42. Oboe

![Different melodic contours of the *Chen Yi Theme*.](image)

*b.* mm. 79-83. Cello

![Different melodic contours of the *Chen Yi Theme*.](image)
In the vertical dimension, the notes of this theme are often stacked as a sustained simultaneity; sometimes its linear presentations are compressed into a short time span, and repeated and superimposed to form an aleatoric texture (Example 6-3). The vertical expression of this theme is always treated as a harmonic background.

Example 6-3. Vertical construction of the *Chen Yi Theme*.

m.117. Strings

m.207. Bass strings

The twelve-tone row (See Figure 4-5a) is used principally in its original transposition and often treated as an ostinato figure, in which all the notes are assigned equal durations. Its presentations with different performance techniques produce an array of timbral effects. On the one hand, the succession of its complete form or the repetition of varying incomplete segments, appearing in different parts in distinct rhythmic patterns, forms a contrapuntal texture. On the other hand, the requirement for individual performers’ own choices of tempo results in an unsynchronous presentation not only between different instrumental parts, but also within a single instrumental part, forming an aleatoric texture. Both these treatments occur in the background, but at times segments of the row may combine with other materials and advance to the surface of the texture (Example 6-4).
In Example 6-4, the brass section beginning in measure 52 is the combination of three pitch constructions: the pitches (B F D♭ D F♯), played by trumpet 1, are a segment of the twelve-tone row; the number of notes (five) and the ascending motion are from the *Chen Yi Theme*; and this ascending motion is thickened by six parallel parts, in which their vertical relationship introduces another pitch structural element—clusters.

These clusters are made up of ic-1 related pcs, usually within the range of a tritone. The cardinality of these clusters may vary from two to seven, with either a unified attack or a staggered entrance (Example 6-5). These clusters provide the basis of the harmony and are always treated as a textural component of the background.
The use of interval classes 1 and 6 in all the pitch material is a key unifying element. Ics 1 or 6 may also be used independently to connect different materials, or to extend the length of a phrase that is built from a single type of construction. As partially shown in Example 6-2b, for example, ics 1 and 6 are usually treated as grace notes, but they sometimes appear as principal notes inserted between three appearances of the *Chen Yi Theme* to extend this phrase to a length of thirteen measures. In addition, ics 1 and 6 are sometimes treated as transpositional intervals in an imitative texture (Example 6-6).

Example 6-6. Ics 1 and 6 in imitative texture (mm. 28-39).

**Formal Structure and Process**

The form of this symphony is built up as a single large shape, which can be divided into four phases according to different orchestral designs. The first phase
(measures 1-61) produces a heavy background by emphasizing the dark sonority of the low range first, and then presents an intense sound effect created by the highest range of the brass. The second (measures 61-134) builds tension through a series of instrumental solos; and the third (measures 135-231) is a lengthy process in which the whole orchestra builds to a big climax through the accumulation of different textural strata. The last (measures 231-285) releases the tension created by the preceding phases by a progressively simplified texture that extends to the end of the piece (Figure 6-1).

Since all pitch materials are constructed in segments and used throughout the entire piece, the contrast between different pitch constructions loses its dominant role as a delineator of formal divisions. Instead, recurring rhythmic groupings and contrasting textures—procedures that developed gradually in Chen Yi’s earlier works—become the principal determinants of form.

The length of each phase is entirely or partially controlled by the number of repetitions of rhythmic groups plus the variable intervals of rest between these repetitions. The only exception is the second phase, in which the length is defined by the movement of a single melodic line. The rhythmic groups can be formed by either a
pitch construction or a non-pitched percussion ensemble. As described above, the *Chen Yi Theme* and the twelve-tone row are often treated as ostinato figures; the complete statement of each figure, in which all notes are of equal duration or sometimes separated by rests with the same value, forms a rhythmic group. The number of repetitions of these groups and the rests between adjacent statements determine the length of the phase. Above the material that establishes this basic length, other materials are added to form different textual strata. In the first phase from measure 12 to 32, for example, there are nine statements of the twelve-tone row played by the double bass; all the notes of the row are presented in quarter-note values grouped as quintuplets. Over this ostinato figure, other strata are superimposed one by one at different times. The length of an added stratum, in which the same twelve-tone row played by the tuba enters one measure later (from measure 13), is defined by a formula: a quarter rest is multiplied systematically (1, 2, 3, 4…) to produce longer and longer time intervals between the repetitions of the row (Example 6-7).

Example 6-7. Systematic multiplication of rests between row statements.
The third phase contains three different rhythmic groupings: the Chen Yi Theme, segments of the twelve-tone row, and a percussion ensemble, each of which is repeated an odd number of times. The succession of these three rhythmic groupings in measures 137-203 defines the length of the big orchestral crescendo. The initial part (measures 137-155) is established through nine appearances of the Chen Yi Theme, played by the vibraphone in a fixed rhythmic pattern—each of the eighth-note pitches is followed by two eighth rests except the last time, in which each note is followed by five eighth rests. The other high pitched-percussion instruments fill in the silences of the vibraphone line.

In the succeeding part (measures 155-165), a segment (starting from notes 1 - 7) of the twelve-tone row (played by the English horn first, then imitated by the other five woodwinds) repeats ten times followed by a series of aleatoric repetitions. The segments are separated by a sixteenth rest, and the succeeding notes of the row are added progressively from the fourth statement (1 2 3 4 5 6 7, 1 2 3 4 5 6 7 8, 1 2 3 4 5 6 7 8 9, etc.—Example 6-8).

Example 6-8. Repetition and imitation of row segments (mm. 156-159).
The last part (measures 160-194) is built up by a recurring rhythmic pattern in the percussion, in which a hocket-like rhythm is produced by the rapid alternation between two pairs of Chinese cymbals, with the wood block added at the beginning and the bass drum at the end. This rhythmic pattern, in three quarter-note beats, is repeated thirteen times with the time intervals between repetitions decreasing progressively by two quarter rests (Figure 6-2).

\[
\begin{array}{|l|}
\hline
|3| & 7 & |3| & 7 & |3| & 7 & |3| & 5 & |3| & 3 & |3| & 3 & |3| & 1 & |3| & 1 & |3| & 0 & 0 & \ldots
\end{array}
\]

The numbers within the lines (| |) indicate the fixed rhythmic pattern and the numbers without | | indicate the number of quarter rests.

Figure 6-2. Numerical pattern played by the percussion, mm. 173-194.

This rhythmic pattern is then broken down to fragments and transformed into a new rhythmic pattern (\(\text{\textbackslashsmall\textstyle\textbackslashtextbackslash}\)), which is also repeated with progressively shorter intervening rests—four appearances separated by three eighth rests, then another four separated by one eighth rest, and finally eight appearances without rests.

The fourth phase is made up of two rhythmic groupings: a percussion ensemble and a recurring ostinato figure based on the Chen Yi Theme. The percussion ensemble begins with a triplet roll on the bass drum, overlapped at its final strike by two quick Chinese-cymbal strikes, and concludes with a sustained sound played by the tubular chime. Starting at the end-point of the main climax in measure 231, this rhythmic pattern is repeated nine times with a decrease not only in dynamics and in the number of beats for the last sustained sound, but also in the number of instruments. From the seventh appearance, only the tubular chime remains, playing the sustained note; the duration of
this note is reduced from nine beats, to eight beats, then five beats, and at last four beats. Overlapping the last appearance of the percussion ensemble, the recurring ostinato figure of the Chen Yi Theme enters, following the same procedure as at the beginning of the third phase—these nine appearances are played here by the glockenspiel instead of the vibraphone, with a slight change in instrumentation in the other parts.

While recurring rhythmic groups define the lengths of phases, the textural arrangement, associated with timbral contrasts, delineates the internal formal structure of these phases. Figure 6-3 demonstrates the large-scale textural design of the entire piece. Each of the four phases is conceived as a specific texture: Phase I concentrates registral distribution and spacing of material, foreground timbral contrast and strengthening of tone quality;\(^6\) Phase II features expansion of the range of a single melodic line created by three solo timbres; Phase III emphases addition or subtraction of strata and differentiation of combined timbres; and Phase IV marks foreground timbral contrast among percussion instruments accompanied by a thin and light background.

Figure 6-4 illustrates the registral distribution of material in the first phase. The background, which consists of repetitions of the twelve-tone row, occupies the lowest register (from E\(^1\)) initially, gradually expands its range (around C\(^4\)) as more instruments enter, and then occupies the highest register (from E\(^6\)). The middle register is used only for the foreground melodic statement, which is presented in three different timbres—woodwinds, percussion alternating with woodwinds, and brass, respectively. These

\(^6\) According to Samuel Adler, “Unison doubling or blending of the same instrument gives a peculiar weight to the tone, but because two, three, or four like instruments cannot always play in tune with each other, many of the upper overtones cut to give a ‘flatness’ to the strength of the pitches.” (Adler, p. 478) Many composers consciously seek this effect; so does Chen Yi.
### Phase 1

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Foreground-background registral distribution refers to different treatments of material, while strata refer to equal treatment in texture.

Figure 6-3. Textural design of *Symphony No. 2.*
three melodic statements present different pitch constructions in different textures. The fragment of a Chinese melody played by the woodwinds is in imitative texture; it is interrupted by the row segments played alternately by percussion instruments and flutes. This is followed by successive statements of the *Chen Yi Theme*, which is played in parallel motion by the brass, forming a bold and rather muddy melodic band instead of a thin and clear melodic line. The tone quality of the melodic material is gradually strengthened, first through emphasis on the succession of solo woodwinds, then by doubling in the percussion instruments and tripling in the flutes, and finally through the
parallel motion of seven brass instruments. This, together with the gradually expanded range and increasing dynamic level, creates an orchestral crescendo, which forms an incomplete shape, terminating the first phase at the point of climax and leaving room for subsequent musical development.

Figure 6-5 illustrates the melodic contour and fluctuating amplitude through the arrangement of pitch, duration, and registral distribution in the second phase. The melodic line is made up of three solo instrumental statements punctuated by orchestral tutti. The first solo statement, played by the flute in its low register, is arranged between C⁴ and C⁷ and extends from measure 61 to 73. The fluctuating movement is small and slow because the range is limited within about one octave, the length of the melody extends only thirteen measures, and the durations of the zenith and nadir notes are relatively long and more stable.

The second solo statement, played by the cello from measure 78 to 93, starts in the low register, where the nadir D♭¹ is emphasized by longer duration. Then, ascending by disjunct motion through the middle register, the melody reaches its zenith C⁵. In this statement, the range is expanded principally downward to four octaves, the length is extended to sixteen measures, and the fluctuating movement of the melodic line is amplified correspondingly.

The third statement from measure 98 to 134 involves three solo instruments. Starting with the cello, the range is expanded upwards from D♭¹ to F♯⁵, and the melodic line rises quickly in disjunct motion. When the cello reaches its zenith F♯⁵, supported by an orchestral tutti, the clarinet takes over the melody on its zenith A♭⁶, which is treated as a turning point in the melodic contour. After this point, the melody gradually returns
one horizontal square = 2.5 measures
one vertical square = two semitones

Figure 6-5. Melodic contour in the second phase of Symphony No. 2.
to the nadir $D^{b_1}$ through a subtle instrumental dovetail at $D^3$, which is the lowest note the clarinet can play; at this point the line is taken over by the bass clarinet. The use of three different solo instruments results in a further expansion of the range (over six octaves), and along with the extension of the length (thirty-seven measures), the melodic contour forms a large, complete shape through the dimensions of space and time.

The formal structure of the third phase undergoes a more complicated and lengthier process to build up a climax. This process consists of introduction, presentation, varied continuation, and withdrawal of the core element—the percussion ensemble described above. Tension is generated in the course of this sequence by changes in three aspects of texture: (1) from coloring and differentiating individual timbres to strengthening tone quality of timbral combinations; (2) from emphasizing a single register in order to highlight a specific timbre to balancing six strata in their own proper registers; (3) from stressing loose or free rhythm to reinforcing regularly recurring rhythmic accents, and then to contracting the temporal space between rhythmic groups.

The core element—the percussion ensemble—is prepared by a passage (measures 135-166) that presents other timbres (high-pitched metal instruments, bass strings, and woodwinds) and features free rhythm, in which rests or tied-over notes placed on the downbeat obscure the rhythmic pulses. In turn, it is foreshadowed by a similar timbre—the wood block—in measures 166-172.

While this ensemble begins to repeat its fixed rhythmic pattern at measure 173, the other three strata gradually join in. First, the alternation of two strata—the horns against the combination of a muted trumpet and the oboe—is inserted in the temporal
space of occurrences of the percussion ensemble; second, a combination of bass instruments from three instrumental choirs (bass clarinet, bassoon, contrabassoon, trombone 3, tuba, cello and double bass) enters when the horns reach their high register, where the oboes double them at an octave above in order to support and strengthen the tone quality. As the repetitions of the percussion ensemble further reduce its temporal space at measure 187, all high woodwinds and brass merge into a single stratum to present the Chen Yi Theme in dense, parallel motion, against the fragment of a Chinese melody played by all the bass instruments. Finally, beginning with measure 196, where the rhythmic pattern of the percussion ensemble dissolves into triplets played alternately by two pairs of Chinese cymbals, the high strings merge with the high woodwinds, creating a new textural background. Two strata remain as the foreground: the horns and the combination of the trumpets and trombones alternate, and even compete with one another, producing the intense sound from their highest register toward the principal climax of this piece.

Measures 207-231 are treated as a supplement to the climax, in which there is further textural intensification that builds to six separate strata. Example 6-9 is an excerpt from the beginning of this passage that illustrates how each stratum is formed, and how these strata are used to intensify the climax. As shown in the example from bottom to top: Stratum I is formed by the bass strings, creating a textural background in the low register with the Chen Yi Theme placed horizontally and vertically; Stratum II uses the other strings, rising gradually in parallel stepwise motion in different rhythmic ratios and occupying the middle and high registers (also treated as a background); Stratum III is a segment of the twelve-tone row played by the bass woodwinds and bass
Example 6-9. Textural climax in Symphony No. 2.
brass, which is the textural foreground; Stratum IV is a sustained cluster played by the high brass in conjunction with the percussion section, which is in the middle register and treated as a pedal point that blends together all other timbres; Stratum V is an aleatoric texture based on the twelve-tone row played by some of the woodwinds; and Stratum VI is an excerpt borrowed from the *Woodwind Quintet* played by the rest of the woodwinds—Flute 1, Oboe 1 and Clarinet 1. The melodic lines of Stratum VI are interlaced with those of Stratum V within the same range, forming a sonic web that covers the middle and high registers. The instruments of each of these strata are placed in their most effective register and present their own materials, producing a chaotic sound effect to intensify the climax.

These six strata gradually merge into three, in which the melody is played alternately between two strata. The bass woodwinds and bass brass against the high brass present the foreground material, while the other stratum—glissandi in the high woodwinds (middle and high registers), along with the strings (low and middle registers), forms a background. This intensified climactic supplement ends with a crescendo of the orchestral tutti, underpinned by bass drum strikes in a precisely notated ritardando.

The textural design is conceived homophonically: the melody always stands out as the foreground with the accompaniment as a background. The contrapuntal texture is used principally at a local level within a specific instrumental choir, in which several individual lines produce a dense web in a limited range. On a large scale, this kind of texture becomes a continuously moving background. The tutti passage and the complex contrapuntal texture are used only at the pinnacle of the climax.
Scoring Principles and Specific Devices

In this piece, the formal structure is delineated principally through the textural arrangement and instrumental groupings that are relatively conventional in Chen Yi’s orchestration. However, colorful and effective orchestral sound effects, which present a more advanced orchestrational challenge, are perhaps the most distinctive aspect of Chen Yi’s personal style. She achieves striking effects in her Symphony No. 2 in three ways: by blending the timbres within and among the traditional families of Western instruments; by exploiting the timbral possibilities of individual instruments or combinations of solo instruments in order to display specific timbres or imitate traditional Chinese instruments; and by using scoring devices like staggered entrances to introduce new timbres or to highlight certain timbres.

The timbres in this piece are created from four traditional instrumental families or sections: strings, woodwinds, brass, and percussion, each of which has a specific sonic personality. Since the texture is homophonically conceived, each instrumental grouping has different timbral functions. The woodwinds are used as a timbral group to present melodies at the foreground of the texture; specifically, an imitative texture is designed to display a combination of their distinct timbres. Sometimes a unison doubling is used for the same instrument (e.g., three flutes) to strengthen a pure tone quality, while octave doublings are used among different instruments in their more effective ranges (e.g., $A^6$ for a flute, $A^5$ for an oboe and $A^4$ for an English horn) to emphasize a combined sound effect. The entire woodwind family is also used to create a background, in which the tremolos on pitches related by ics 1 and 6, or segments of
the twelve-tone row played by upper individual instruments are ramified in the same high or mid-range. This treatment creates a buoyant, continuous sound that functions as a thin and rather transparent background. This kind of background is usually associated with strings in the same range, because the heterogeneous timbres of the woodwinds need to be supported by and blended with the rich overtones produced by the strings to provide timbral cohesion. In measures 51-61 and 135-187, for example, the upper woodwinds plus the upper strings spread out across their mid- and high ranges, set apart from the brass or percussion instruments that present foreground material.

When melodic material appears in the brass instruments, it is scored in their highest register to create an effect of great tension. The brass family is often subdivided into two groups: on the one hand, the horns, trumpets and trombones 1 and 2; on the other, trombone 3 and the tuba, which are often combined with the other bass instruments, such as the bassoon, contrabassoon, cello and double bass. These two balanced timbral groups usually state the melody alternately as a foreground event, especially in the course of creating the climax. The melodic presentation of the entire brass family, either as a whole or split into two groups, functions as a foreground; simultaneities appear only in short tutti passages that function as punctuation between divisions in the form.

The percussion family is subdivided into three timbral groups: the first combines pitched and high non-pitched metal instruments; the second consists of a combination of membranous instruments (drums) plus medium and low non-pitched metal instruments; finally, the wood blocks with their incisive, penetrating and dry sound quality stand alone as a timbral group. This family plays an equal role in the
orchestra with the other three families: it not only states the melody and sets up the
lengths of passages by repetitions of fixed rhythmic patterns, it also plays a leading
role in the orchestra—an idea derived from Beijing opera\(^7\), in which a rhythmic
pattern \(\text{\textcircled{}}\) and its extended versions played by the wood blocks signal the entrances
of orchestral tutti. In measure 73, for example, the rhythmic pattern \(\text{\textcircled{}}\) introduces
a simultaneity played by the whole orchestra. In measures 166-171, this rhythmic
pattern is extended as \(\text{\textcircled{}}\) in order to introduce a percussion ensemble. At
the silence after the peak of the climax in measure 206, this rhythmic pattern \(\text{\textcircled{}}\) breaks the silence to introduce the most complicated and piercing orchestral sonority
of the piece.

The string family is usually used as a whole, in which the pitch materials, the
twelve-tone row and the *Chen Yi Theme* that fall within a limited range (usually within
an octave), are played without synchronization between parts, providing a dense
background for the principal melodic and rhythmic presentations. The distribution of
registers does not affect the balance and dynamics of the sound since all members of
this family possess a homogenous tone quality throughout their entire range. The
specific registral distribution, however, is closely related to the sound effect of the
foreground. For example, in measures 28-42, the strings play in their mid- and low
ranges and at a relatively softer dynamic level when the individual timbres of the
woodwinds in an imitative texture are treated as the foreground. In measures 246-274,

\(^7\) In the simple accompanying ensemble of Beijing opera, the conductor plays a small wooden drum—
*Dan Pi*, which is shaped as a thick and round plate mounted on a stand and struck by two wooden sticks;
it sounds similar to the wood blocks. The rhythmic pattern \(\text{\textcircled{}}\) is usually a signal indicating the entrance
of the music.
they play artificial harmonic glissandi that produce a very thin background in order to project the light and bright sound of high-pitched metal percussion instruments. In measures 207-209, they spread out across their whole range when the brass states the melody. Occasionally, the bass strings are treated as the foreground (measures 144-159), emphasizing their intense sound in their high range.

While most melodic statements, usually successions of segments, are presented through blended and combined timbres, long melodic lines stated in individual timbres make a sharp contrast. Two considerations govern the timbral choices. The first is the imitation of Chinese instruments, which is accomplished by Western traditional instruments playing in unusual registers and using extended performance techniques. For example, the flute in its low register with wide vibration imitates the sound of the Chinese bamboo flute (zhu di); the oboe in its low register imitates the Chinese guan zi, and with grace notes it imitates the human chanting voice; the timbre produced by combining a muted trumpet with an oboe imitates the sound of the Chinese suona. The harp’s downward arpeggio with a pedal glissando and the vibraphone’s grace notes imitate the Chinese zheng. The second consideration of timbral choice is to display the most expressive timbres of individual instruments. The solo cello, for example, uses principally its rich, sonorous low register and its lyrical, intense high register. The solo clarinet dovetailed by the bass clarinet as a whole presents all its timbral qualities: a shrill, piercing sound in the high register, a bright, incisive and expressive timbre in the middle (“clarino”) register, and a deep and rich tone in the low register.

Some solo non-pitched Chinese percussion instruments are introduced directly into the orchestra; these include two pairs of Chinese cymbals, the woodblock or
temple block (which has been used in the Western orchestra for a long time), and a small Beijing opera gong, which is used at the very end of this piece with repeated decrescendo strokes to convey a tragic emotion.

Some specific scoring devices are designed for the introduction, withdrawal and highlighting of certain timbral combinations; they may also create distinctive sound effects based on the spacing of dissonant simultaneities and pedal tones.

The introduction of a new timbre is prepared in three ways. First, a new non-pitched percussion timbre may be foreshadowed by a similar timbre. In measures 166-173, for example, the wood blocks foreshadow the percussion ensemble. Second, a new solo timbre may be prepared by hiding its initial attack within the final attack of a tutti, so that its own timbre emerges when the tutti sound fades away. In measure 61, 78, and 117, the entrances of solo flute, cello, and clarinet are all introduced in this way. The third procedure entails holding a new timbre in reserve by emphasizing some other timbral combination until it appears. In measures 49-51, the timbres of the woodwinds and strings are emphasized as they move into a high register (and as the middle register drops out), which prepares for the entrance of the brass.

The disappearance of a timbre is effected by increasing the temporal space between the notes played by those instruments while simultaneously emphasizing a different timbre. For example, the last statement of the Chen Yi Theme is played by the vibraphone from measures 152-155, in which the time intervals between adjacent notes are progressively increased from two eighth rests to five, so that the scattered notes of this timbre are gradually submerged in the highlighted timbre from the high register of the strings.
In order to generate an effect of after-sound, or artificial resonance, certain timbres are highlighted through staggered attacks. For instance, in measures 61 and 78 the attack of the vibraphone and a small bongo is a thirty-second note later than the final tutti attack, exposing the bright and penetrating timbre of these instruments as well as adding a colorful after-sound at the end of the tutti. The staggered entrance of simultaneities highlights each individual timbre that might not be apparent in a unified attack (see Example 6-5b). Two rhythmic patterns of the percussion ensemble are also designed to make each distinct timbre audible (Example 6-10).

Example 6-10. Two rhythmic patterns in the percussion ensemble.

In vertical sonorities, which are based on the *Chen Yi Theme* or the cluster and characterized by a dissonant effect of stacked ics 1 and 6, the pitches are assigned to the instruments that possess homogeneous timbres in their most typical registers, and spaced according to overtone principles—loose and wide in the lower register but dense and close in the high register. Example 6-11 illustrates the spacing of several simultaneities in different timbral groupings.
Example 6-11a is scored for strings in measures 81 - 83: here, since three low instruments (double bass, cello and viola) play harmonics that sound two octaves above the written notes, the actual low pitches are two pairs of tritone—D⁵ (double bass) to G⁵ (violin) and G⁷⁵ to C#⁶, which are widely spaced at the bottom although these two tritones are connected by a semitone (G⁵ and G⁷⁵). The remainder of this simultaneity is

Example 6-11. Spacing of simultaneities in different timbral groupings.
made up by a series of closely spaced semitones—C₆⁴ and D₆⁶, E₆⁵ and E₆ (harmonics played by the cello and viola), F₆⁶ and G₆⁶, A₆ and B₆⁶. The entire sonority is a high registral clash that combines with harmonics and actual notated pitches from this homogeneous timbral family.

Example 6-11b shows a simultaneity produced by the brass, which is also a homogenous timbral family. After the loud triplet attack of the upper brass, all instruments execute very soft fluttontonguing, creating a subito piano. The note E² played by the tuba and trombone 3 is doubled by the trombones 1 and 2 on E³ and E⁴, forming a bass foundation that spreads out two octaves in the low register. Above this fundamental, seven upper brass are arranged between G⁴ and E⁵: a clash is created by A⁴ and B⁴, and each of these pitches is played by a combination of one horn and one trumpet; another clash occurs between G⁴ and A⁴ played by the remaining two horns; and E⁵ at the top of this sonority, played by the trumpet 1, is the eighth overtone of the fundamental E². The entire sonority is cohesive: the resonance of the widely spaced bass with the top overtone is balanced against the dissonance of the closely spaced clash in the middle.

Example 6-11c demonstrates a timbral combination of a simultaneity. The fundamentals comprise F¹ from the low woodwinds and E² from the low brass; both of these fundamentals are doubled by instruments in the same timbral families. The potentially muddy effect created by these clashing fundamentals is therefore subtly avoided by distributing them in different timbral families.

The entire orchestral sonority, which may change either by an abrupt contrast or by a smooth dovetail, is always supported by sustained pedal tones, which serve to blend all the different sounds. The pedal tones can be placed in any register and may be
played by either a single instrument or a group of instruments, pitched or non-pitched. Registral distribution and density of the pedal tone depend on the texture, on dynamics, and on considerations of balance between the melodic foreground and the background. In measures 207-210, for instance, the brass choir (except the bass instruments) plays a sustained semitone-stacked simultaneity in the middle register with a soft dynamic. This sustained simultaneity, associated with the strings, fills the space that is left vacant by the woodwinds, which are played in the high register, and the combination of the bass woodwinds and brass in the low register, thereby blending the entire sonority and balancing the dense texture. Another example occurs in measures 95-111, where a non-pitched, sustained, rolling sound produced by the bass drum takes over the pitched, sustained simultaneity produced by the woodwinds and muted brass, supporting a melodic line played by the solo cello in its high register. This thin texture is gradually thickened by adding other non-pitched percussion instruments as the melody develops.

In this piece, the textural organization and timbral differentiation, along with numerically controlled rhythmic patterns, become the determinants of form. Individual pitch constructions, made up of ics 1 and 6 as in Chen Yi’s earlier works, have no structural importance apart from their textural and timbral context. The sonority of the orchestra is fully exploited, and the complicated, contrapuntal tutti texture is used only at the climax, while other mixed timbres are always emphasized as the textural foreground. The contrasts among the different mixed timbres and between mixed timbres and the solo timbres enrich the color of the orchestral sonority. Since the foreground timbres are often presented by groups of instruments, the background is made up of assorted and reticulated textures that balance the foreground sonority.
Momentum was commissioned by the Peabody Conservatory of Music, The Johns Hopkins University, in 1997 and premiered by the Peabody Symphony Orchestra at Lincoln Center’s Alice Tully Hall on May 2, 1998. According to Chen Yi, this composition was inspired by “the power of the ancient totems, the tension of the breathing lava, and the gesture of the exaggerated dancing lines in Chinese calligraphy.” From these natural objects and phenomena as well as artistic aesthetics, Chen Yi was concerned deeply about a controlled momentum, in which the interactive movement and energy, and the modulation of line and texture create a continuum of motion and tension in a spatial equilibrium. She strived to translate this kind of momentum into music through a controlled flow of sound within an organized texture.

Transformation of Pitch-Class Sets

In this piece, transformations and interconnections of several small pc sets comprise the pitch content of sound strands. These pc sets include 1) a motivic-type three-note set, 2) an ascending contiguous chromatic segment that may vary in cardinality, 3) a descending six-note set, and 4) simultaneous with different number of notes. In addition, two melodic passages, which are taken from Ge Xu (Antiphony) and written in the style of Chinese regional theatric music, appear occasionally as textural

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8 Chen Yi, program notes of Momentum, 1998.
9 Ibid.
components. Each of these pitch materials and their variants is associated with special instrumental combinations, rhythmic feature, and textural formations, and each of them functions differently in the development of the music.

The motivic-type three-note set $B^5-C^5-F^#5$, labeled $x$, is constructed by ics 1 and 6 with ordered pitch intervals $\{1-11 + 6\}$. The duration of these three notes may vary in the piece, but the set is identical by the construction of its contour. Its several variants are constructed by inverting the original contour, reordering the notes, adding more pitches, and changing the intervallic relationship while keeping the recognizable contour. The functions of this set are defined by the manners of performance and the design of timbre. Example 6-12a demonstrates the original set and its variants played by the solo piccolo. This pure timbre is usually treated as a foreground event, signaling the beginning or the end of a formal section. The initial presentation of this set is shown in measures 1-3, the entire five notes included the display of the original set plus two additional notes, which are the members of this set but in a reversed order with different contour ($F^#)-B-C \{+5+1\}$. Measure 10 is the transposition of this set at $T_2$, while in measures 13 and 14 the durations of the pcs in this set are extended in different length. The set is inverted in measures 116-118, becoming $\{+11-6\}$ and adding more pcs with a similar contour with an emphasis on ics 1 and 6. Three occurrences of this set in measures 148-152 are inlaid in a longer melodic line.

Example 6-12b illustrates the linear presentation of this set in an imitative texture played by two oboes. Presented twice with varied rhythmic distributions for each oboe in measure 138, this set is placed a semitone apart in different transpositions. Measure 139 is the voice-exchange of measure 138. In this manner, a single display of the set becomes
a component of a well-knitted texture. Although presenting in a homogenous timbre produced by oboes in the same register, the web-like melodic and rhythmic presentations make the texture more active. The similar imitation also occurs among three voices—two oboes and a flute. This imitative texture functions as a sound strand, presenting independently as foreground event or as a layer in the texture.

Example 6-12c shows the melodic extension of this set played by a group of instruments in unison and octave doubling. In measures 33-41, the melody starts with this three-note set, extends by adding ic 6, and then combines with another pitch materials (γ). This melodic line is played by the violin II with the viola doubled at pitch and the violin I doubled one octave above. In addition, the same melody is also doubled by woodwind instruments: two clarinets double the violin II at pitch, two flutes double the violin I at pitch, and the piccolo doubles one octave above the violin I. This extended melodic line with its mixed timbre is placed at a climactic area to strengthen the sonority in the middle and high register. In measures 109-112, this set combines an additional ic 1 to form another motivic-type set, which states twice to form a melody. This four-note variant can also be viewed as an interlocking of two statements of the three-note set. The first three notes are the transposition of the set at $T_8$ with the original contour, while the last three notes are the inverted retrograde of this set at $R_{11}$. This melody is placed toward the climax and played by four horns in their most effective range, forming a sound strand to fill the sonic space in the middle register.

Example 6-12d is a seven-note ostinato pattern derived from the three-note set and played mainly by the bass strings. The construction of this pattern is to add ics 2 and 6 after the statement of the original three-note set. This pattern is also extended through adding extra notes. Presented in even eighth-note triplets, the recurrences of this seven-note pattern and its extension are grouped with seven, eight, nine and thirteen notes in succession. An eighth rest separates these groupings. The continuing repetition of this ostinato pattern forms a textural stratum that is reinforced by the
doubling of bass woodwinds and the tuba. The varied number of groupings and extension of the seven-note pattern result in that the pattern can start at any point in a measure. The purpose of this arrangement is two-fold: to keep a unity in pitch construction and to avoid a possible monotonousness produced by the pitch construction.

Example 6-12e illustrates the employment of this set for a percussion instrument, the timpani. Measure 20 includes all three pcs (E F B) in a re-ordered form, in which the last three notes are the retrograde of the original and the first three notes are its inverted contour. Measure 29 shows a five-note variant that is symmetrically placed with the central note shared by two statements of the three-note set. This variant appears in the piece at important formal positions, such as the beginning or the end of a phase or the entrance of a new sound strand. Measures 210-211 present a seven-note variant, which is the extension of the five-note variant with an additional note placed at the center. This variant is used only once, but is placed at a crucial position, the end of the piece.

Example 6-12f illustrates two variants that alter the intervallic relationship between the notes in the set. In measure 180, the set played by the bass strings and woodwinds is treated as a part of a long melodic line. Its original contour remains, but subtracts the ordered pitch interval from {-11} to {-10}. The same intervallic change also occurs in measures 114-115 played by the violins. In this case, the set is inlaid in the linear statement. These variants are scattered throughout the piece, alternating with the original set to avoid static sonority and to keep affinity to the original set as well.
The ascending contiguous chromatic segment, labeled \( y \), is commonly presented as a group of six sixteenth notes, in which three two-note sub-groupings in an ic 2 are arranged in a chromatic ascending motion (Example 6-13a). The addition of two-note subgroups extends the length of this set, and the extended set, played by the woodwind ensemble, forms a passage that usually appears in a crescendo. The solo expression of this set, played by one of woodwinds or the trumpet, is usually used to fill the space left by sustained notes in other part as well as to create a forward motion or reinforce the tendency of crescendo.

Example 6-13b shows one of the variants, which reverses the order of two ascending adjacent notes and changes ic 2 into ic 1, as \( A^b \), \( A \), \( G^# \), \( B^b \), \( A \), and \( B \) instead of the original construction \( G \), \( A^b \), \( G^# \), \( A^# \), \( A \), and \( B\) . In this case, the extension of the segment appears in a decrescendo. In addition, the notes of this six-note set may vary in duration in a linear expression, as seen in Example 6-13c. In this case, it may combine with other pitch materials to form a longer melodic line.

The descending six-note set, labeled z, is constructed by a fixed order of notes within a framework of a tritone. The six notes of this set can be grouped into three pairs, which are featured by ics 1, 5, and 2, respectively. A tritone is often added and repeated after this set to extend its linear expression. This set is usually played by woodwind instruments in an imitative texture (Example 6-14a) or in ensemble unison (Example 6-14b) to form a textural layer. It is also combined with other pitch materials to form a longer melody, as seen in Example 6-14c.


The simultaneities are constructed mainly in two ways: closely packed together with only a semitone between parts and stacked with interval classes 1 and 6. The
former is displayed by a group of instruments, usually the combination of eleven or twelve woodwind and brass instruments in varied sustained forms, while the latter is always played by the harp, emphasizing only the attack. Example 6-15 demonstrates several typical instrumental combinations.

Example 6-15a and b illustrate two instrumental combinations used as simultaneities: one is the combination of bass woodwinds with horns, trombones and tuba, and another one is the ensemble of the entire brass section. Example 6-15a presents a twelve-note cluster that packed within an octave from A\(^{3}\) to A\(^{b4}\). This simultaneity is dominated by the timbre of the brass since the pitches (B\(^{b3}\) C\(^{4}\) D\(^{b4}\) D\(^{4}\)) played by the woodwinds are enclosed within the pitches played by the horns (above) and trombones (below). The timbre of the woodwinds is therefore blended into those of the brass. Example 6-15b shows a common instrumental arrangement for the brass ensemble, in which the trumpets are placed on the top, the horns in the middle, and the trombones and the tuba at the bottom. Both simultaneities present a typical sound effect through the manner of performance—an accented attack in f followed immediately by a sudden p and through a crescendo back to f in a short time span. Example 6-15c presents the simultaneity played by the harp, and two versions of the same pitch construction that is based on ics 1 and 6 are used to emphasize the ending point of a crescendo gesture.

The next two examples demonstrate two sustained simultaneities that are associated with rhythm. Example 6-15d shows a sustained simultaneity in the low register played by the bass woodwind and brass. Packed a semitone apart within an octave from A\(^{1}\) to A\(^{b2}\), this sonority lasts for twenty-two measures. The twelve
Example 6-15. Simultaneities in *Momentum*.
instruments are divided into four groups, each of which is assigned a distinct two-measure rhythmic pattern. The accents at different points within each measure energize this sustained sonority. Example 6-15e presents a simultaneity played by the entire brass instruments, plus the doublings of the high woodwinds, the high Japanese woodblock, and later also the high strings. The sixteenth sextuplets are unevenly distributed into three rhythmic groupings with the number of 10, 7, and 13, respectively. Two or three sixteenth rests separate these groupings. The recurrences of these groupings, mixed timbres, and the loudness of dynamic produce an intensified sound effect, functioning as the core of a climax.

In addition to the transformation and interconnection of the small pc set, two melodic passages are used as components to form sound strands. Example 6-16a illustrates a melodic fragment taken from Ge Xu (Antiphony), which is played by the trombones and the tuba in an imitative texture. The atonal tendency, which is reflected from the formation of ics 1 and 6 in both linear and vertical dimensions, coincides with the style of the small pc sets in this piece.

Example 6-16. Two melodic passages.
Example 6-16b demonstrates a melody written in the style of the Beijing opera and played by the violins. This clearly modal-type melody contrasts greatly against the atonal style of small pc sets. In order to reduce this stylistic incongruity, the technique of “borrowing note” is used to connect melodic fragments. The fragment E F♯ A in measure 158 (labeled i) with the keynote on D, for example, is transposed a half-step higher, becoming F G B♭ with the keynote on E♭. The next fragment (labeled ii) in measure 159 is shifted to another mode with the keynote on E, which is a half step higher than that of the previous fragment. The mode of the fragment (labeled iii) in measure 160 is shifted again, with the keynote on A. At last, the fragment (labeled iv) ends on F♯ pentatonic mode Shang (mode Re) through the borrowed note D♯, which is not the diatonic note in the preceding fragment. The frequent shifts in mode blur the tonality, resulting in the melody sounding closer to the atonal style. This melodic statement is further broken down in tonality by introducing the small pc sets in a contrapuntal texture, as seen in Example 6-17.

Example 6-17. Stylistic fusion of a modal-type melody.

In Example 6-17, the violin I keeps stating the modal-type melody from measure 162 to 165, while the viola plays the pc set x in measure 163. Between these two parts, the violin II plays a melodic segment with the contour similar to the inverted pc set x but
the arrangement of pitches closed to the tonal melody, in which the contour outlines a dominant seventh chord. The vertical combination of modal, tonal, and atonal melodic fragments neutralizes the stylistic contrast, resulting in a relatively unified sonority.

**Textural Process in Creation of Shapes**

The formal structure of *Momentum* is delineated by three large shapes, each of which comprises a complete procedure of increasing and decreasing the textural density and complexity through the arrangement of sound strands. Figure 6-6 shows the formal structure of the entire piece by indicating the measure number of each large and small-division, arrangement of tempos, textural strata, and the main active and counter-active instruments in every formal division. The sizes of these three shapes are basically equal according to the duration of performance in real time, since the tempo varies in different sub-divisions within or between the shapes. The procedure of shape creation is accomplished by three phases—the beginning, the course of crescendo to the climax, and the falling. The crescendo and decrescendo marks at the bottom of the diagram symbolize not only the change in dynamics, but also the changes in textural density, degree of timbral fusion, and strength of the entire orchestral sonority.

The phase of the beginning is divided into initial and continuing parts according to the arrangement of texture. The initial part is identified by the thinnest texture, which is featured by a pure timbre, relatively high register, limited range, loose or free rhythm and slow tempo. The continuing part is presented by a small group of “light” instruments chosen from either woodwind or string section and performed in an
Large divisions

<table>
<thead>
<tr>
<th>Phases</th>
<th>Shape I (mm.1-54)</th>
<th>Shape II (mm.54-148)</th>
<th>Shape III (mm.149-211)</th>
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<tbody>
<tr>
<td>Measures</td>
<td>Beginning</td>
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<td>Falling</td>
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<td>Textural Strata</td>
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<td>A single sound strand</td>
<td>Piccolo</td>
<td>Woodwinds</td>
<td>Strings</td>
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<td>Core active instruments in creation of climax</td>
<td>Low pitched Percussion (bass drum, timpani)</td>
<td>Trb. &amp; Brass Section</td>
<td>Brass high strings &amp; woodwinds percussion</td>
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<tr>
<td>Counter active instruments</td>
<td>High woodwinds &amp; strings</td>
<td>Bass woodwinds and strings</td>
<td>High woodwinds &amp; strings horns</td>
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Figure 6-6. Formal structure of *Momentum.*
imitative texture or a single but thickened line, which is produced by the parallel motion of several instruments. The range is still limited, the timbre starts to be mixed but in the same instrumental group, and the rhythm in the vertical dimension is getting denser due to the introduction of contrapuntal texture.

The course of crescendo to climax is discernable by the entrance of “heavy” instruments, such as either the brass section or the percussion ensemble, or both of them, and with the emphasis of the strong and complex rhythms and the loudest dynamics. This phase is the central part in the creation of a shape, associated with varied instrumental combinations, broadened range, mixed timbre, increased textual density, dynamics and rhythmic complexity, as well as special orchestral devices that sustain the climax area. Three different instrumental combinations—percussion ensemble, brass section, and bass strings with bass woodwinds—are the core active executors that lead to the pinnacle of the three climaxes. Among the climaxes, the one in the second shape is given specific attention to intensify systematically the strength of the orchestral sonority through four stages.

The phase of the falling is recognizable through a rather rapid reduction in textural density and a gradual decrescendo in dynamics. This phase is usually executed by a single instrumental group, such as the strings in the first shape, the high woodwinds associated with the brass and high strings as the background in the second shape, and the percussion section with the strings as the background in the last shape. The instrumental assignment, registral distribution, and transformation of sound strands in the development of textural complexity for these three shapes will be investigated in detail and demonstrated separately with the aid of Figures 6-7 to 6-9.
The importance in texture is distinguished by the thickness of solid or dashed lines as well as the varied shapes of heads.

The following symbols are used:

- - - - = Background  
  = Foreground  
        and    = Middleground

**Figure 6-7.** Instrumentation of Shape I in *Momentum.*
As shown in Figure 6-7, the first shape extends from measure 1 to 54 with the piccolo initiating the shape in a high register between $C^6$ and $A^7$. The only other timbre in this part is the high-pitched percussion instrument—the bongo, which fills the space left by the sustained note of the piccolo. The pure timbre from a single instrument is mingled into a heterogeneous timbral mixture of high woodwinds from measure 12 to 19. Their different articulations, avoidance of regular rhythmic pulse, and intertwined lines in the same range form a sound strand, leading to the next phase. A thin, transparent sound stream produced by the harmonics of the high strings serves as a timbral blender, melting into the sonority of the woodwinds. The roll of the suspended cymbal and the ascending glissando, the best-known effect of the harp, join in measure 17 and 18 respectively to coordinate the crescendo of the woodwinds.

The course of crescendo to climax (measure 19 to 41) can also be divided into two parts; one is a lengthy crescendo toward the climax and the other is the climax area, which maintains the accumulated energy with the most resonant orchestral sonority. The first part starts with two textural strata—the percussion ensemble and the combination of the bass woodwinds and bass brass. A signal-type pattern featured by a group of thirty-second notes is played alternately by the timpani and the bass drum, producing a chasing effect. The other textural stratum is a simultaneity presented in the lowest register from $A^1$ to $A^2$ as background and played by bass woodwinds and bass brass—horns in low register, with trombones and the tuba. This low-register simultaneity (see Example 6-15d) keeps active through the staggered accents on every eighth note and is extended until the end of this phase. The second part (measure 33 to 41) of this phase is led by a short ascending gesture (pc set “y”) played by the high
brass. Three trumpets appear occasionally to add strength to the sound strand produced by the high woodwind and strings, which form a new sound strand in the high register beginning in measure 33 to enrich the sonority and to provide more energy for the climax.

The phase of the falling (measure 42 to 54) begins when the entire orchestra withdraws suddenly in measure 54, leaving a single melodic line played by the ensemble of the strings. This melodic line starts from the high register in the range of B⁶ – C⁷ played by the violin I and is thickened by the doublings in the lower two octaves with the violin II and viola in the range of B⁵ – C⁶ and the cello between B⁴ and C⁵. The register of the melody is gradually dropped, while the range is narrowed since the doublings is decreased into one octave and then at pitch at the end of this phase. In this shape, the most active instruments in the creation of climax are the percussion ensemble and the bass woodwinds and bass brasses; the gravity of the entire orchestral sonority is therefore focused on the lower register.

Figure 6-8 demonstrates the arrangement of instruments and the textural strata for Shape II. The solo violin starts the phase of the beginning with a greatly fluctuated melodic line within the range between G³ and A⁶. A small group of high woodwinds follows the violin solo to present an imitative texture, leading to the next phase. This imitative texture is similar to that of the first shape but with a rather spare rhythmic distribution and played by the oboes and the English horn in the middle register.

The course of crescendo to climax in this shape undergoes a more complicated textural process, which is divided into four stages. The first stage is presented initially by trombones and tuba in an imitative texture in the middle register, supported
Shape II (mm. 54-148)

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Figure 6-8. Instrumentation of Shape II in *Momentum.*
by high strings in the same register. The unison played by oboes and the English horn takes over the trombones to present the melody as the foreground event, which is associated with the recurrences of a fixed pc set in even, triplet divisions played by the double bass in the low register. In this stage, the register is kept in the lower-middle register (below C⁵) and emphasizes a darker instrumental timbre.

The second stage starts from measure 89, when the high register is filled by the high woodwinds. The entire brass section for the first time in this piece play together to present an eleven-tone cluster in the middle register, which is the best range for presenting the resonant and metallic sound of the brass. This closely packed simultaneity forms a “sound wall,” blocking in the middle register. In order to balance the entire orchestral sonority, the bass woodwinds join in the part of the bass strings and double at pitch to reinforce this stratum. The textural strata are increased to four when the brass section is split into two. These four strata are distinguished from each other by register and rhythm. The high woodwinds and the high strings occupy the high register in an evenly divided duple rhythm, while the bass woodwinds and bass strings stay in the low register in even eighth triplets. The trumpets play short, discontinued ascending fragments in their strongest range, while the horns as a counterpart of the trumpets play a longer melodic line in their most resonant range with a composite rhythmic combination including triplets, quintuplet, dotted sixteenths and long sustained notes. The melodic line played by the trumpets is thickened by parallel stepwise motions, which are packed a semitone apart within a relatively narrow range, while the melody played by the horns is constructed by over-octave leaps and doubled at octave, occupying a wider range. At the same time, the tempo gradually accelerates
from $\gg = 80$ to $\gg = 116$. From measure 104, the percussion section changes its role as background to form a new sound strand through its strong, complicated rhythmic ensemble. The orchestral register is in this way fully occupied with five distinguished textural strata, which are clearly identified by their specific register and pure or mixed timbres.

In the third stage (measure 116 to 124), the textural strata are kept on five in total with different timbral groups. The woodwinds are split into two strata and the other three instrumental sections—brass, percussion and strings—are treated as separate timbral groups, each performing a brief pattern of material unique to itself. As illustrated in Example 6-18, each of the woodwind, percussion, and string groups produces a dense web with multiple lines, forming an aleatoric texture. The brass section creates a powerful “sound wall” through a parallel motion with closely packed voices, while the piccolo and flutes sustain at their highest range. This stage reaches the pinnacle of the climax by presenting five sound strands with complicated rhythmic activities.

The last stage is the area of maintaining the climax, which lasts for thirteen measures (measure 124 to 136). Shown in Example 6-19, the textural strata are reduced into two in this stage, and the un-evenly distributed rhythmic groupings (10+7+13) play an important role in this climactic area. One of these two strata is formed by the horns and trumpets and doubled by all the high woodwinds, strings and high-pitched percussion instrument—Japanese wood block, while the remaining instruments form another stratum, which accents on the rests left by rhythmic groupings of the other stratum, functioning as punctuation. The unified rhythmic activity in this stage contrasts greatly with the polyrhythmic textures of the previous stage.
Example 6-18. Five textural strata in Shape II.
Example 6-19. Two textural strata in Shape II.
The rhythmic groupings are suddenly cut off in measure 136, which indicates the beginning of the falling phase. With the withdrawal of the percussion, the brass and string sections execute a sustained simultaneity as the background. The woodwind section in the foreground starts from the extremely high register at $A^{b6}$ and $B^{b7}$ and gradually drops down to the middle register between $B^3$ and $A^4$ with a notated ritardando. During the course of decrescendo, the number of instruments is also gradually reduced from seven at the beginning of this phase to only one at the end.

Similar to Shape I, the beginning phase of Shape III starts its initial part (measure 149 to 157) with a solo piccolo in the high register, but the length of this part is much shorter than its first appearance in Shape I (Figure 6-9). In the continuing part (measure 157 to 175), the clear, lengthy, and modal-type melody is introduced by the violin I and II in the high register, and is soon melted into a polyphonic texture that is made up of atonal materials. The solo cello picks up the modal melody, while the register of the melodic line drops down to the low register, preparing the timbre for the next phase.

The bass strings led by the solo cello form the core active sound strand in the low register in the phase of crescendo to the climax (measure 175 to 194). Along with the entrance of the brass section in the middle register, the bass woodwinds join in the sound strand of bass strings in an effort to balance the sonority against the brass section. The high string and horns form the third sound strand in the middle register from measure 191, while the sustained simultaneities played by the high woodwinds fill the high register as a background. The percussion and the harp help to strengthen the sonority toward the end of this phase. With a rather slow tempo, this phase presents a less dense and less complex texture than that of Shape II.
Figure 6-9. Instrumentation of Shape III in *Momentum*.
The falling phase begins from measure 194 with the withdrawal of the brass and woodwind sections. This phase is executed primarily by the percussion section with the tremolo and trill glissando of the strings as the background. The ending rhythmic gesture in a loud dynamic is also executed by the percussion instruments. Similar to Shape I, the gravity of the entire orchestral sonority is focused on the lower-middle register since the core active instruments are the bass strings and woodwinds.

Control on Tone Quality and Physical Energy of Sound

Since this piece is conceived to translate an impetus gained by a slow and coherent movement into music through the flowing sound, the control of the tone quality and physical energy of sound also becomes one of the orchestrational focuses. The concern with the tone quality is two-fold: gradually transfer the sound color and gradually increase and decrease the tone weight during the movement of sound strands. The principal methods include: (1) connecting instruments that are in a similar tone quality or in the same register; and (2) introducing a new timbre through the procedure of foreshadowing with the new timbre, emerging gradually, and blending into another timbre.

The connection of similar timbres occurs between shapes or different phases within the shapes. The connections between Shape I and II as well as Shape II and III serve as one example. The last timbre in Shape I is the strings, which end in unison at
the register between $G_3$ and $B_{b3}$. The solo violin enters in this register from $A_3$ and raises the register to $A_6$, on which the flute I enters before the withdrawal of the solo violin. Through the flute, a passage of the woodwinds is introduced. Shape II ends with the timbre of the woodwind section in the middle register on $A_4$, and the piccolo takes over the sound strand from $B_{b5}$ to lead to the third shape. The registral space left between these two pitches is filled by the unmeasured tremolo (on $F_{#5}$, $G_5$, $A_{b5}$, $A_5$ and $B_{b5}$) played by the strings at the same register of the piccolo. The timbre of the piccolo is reinforced by the flute at the high register, where the first violins enter with a sustained note before the withdrawal of the high woodwinds.

The second method produces a smooth introduction of a new timbre. For example, the Violin I and II play sustained harmonics on different pitches as a simultaneity from measure 23 to 33. Three occurrences of this simultaneity enter at the ending point of the harp’s upward sweepings to create a pedal effect. The durations of this simultaneity is gradually increased: six beats for the first time, eight beats for the second time, and then thirteen beats for the third time. In this way, the timbre of the strings emerges from those of the percussion and bass brass and leads to a new sound strand smoothly. At the same time, the high woodwinds enter in between the occurrences of strings’ simultaneity with another sustained simultaneity in order to blend the entire sonority, and then join in the strand of the high strings.

Another example, illustrated in Example 6-20, shows the association among three timbral groups, in which the transformation of the tone weight is also carefully considered. From measure 78 to 80, the imitative texture of the woodwinds concludes on $C_4$ with sustained notes, while the strings enter at the same register ($C_{#4}$, $C_4$, $B_3$, and
G\(^3\)) before the withdrawal of the woodwinds. Over the mixed timbre and sustained sonority of these two timbral groups, three trombones and the tuba enter one by one. As a result, the timbre of the trombone is prepared by the mixed timbre of woodwinds and strings in the same range. Since the tone quality of trombones is heavier than those of any single woodwind, the timbral preparation adds more weight, as the combination of two timbral groups. In a similar manner, the introduction of the trumpets is prepared by the trombones and is associated with the combination of bass strings and woodwinds in an effect to gain a balance in tone quality.

Example 6-20. Timbral introduction of trombones.
These methods are also applied to the percussion ensemble when it is treated as an independent sound strand. For example, in the course of crescendo to the climax of Shape II, the strings, except the double bass, play sustained simultaneities to strengthen the tone weight of the woodwinds from measure 83 to 97. The snare drum as a component of this sound strand plays sustained rolls with no distinct rhythmic pattern in the same length as those of the strings. When the textural strata are increased into four, the timpani, bongo, and bass drum execute a complicated rhythmic pattern to form an independent sound strand. In this case, the snare drum with its less weighted sound in the percussion ensemble prepares the more weighted sound produced by the combination of the other percussion instruments.

The control of physical energy in the flowing sound primarily involves three methods: (1) activating the long-durational sustained simultaneity or an aleatoric texture through the arrangement of rhythmic patterns and groupings; (2) emphasizing the linear motion through the expansion of the range for a single melodic line; and (3) intensifying the impetus produced by non-pitched sound strands through the frequent change in dynamics.

Since the instrumental combination and registral distribution are the determinant elements in producing a distinct sound strand, the pitch construction for a special sonority is usually kept unchanged for a rather long duration. In such cases, the rhythmic activity can create a kind of impetus to activate the sustained sonority. Example 6-15d and 6-15e present typical ways to activate the vertical simultaneities. The staggered accents produced by four different rhythmic patterns in Example 6-15d prevent the music from being at a standstill in the low register, while the arrangement
of unevenly distributed numbers for rhythmic groupings in Example 6-15 creates an unpredictable physical energy in the music. In addition, the rhythmic activity plays an important role in the aleatoric texture. When a group of instruments occupies the same register, each instrument is limited to a narrow range and assigned different melodic and rhythmic patterns. In performance, their melodic lines are intertwined with their own unique rhythmic pattern. Any single line cannot be discernable while the entirety is formed as an ever-moving and colorful sound block or sound mass, as seen in Example 6-18.

The expansion of the range in linear motion occurs when a single line with no regular rhythmic activity is the only active element in a texture. Figure 6-10 demonstrates the fluctuation of a melodic contour played by the solo violin in Shape II. The line moves through a wide range with an ascending tendency from the low to high register.

![Figure 6-10. Melodic contour of the solo violin in Shape II.](image-url)
The frequent changes in dynamics mainly occur in the percussion ensemble. The competition between the timpani and bass drum in Shape I serves as a typical example. As shown in Example 6-21, the timpani and the bass drum play a signal-type pattern alternately, the sustained roll of the timpani executes a crescendo while the bass drum plays in a decrescendo. In addition, the relationship between these two parts is constantly changed when the music progresses. The time interval between the performances of the signal-type pattern is broadened when the timpani extends the duration of the last note in the pattern while the bass drum reduces the duration of its last sustained note. The space left by these two instruments is filled by the entrance of other percussion instruments, which are also assigned different dynamics and execute crescendo. In this way, a poly-dynamic texture is formed and the tension is increased greatly.

Example 6-21. Rhythmic pattern played by the timpani and bass drum.
Compared with *Symphony No. 2*, this piece emphasizes the smooth timbral transformation of the sound strands instead of timbral contrast, and several sound strands are usually treated equally in the texture by carefully arranged tone weight instead of the differentiation between the foreground, middleground and background. The rhythmic patterns, the increase and decrease of the textural density and complexity, and the changes in dynamics provide the energy to the flowing sound strands.
CHAPTER SEVEN
CHEN YI’S WORK IN RELATION TO THE DEVELOPMENT OF CONTEMPORARY MUSIC

After coming to the United States in 1986, Chen Yi developed a musical language that reflects her national origin and cultural traditions, and a style intended to appeal to both Western and non-Western audiences. She was strictly trained in the traditions of Chinese music and Western classical music in China, and had already started to integrate elements of both musical cultures into her work before coming to the United States. Beginning with compositional procedures similar to those of her Chinese predecessors, she subsequently incorporated Western post-tonal techniques into her works in a systematic manner.

The foregoing analyses of nine of her compositions expose a process in which Chen Yi focused on four aspects of musical structure: pitch, rhythm and proportion as determinants of form, timbre, and textural process that governs the placement and duration of events in time. These aspects show how she developed a personal style that successfully melded elements of Chinese traditional music with those of Western post-tonal composition during the period 1987 – 1998. The examinations of Chen Yi’s intention in relation to her compositional realization, presented below, will give a more objective evaluation of her work, her position in contemporary music, and the implication of her work in regard to music of the future.
Cross-Cultural Fusion as a Process in Chen Yi’s Composition

Four of the five pieces analyzed in Chapter 3 and 4 were composed when Chen Yi was learning Western post-tonal compositional techniques and experimenting with combinations of Western and Chinese musical characteristics. During this period, she progressed from exercises that centered on melodic structure to more sophisticated attempts that combine some of the fundamental principles of Western and Chinese composition. *Woodwind Quintet* is a compositional exercise written by Chen Yi when she was studying twelve-tone techniques in 1987. On the one hand, she experimented broadly with the treatment of pitch materials, designing a row that avoids any tonal or modal inclinations. She also adopted some devices for pitch manipulation from Western contemporary composers. For example, she arranges twelve-tone row segments vertically, as did Schoenberg, and she presents the row with timbral shifts and modulation, a device typical in Webern. She invents her own ways to manipulate the row, such as adding an appended segment to the row and using paired row presentations, and also uses smaller sets that are related in their construction to row segments in order to expand pitch content. She uses sectional structures and contrapuntal textures resembling the mensuration canon of the Renaissance as a formal means of development. On the other hand, she maintains the linearity of Chinese traditional music by both juxtaposing and superimposing fragments of Chinese melody and the twelve-tone row.

The style of the *Woodwind Quintet* is essentially Western: the pitch constructions are built from interval classes 1 and 6; even the fragments of Chinese
melody used in this piece are permuted to form dissonant sonorities. The form resembles the sectional organization used in many Western compositions, and all the instruments are Western and played according to the Western idiom. Although the musical development and climaxes are carefully conceived, the overall effectiveness of the piece is hampered by somewhat inflexible and repetitious approaches to the treatment of pitch material. Also, devices employed to obscure the regular rhythmic pulse (like the omission of downbeat articulations and phrases or melodic segments that start at unusual times) are so numerous that they impair the perceptual coherence of the music.

Near Distance was written one year after the Woodwind Quintet in 1988, and exhibits tendencies toward stylistic change in three respects. First, Chen Yi advances her exploration of pitch structure by employing Western free-atonal techniques, which entail the manipulation of small, unordered pitch-class sets that contrast with the strict pitch ordering of dodecaphonic writing. Another development is her organization of pitch content into a Chinese “shape” to produce musical continuity not only in individual melodic lines, but also within the accumulation of textural strata. Finally, she combines two different ways of dealing with pitch material—one based on the Western concept of pitch structure, the other on the Chinese approach. She produces a complicated contrapuntal texture that avoids a sense of pitch repetition in both linear connections and vertical combinations, but she also employs relatively simple textures in which different methods of playing individual pitches imitate sound effects from Chinese traditional instruments.
Western and Chinese elements are used both cooperatively and in opposition in the piece, and the Chinese approach is dominant in the realm of form and pitch structure. The choice of instruments—the piano and solo strings that produce a resonant sound, and percussion instruments that produce diverse timbres—not only enriches the entire sonority, but also ensures a musical momentum that consists of sustained, massed sound with no regular rhythmic pulse or meter. Musically, this instrumental combination produces a more coherent effect than the *Woodwind Quintet*.

Chen Yi continued to explore possibilities of integrating formal structures and fusing aspects of pitch structures from Western and Chinese cultures in *Sparkle* and the *Piano Concerto*, which were written four years after *Near Distance* in 1992. In *Sparkle*, a complete Chinese folk tune—*Baban*—is used as a small-scale model of the formal structure in conjunction with a perpetual motion. The instrumentation (similar to that of *Near Distance* but with the addition of the marimba and the double bass), together with high-pitched scoring, helps create a bright, somewhat lighter sonority.

In *Sparkle*, Chen Yi maintains the same principles of pitch construction established in her earlier works, treating dissonant intervals as a foundation. By scoring the dissonant intervals widely apart and in the high register, however, she attenuates the dissonance. The pitch materials include both a Chinese element—fragments of *Baban*—and a Western element—a twelve-tone row. However, the *Baban* melody is transformed by the Chinese technique of “borrowing notes” into an atonal-type melody, creating an effect analogous to contemporary Western style; the twelve-tone row, on the other hand, is treated as a transitional figuration and arranged as a long, ascending curved line by the connection of its varied transpositions, resulting in a linear motion.
that is more Chinese in its conception. The combination of both materials—one as grace notes, and the other as principal notes—creates a true stylistic fusion.

The repetition of a single type of pitch construction across several sections serves to simplify the texture. This textural simplicity, along with the bright, light, relatively consonant sonority and the rhythmic fluidity, resembles the compositional style of minimalists Philip Glass or Steve Reich, in which the vocabulary, whether rhythmic, melodic, harmonic, or instrumental, is restricted to the reiteration of simple patterns.¹

*Sparkle* is a true fusion of styles. It has Western and Chinese elements, but they are combined in such a way that the final product does not resemble either of them. The basic approach is to treat an element associated with one culture in a way that is associated with the other culture. This method is applied not only at the surface level—converting the quality of melody as mentioned above—but also at a deeper level, to sever the relationship between melody and phrase structure. For example, the rhythmic groupings of *Baban* are exactly preserved, but the melody, which always dominates Chinese music, gives way to repeated vertical pitch constructions, which is not a part of Chinese style. The twelve-tone row is reiterated, but the use of the percussion to punctuate phrases, and the unison melody played by all instruments without any kind of harmonic support, are not idiomatic in Western style. The stylistic character of this piece is established through techniques drawn from both cultures—the perpetual rhythmic motion, the continuously flowing melodic line, and the creation of a climax.

In the *Piano Concerto*, Chen Yi integrates Chinese and Western elements more closely. She adopts the same source—*Baban*—and follows the same compositional procedure as in *Sparkle*. In the *Piano Concerto*, however, both the rhythmic groupings and the melody of *Baban* are enlarged proportionally to serve as a model of large-scale formal structure as well as a source for the underlying pitch structure.

The style of the *Piano Concerto*, because of its Chinese source material and method of enlargement, differs from most Western music and achieves an effect not normally associated with the Western orchestra. Its range of expression is restricted, however, since every detail of the formal and pitch structure is precisely controlled by ordering and numerical calculations. For example, the notes of *Baban* are isolated in terms of proportional enlargements, so that the original melodic line is segmented. The materials that fill the large gaps between successive *Baban* notes are seemingly incoherent, detracting from musical development linearly. The climaxes are precisely calculated, but the musical development may seem unnatural and inconsistent because of the large amount of added material. The rhythmic pulse of the original *Baban* is greatly weakened by the enlargement, although the changes in meter and tempo tend to restore some of its inherent momentum.

Following the same formal structural principle and adopting the rhythmic groupings of *Baban* as part of the source material, *Qi* was written much later than the aforementioned two pieces in 1997 and reflects a relatively stable compositional approach to the cross-cultural fusion. In its overall structure, *Qi* conforms to the Western principle of sectional form, which uses proportional divisions of equal length for each section, and a restatement of the opening pitch material to achieve a rounded
form. As in the *Piano Concerto*, Qi’s climactic points are all precisely calculated according to the Golden Section division. Also in this work, however, the “shape” is used as a means of organizing melodic statements, textures, rhythmic patterns and timbres more flexibly to achieve climaxes, thereby avoiding the need for “filler” material.

Instead of enlarging the rhythmic groupings of *Baban* as in the *Piano Concerto*, Chen Yi reduces them proportionally in *Qi*. The increasing number of notes per unit of time creates momentum and intensifies the rhythmic tension. The combination of rhythmic telescoping with other contemporary rhythmic techniques (e.g., polymeter and notated accelerando) not only serves as a basic structural device but also enriches and diversifies the rhythmic content of the piece.

In addition to the formal structure and rhythmic organization, Chen Yi employs a more skillful means to deal with the pitch structure and melodic development as well as the instrumental combinations. She employs pentatonic melodies, but incorporates into those melodies interval classes 1 and 6, which are foreign to the collection. She also “modernizes” the pentatonic melodies by displacing certain notes from their regular locations within the collection, thus producing dissonant or atonal effects. In the process of melodic development, Western-style segmentation and motivic transposition intermingle with Chinese melodic embellishment and free expansion and contraction within a consistent contour. The pitch materials, although contemporary in sound, are brought together within an idiomatic Chinese approach to phrasing.

Chen Yi uses heterogeneous solo instruments to build swift and violent momentum, which is comparable to the effect produced by a full orchestra. She creates
a forceful melody by scoring the flute and cello solos in different registers and by using their doublings in different spacings. The driving force of the percussion derives from two procedures: first, a sequence of progressively brighter timbres, and second, a notated accelerando. The piano’s wide range is used to blend the other timbres—to mingle with the flute in its high register, to merge with the timbres of the drums in its lowest register, and to traverse its entire range with a sawtooth movement, which helps to meld the other timbres.

Along with the further smoother integration of elements from both cultures, the style of Qi presents a tendency in which several grammatical principles of traditional Chinese music and the design of climaxes become the underlying structural governors. The creation of the “shape,” for example, not only mobilizes the flow of the music by bringing all the structural elements into play systematically, but also arouses a psychological reaction, such as gradually getting exited that is common to the audiences.

The four pieces analyzed in Chapter 5 and 6 were composed after Chen Yi firmly established her own style, which can be described as a Chinese-based musical language interpreted by Western idioms. During this period, Chen Yi’s music achieves continuity and a logical sense of development by exploring the expressive potentials of timbre and texture. Most importantly, she became increasingly committed to the use of music to express human emotions and experiences. She came to believe that although musical expression may differ from culture to culture, the emotion it conveys can be understood and accepted by audiences of any cultural background. The structural elements, either Chinese or Western, are therefore all subsumed into a unified sound
entirety, which is governed by the need of emotional expression with underlying organizational devices taken from traditional Chinese instrumental music.

*Ge Xu (Antiphony)* and *Sound of the Five* are two characteristic pieces in which Chen Yi focuses on adaptation and reinterpretation of Chinese folk tunes and instrumental music through Western instrumental idioms. She deals with two types of scorings: one for the full timbral palette of the orchestra, the other for a homogenous timbral group—string ensemble. In *Ge Xu* (1994), the modernization of several carefully selected Chinese folk tunes with the association of atonal auxiliary pitch materials enriches the melodic expression while the original melodic characteristics are still preserved. The melodies are assigned to the instruments according to their distinct timbre and effective range, thereby enhancing the clarity of the music and yielding the best orchestral sound as well. The change of tempo as underlying organizational principle ensures the coherence of the overall form and the percussion instruments play a dominant role in the change of tempo.

In *Sound of the Five* (1998), the sound effects of the Chinese wind, plucked string, pitched and non-pitched percussion instruments are interpreted through both traditional and contemporary string techniques. The particular emphases on double-stops with an open string and the ensemble unison for a passage with running notes strengthen the entire sonority, and the registral arrangement of a single motive or rhythmic pattern with the combination of harmonics and pizzicato creates colorful sound effects and intensifies the progress of the music. While the techniques of melodic expansion represent a Chinese approach, the sequential development of short motives and the manipulation of small pc sets, and the sectional and symmetrical formal
principles are Western-oriented approaches. The compositional approach to orchestration in these two pieces—to transcribe Chinese tunes and instrumental sound effects into a Western orchestra—is similar to the practice of Chinese predecessors. But, instead of the tonal harmonization of Chinese melody, which prevailed in previous generations, the modal and atonal elements are seamlessly integrated to present a music entirely in Chen Yi’s idiom. At the same time, these two pieces demonstrate the timbral organization and proper assignment for instruments, and the boundaries of different materials and formal section are clearly displayed.

By assimilating the techniques of Western texture-oriented composers like Ligeti, Penderecki, and Lutoslawski, Chen Yi pays more attention to the textural process in Symphony No. 2 and Momentum. In these two pieces, the clearly-displayed boundaries of sectional form tend to be blurred; pitch materials, either motives or melodic fragments, and regular phrasing have gradually lost their function in the presentation of musical ideas, becoming components of textural strata or sound masses. The contrast of timbral groups and the smooth transformation between different timbral groups, the registral contraction and expansion, and textural stratification as the structural focus are controlled by the creation of “shape.”

Symphony No.2 (1993) is an earlier piece based on the manipulation of texture, so the melodic expression is still emphasized and other structural elements are placed at a secondary position in the texture. The melody is always projected as the foreground through either the amplified melodic contour from solo instruments or the strengthened bright, metallic sonority produced from the highest range of brasses. The principle of pitch constructions may not be followed strictly when melodic passages permit
improvisation governed by the emotional need. The dissonant sonorities never change their structure, so they are not used to create harmonic tension; instead, they serve to accompany the recitative melody, as a tradition in both Chinese and Western musical cultures.\(^2\) Phrases punctuated by a long sustained note or by a simultaneity with sharp cut-offs are typical in Chinese music, but these expressions become more effective through the use of a powerful and colorful Western orchestral tutti. A bold and muddy melodic line produced by a group of brass in semitone-related parallel motion is an effect inspired by the heterophonic variation of Chinese instrumental ensembles; so is an ever-moving background created by an aleatoric texture, which is also typical in some contemporary Western music.

In *Momentum* (1998), the formal structure is perceived in a way similar to *Symphony No.2* through the creation of three large shapes. In this piece, however, the manipulation of texture concentrates on the smooth timbral transformation of the sound strands, and all pitch materials are treated equally as components of sound strands. The impetus of the music is produced by the continually evolving timbral totality and textural densities and the instrumental color plays a vital part in articulating the behavior of sound strands. The entrance and cessation of instruments in different timbral combinations are prepared by the adjustments of the sound color and tone-weight from existing timbral groups associated with the arrangement of register and dynamics. The pitch construction, on the other hand, is rather simple and static. The practices of textural stratification and aleatoric techniques yield a huge polyphonic web

\(^2\) In traditional Chinese narrative music, the accompaniment is usually a fixed, reiterated chord played by the singer on a plucked instrument, or a fixed rhythmic pattern on a small drum, thereby punctuating the phrase or creating an atmosphere of tension and suspense. This style is similar to recitativo style in early Western operas.
and a high degree of rhythmic intricacy and spontaneity in individual parts and in the relationship between parts. In this case, bar lines lose their function in rhythmic regulation. The Western techniques of textural process controlled by the Chinese structural principle—the creation of “shape”—result in a tremendous “momentum” in the sounds themselves. Audiences have been impressed deeply by their acoustical properties, their physiological and emotional resonance, and their unfolding in time.

In these two pieces, Western and Chinese techniques and approaches can be identified, but they are integrated inseparably to build a musical entirety that expresses human emotions effectively. The cross-cultural fusion of her music in this way reaches a syncretism at a higher level, and the resulting music is therefore accepted by the audiences of Western and East Asian cultural background.

### Implications of Chen Yi’s Work in regard to the Music in the Future

Nowadays, the cross-cultural fusion of musical elements as a compositional approach has widened the scope of source materials and techniques, and has been adopted by an increasing number of composers throughout the world. At the same time, this practice arouses a problem about the quality of music in the future. Robert Morgan makes the following observation:

“All this music, drawn from different popular, folk, ethnic and historical tradition, becomes part of a vast electronic network within which any given item necessarily loses something of its uniqueness and particularity. … As a fragment within a larger eclectic mix, it no longer
has its own well-defined place or cultural function: it becomes just another component in the ubiquitous amalgam now commonly referred to as ‘world music.’ With so much music available, musical culture loses its traditional focus, becoming an eclectic synthesis, a recycling of material drawn from a storehouse that is so large and flexible as to have no real shape of its own.”

Morgan’s view implies a pessimism for the loss of traditional focus in the so-called ‘world music.’ The developmental course of Chen Yi’s personal style, however, stands as one of the ways in which cross-cultural elements can be integrated while the cultural traditions remain. Chen Yi approaches composition from a multi-cultural perspective by studying the music and performance practices of various cultures and by attempting to subsume structural procedures from different styles of music into her own works. Based on a solid technical foundation in both Chinese music and Western classical music, Chen Yi is able to assimilate ideas and principles of Western post-tonal techniques as well as elements from other musical cultures in order to compose a kind of music that expresses universal human emotions. In this effort, she achieves her greatest success by uniting Chinese musical expressions with Western performing media through the stages of Westernization and modernization, leading to syncretism at a new level. Her music can be understood and accepted by both Western and East Asian audiences, thereby facilitating the cultural interchange and enriching both Chinese and Western musical cultures as well.

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BIOGRAPHICAL SKETCH

Xin Guo was born in Beijing, China on December 16, 1952. She began studying the piano at the age of six. Her education was interrupted during the Cultural Revolution and she was sent to the countryside to be laborer from 1969 to 1975. She resumed her musical education in 1975 and received the bachelor of music degree in piano performance from Tianjin Conservatory of Music in 1978. After being a piano accompanist for six years, she became a graduate student in 1984 and earned the master of art degree in music theory from Tianjin Conservatory of Music in 1986. After working as a theory teacher at the Central Conservatory of Music in Beijing for six years, she came to the United States for her further study in 1992.

Before entering the School of Music at Florida State University for her doctoral study in 1999, she earned the master of music degree in piano performance at Carnegie Mellon University in 1995 and the master of art degree in music theory at the University of Connecticut in 1999. She has been working as a writer and an editor for the journal of *Music in China* since 1997.