Hearing Pentatonicism Through Serialism: Integrating Different Traditions in Chinese Contemporary Music

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Hearing pentatonicism through serialism: Integrating different traditions in Chinese contemporary music

Nancy Yunwha Rao

For Chinese composers of the late twentieth century, deciding which musical traditions to integrate has been and continues to be an intricate process. Although it is common to this day to find contemporary Chinese music described as the meeting of East and West, the Western and Chinese music traditions have not been two completely separable entities for over a century. The diffusion of Western music in China began significantly in the late nineteenth century, primarily through missionaries and the military. Since the early twentieth century, Western music has been a part of Chinese urban musical life, constituting a central element of musical entertainment and the standard music
education. One example of how the twentieth-century hybrid form of Chinese music took root quickly and deeply is the Chinese art song, which has been popular among urban Chinese since 1920 and uses the tonal harmony of eighteenth- and nineteenth-century European music. For example, generations of educated Chinese people have enjoyed art songs such as Zhao Yuanren's "Jiao wo ruhe buxiang ta (How Can I Not Think of Her)," composed in 1926; and to this day, school children in Taiwan still sing Huang Zhe's "Xi fong de hua (Words of the Western Wind)," written in 1935 for use in elementary school. In the 1920s, such art songs were used to accompany Chinese films. Since then, songs in the tonal idiom have been embraced by a wide audience, and most popular songs have been written in the Western tonal idioms. On the other hand, various types of traditional Chinese music still constitute an important part of people's daily life, from entertainment to ritual offerings. Despite the incursion of Western music, traditional Chinese music continues to develop and thrive, be it tradition associated with the literati culture such as gòu, or tradition deeply linked to larger masses such as folk songs. In addition, the golden period for Peking opera and Cantonese opera in the 1920s and 1930s was in no small part due to intense contact with Western musical traditions. As a result of continuing cultural interaction such as this, musical culture for an urban Chinese—be it in Hong Kong, Macau, mainland China, or Taiwan—includes at least the following three elements: traditional Chinese music, twentieth-century Chinese music, and Western European music of the seventeenth, eighteenth, and nineteenth centuries. The balance among these three traditions is inevitably unstable and malleable at various historical moments and geographical locations. Together they constitute the immense complexity of Chinese musical life.

An awareness of this context is important to the topic of this essay—an examination of Chinese composers' integration of pentatonic sonority and serialism. Most Chinese contemporary composers are as well-versed in European tonal music of the seventeenth to the late nineteenth century as they are in twentieth-century Chinese music and the various strands of traditional Chinese music. Their creative processes have always been deeply entangled with sonorities from all three traditions. Thus, for these composers to merge different traditions in compelling ways becomes as much a conscious as a subconscious endeavor. In such an environment, their encounter with serialism has complicated layers of meaning that go far beyond the binary East-meets-West model that often frames discussions of Chinese new music. It is thus important to ground any analysis of contemporary Chinese music in rigorously transnational frames. Rather than simply retreating to existing reductive models that perpetuate the us/them divide and continue to fetishize the composers
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and their work—and therefore sidestep the inextricable complexity of issues in such syntheses—we need to look at the temporal simultaneity of these traditions and the ways in which they have been and continue to be bound up in an inextricable and complex whole. This essay is an exploration of one facet of such a nexus of traditions.

What is the impact of serialism on Chinese new music? On the one hand, Chinese composers’ reactions to serialism are as varied as those of their Western counterparts. Many Chinese composers were skeptical, while others turned to serialism enthusiastically. Serialism came in vogue as a novelty in some composer circles. While some adopted it as a means of creating melodies, others delved deeply into its structural implications. On the other hand, Chinese composers’ approaches to serialism inevitably differ from those of their Western counterparts, because the diatonic system was never their only primary musical system. Furthermore, serialism provides a somewhat more open way to integrate with traditional Chinese music. For many Chinese composers, serialism’s emphasis on the individual notes or interval relations rather than on the functionality of the notes is similar to certain aspects of traditional Chinese music. In fact, some composers believe that serialism allows them to associate more freely with traditional Chinese elements. Many developed unique systems that connect concepts of serialism with Chinese philosophical, religious, and cosmological concepts. The most notable examples are Chou Wen-chung’s Yijing system and Zhao Xiaosheng’s Taiji system. For example, in Chou’s *Metaphors* (1960), the trigrams in Yijing are interpreted as scale segments and eight modes are formed according to the structure of eight trigrams. Zhao, on the other hand, formatted a Taiji composition system in 1987 where all sixty-four hexagrams in Yijing are translated into pitch sets and their permutations. Other such work includes Zhou Long’s connection of twelve-tone series with a Buddhist state of mind in *Ding* (1990), and Pang Huangleong’s connection of cosmology with a permutation of five elements in *Wandlungsphasen* (Wu Xing Sheng Ke, 1979–80).

While the ways that Chinese composers have chosen to incorporate twelve-tone technique or serialism vary widely, many move in a similar way into the realm of pentatonicism. By adopting serialism or its underlying concept, they reinterpret the Chinese pentatonic traditions in light of serialism, illuminating one of the most prominent dilemmas for the twentieth-century Chinese composers—the harmonization of pentatonic melody. In the first half of the twentieth century, Chinese composers embraced the harmonic language of diatonic system to accompany pentatonic musical ideas, an approach with which many in the second half of the century grew dissatisfied. Serialism, with its emphasis on intervals, invariance, and ordering, shed significant light on the matter for many composers.
I will sketch and contrast three different modes of integration by examining how three contemporary Chinese composers—Luo Zhongrong, Chen Qigang, and Lu Yen, varied in their experiences and backgrounds—integrate the essential qualities of the realms of pentatonicism and serialism. I am interested particularly in the theoretical underpinning of the three composers’ choices of paths through chromaticism and pentatonicism. I am also concerned with the aesthetics of these different modes of integration and ask: what drew these composers, positioned as they are among a particularly rich array of musical traditions, to serialism? How, during this process of integration, are the meanings of different musical systems transformed?

LOU ZHONGRONG

The first mode of integration seeks to elevate pentatonic sonority to structural and sometimes abstract levels. Many composers rely on this mode of integration, including Chen Mingzhi, Lu Shiling, Wang Zhenya, and Peng Zhimin.7 Luo Zhongrong’s approach, however, remains the most systematic, revealing a keen sense of the structural implications of twelve-tone pitch space.

In mainland China Luo Zhongrong, a composer in residence at the Central Symphony Orchestra and a composition teacher for the Central Conservatory and Chinese Music Conservatory in Beijing since the 1970s, is regarded as the father of Chinese modern music.8 Luo is indeed unusual among his contemporaries. He has definitely followed his own modernist path, based on a solid understanding of Hindemith’s composition technique, one that he started in the late 1940s while studying under Tang Xiaolin, a student of Hindemith. As a translator of Paul Hindemith’s The Craft of Musical Composition and A Concentrated Course in Traditional Harmony, Allen Forte’s The Structure of Atonal Music, and George Perle’s Serial Composition and Atonality, he developed a keen interest in the structural interrelations of pitch-class space and collection classes.9 Through his teaching, compositions, translations and articles, Luo’s serial thinking has influenced and will continue to influence many generations of Chinese composers.10

Luo’s use of the twelve-tone row is deeply intertwined with pentatonic thinking. From the beginning of his serialism, Luo has incorporated pentatonicism in structural and abstract rather than foreground and literal ways. His song of 1979, “She jiang cai-furon (Picking Lotus Flowers Along the Riverside),” is based on a tone row containing exclusively pentatonic intervals: major second, major and minor thirds, perfect fourth and fifth, major and minor sixth, and minor seventh. (Example 1a) That
this row contains two pentatonic scales was known to the composer only at a later date and affects the musical surface very little.

With each subsequent design Luo becomes more abstract. In the twelve-tone row for his Second String Quartet (1985), he retains the pentatonic intervallic relation yet prevents any completion of a pentatonic scale in consecutive notes. The resulting tone row allows at most four successive notes from the same pentatonic scale, avoiding any indulgence in obvious pentatonic melodies (Example 1b). As it turns out, this row is comprised of three consecutive 0257 tetrachords. With his next design for the Third String Quartet (1996), Luo’s main criteria were to maximize the variety of segmental pentatonic trichords and tetrachords in a tone row. In constructing the row, Luo tries to maximize the use of different pentatonic pitch-class sets—i.e., the three pentatonic tetrachords [0247], [0257], and [0358] and four pentatonic trichords [024], [025], [027], and [037] (shown at the top of Ex. 1c). However, it is not possible to use all three

EXAMPLE 1a: Luo Zhongrong, “Shejiang Cai Furong (Picking Lotus Flowers Along the Riverside),” Measures 4–9

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pentatonic tetrachords as segmental tetrachords in a twelve-tone row. Nor is it possible to use all four pentatonic trichords. Consequently, Luo designed tone rows that consist of three pentatonic and one non-pentatonic segmental trichords, constituting at the same time two pentatonic and one non-pentatonic segmental tetrachords. The resulting row collection is twenty twelve-tone rows, each consisting simultaneously of three different tetrachords and four different trichords. Without the help of any computer program, Luo derived these twenty rows by hand, and he thought at the time that he had exhausted all the possibilities. He uses all twenty rows in the Third String Quartet. Example 1c reproduces four such tone rows. Letter names in the right-hand columns indicate the constituent trichord and tetrachord types of each tone row.

In *Qin-Yun (Rhyme of Qin)* for guqin, a zither-like traditional Chinese instrument, and a chamber ensemble of thirteen instruments and percussion (1993), Luo explores a certain relationship among the different pentatonic scales and aggregate. Here he juxtaposes six excerpts from the traditional guqin repertoire with the ensemble. Rather than being thematic materials, these guqin excerpts, marking sectional beginnings, function in continuous dialogue with the chamber ensemble throughout the work. The pentatonic pitch structure of the quoted excerpts is complemented by the ensemble, creating continuous blocks of complete

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Pentatonic trichords: 024 (a), 025 (b), 027 (c), 037 (d)  
Pentatonic tetrachords: 0247 (A), 0257 (B), 0358 (C)  
Non-pentatonic trichord/tetrachord: x, X

Tone Row:  
0 2 4 7 5 t 8 1 6 3 9 e  |  abex  |  ACX  
0 2 5 7 4 e 6 8 1 3 9 t  |  bdex  |  BAX  
0 2 7 9 e 1 3 6 t 4 5 8  |  cadx  |  BAX  
0 3 7 t 1 8 5 8 e 2 4 6  |  dbxa  |  CAX

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EXAMPLE 1C: LUO ZHONGRONG, THIRD STRING QUARTET  
(FOUR EXAMPLES FROM THE TONE-ROW COLLECTION)
aggregates. In what many would consider a movement form, the separate sections are brought together intriguingly by expressive excerpts of guqin solo, each marked by its own unique mood, articulation, and touch.\textsuperscript{12}

In \textit{Qin-Yun}, the ordering in a tone row is not as important as the portrayal of the relationship between collection classes. Luo divides an aggregate into a pair of non-overlapping pentatonic scales and a dyad. There are two ways that any two non-overlapping pentatonic scales can be related. In the first, the pentatonic scales are a minor second apart, and the resulting dyad is a perfect fourth. In the second, the two pentatonic scales are a tritone apart, and the resulting dyad is a tritone apart. Luo lays out these two types of non-overlapping pentatonic pairs and their related dyads in a unique matrix, which he includes at the end of the score. Example 2a shows this matrix in its complete form. (Text added at the top is mine.) Horizontally, on the same row two pentatonic scales are linked by the 06 dyad excluded in both. In other words, the center 06 dyad and the two pentatonic scales on both sides, a tritone apart and non-overlapping, form a complete aggregate. Vertically, on the other hand, two pentatonic scales, a semitone apart and non-overlapping, and the 05 dyad positioned between them form a complete aggregate. This matrix is designed to stress the complementing pentatonic scales and

<table>
<thead>
<tr>
<th>Dyad</th>
<th>Pentatonic Scale</th>
<th>Dyad</th>
<th>Pentatonic Scale</th>
<th>Dyad</th>
</tr>
</thead>
<tbody>
<tr>
<td>(05)</td>
<td></td>
<td>(06)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 e</td>
<td>0 2 4 7 9 5 e</td>
<td>6 8</td>
<td>1 3</td>
<td>0 5</td>
</tr>
<tr>
<td>7 0</td>
<td>1 3 5 8 t</td>
<td>7 9</td>
<td>2 4</td>
<td>1 6</td>
</tr>
<tr>
<td>8 1</td>
<td>2 4 6 9 e</td>
<td>8 1</td>
<td>0 3 5</td>
<td>2 7</td>
</tr>
<tr>
<td>9 2</td>
<td>3 5 7 t 0</td>
<td>8 2</td>
<td>9 e 1 4 6</td>
<td>3 8</td>
</tr>
<tr>
<td>t 3</td>
<td>4 6 8 e 1 9 3</td>
<td></td>
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<td>4 9</td>
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<td>e 4</td>
<td>5 7 9 0 2 t 4</td>
<td>5 6</td>
<td>1 8 1 3 6 8</td>
<td>5 t</td>
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<td>0 5</td>
<td>6 8 t 1 3 e 5</td>
<td>0 2</td>
<td>4 7 9</td>
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<td>1 6</td>
<td>7 9 e 2 4 0 6</td>
<td>1 3 5 8 t</td>
<td>7 0</td>
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<td>2 7</td>
<td>8 0 3 3 1 7 2 4 8 e 1</td>
<td>8 1</td>
<td></td>
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<tr>
<td>3 8</td>
<td>t 0 2 5 7 3 9 4 6 t 1 3</td>
<td>9 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 9</td>
<td>e 1 3 6 8 4 t 5 7 e 2 4</td>
<td>t 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example 2a: Luo Zhongrong, \textit{Qin Yun}, Matrix
their related dyads. Luo used this design for several compositions. The advantage of this design is clear: it is an interpretation of the proximity of the twelve pentatonic scales. And the dyads, either an 06 or an 05, become markers of their associated pentatonic scales.

Example 2b is built from the chart in Example 2a. It simplifies Luo's matrix to show additional relationships among these pentatonic pairs. Here the dyads are omitted, and the different forms of pentatonic scale are represented by P and the subscripted integer following it. For example, the P₀ refers to the pentatonic collection \{0, 2, 4, 7, 9\}, P₁ refers to the pentatonic collection \{1, 3, 5, 8, t\}, P₂ refers to the pentatonic collection \{2, 4, 6, 9, e\} and so on. On this chart, the

EXAMPLE 2B: PENTATONIC REGIONS: NON-INTERSECTING PENTATONIC SCALES (DIAGONAL CONNECTION), MAXIMUM-INTERSECTING PENTATONIC SCALES (VERTICAL OR HORIZONTAL CONNECTION), AND TETRACHORDAL INVARIANTS (F-X REFERS TO PITCH-CLASS COLLECTION—\{x, x+2, x+4, x+7, x+9\}, x = 0, 1, 2, ... e)
non-intersecting pentatonic scales are diagonally across from one another, whereas the maximum-intersecting pentatonic scales are vertically across from one another. In other words, diagonally related pentatonic scales, which are either a semitone apart or a tritone apart, have no pc in common. Vertically related pentatonic scales have four pcs in common, and are a perfect fourth apart. It is evident from this chart that any two different scales that complement the same pentatonic scale and are separated by a perfect fourth are, in fact, closely related. With a tetra-chordal invariance, the two pentatonic scales constitute a pair of maximum-intersecting pentatonic scales. For example, P_2 and P_9, both non-intersecting with P_8, share a tetra-chordal invariance, \{4, 6, 9, e\}. They are thus a maximum-intersecting pair. (See X in Example 2c.) Each triangle formed from the P's between two consecutive columns or rows reflects such a close-knit relation. This kind of close-knit relation plays an important role in Luo's use of pentatonic pairs, which often moves along pentatonic regions that can be related in such triangles. Just as often, however, Luo makes use of yet another pentatonic scale a minor second apart from the primary pentatonic scale, in effect exhausting all the possibilities of non-overlapping pentatonic scales that can be related to it. For the example in question, that means the inclusion of P_7 as well. (See Y in Example 2c.) As the resulting graph makes clear, the same maximum-intersecting relationship between P_9 and P_2 is also found between P_2 and P_7. To put it differently, the P_x is non-overlapping with P_{x+1}, P_{x-1} and P_{x+6}, while both the P_{x+1}/P_{x+6} pair and the P_{x-1}/P_{x+6} pair are maximum-overlapping. I will return to Luo's particular path through pentatonic pairs later in the analysis.

The chart in Example 2b can also be read for further relation or proximity. For example, to move from a pentatonic scale downward along the column on the chart, i.e., a modulation through a sequence of pentatonic scales related by perfect fourth, requires the change of merely one pc at a time—a kind of gradual "modulation" involving minimal changes. The first and the sixth pentatonic scales in such a progression would have no pc in common. In other words, five consecutive pentatonic scales in such a column would have one pc in common.

Contrastingly, a "progression" that links together non-intersecting pentatonic scales is reflected by diagonal relations on the chart. To move from a pentatonic scale diagonally down the chart, which means modulation through a sequence of pentatonic scales related by either a tritone or a semitone, requires the change of all five notes each time. Here, however, the sequence of pentatonic scales related by a tritone (moving diagonally from the top left to the lower right, for example, P_2–P_8–P_2–P_8) is merely an alternation between two different forms of
EXAMPLE 2C: (X) TRIANGLE RELATIONS AMONG THREE PENTATONIC SCALES, $P_2$, $P_9$, AND $P_8$;
(Y) TRIANGLE RELATIONS AMONG FOUR PENTATONIC SCALES, $P_2$, $P_9$, $P_8$ AND $P_7$;
(Z) COMPLETE AGGREGATE CREATED BY DIAMOND SHAPES.
NOTE: EACH CIRCLE INDICATES A PENTATONIC REGION; THE RELATIONSHIP BETWEEN TWO PENTATONIC REGIONS IS EXPRESSED BY THE LINES CONNECTING THEM. THE STRAIGHT LINE INDICATES THE MAXIMUM-INTERSECTING RELATION; THE ARROW LINE INDICATES A NON-INTERSECTING RELATION.
pentatonic scale, whereas the sequence of pentatonic scales related by a semitone (moving diagonally from the top right to the lower left, for example, $P_0-P_1-P_2$) constitutes a sequence that includes all twelve forms of pentatonic scales. (The top-right to lower-left sequence is identical to the orientation of pentatonic scales in Luo's matrix in Example 2a.) Furthermore, any four pentatonic scales that form a diamond shape on this chart, as shown in $Z$ of Example 2c, constitute a complete aggregate, a property we will discuss later in this essay. For Luo, though, a complete aggregate is comprised of the pentatonic scales and the dyads, a topic to which I now turn.

While Luo's chart is suggestive of various pentatonic relations in his composition, its dyad has a significant role in his integration of pentatonicism and serialism. In *Qin-Tun* the guqin melodies, taken from the instrument's classic repertoire and indicated by the original titles, are pentatonic. The pitch structures that complement the pentatonic materials of the guqin excerpts are derived from the non-intersecting row pairs and the resulting dyads. Despite its total chromatic quality, the work retains a sense of "home regions" as the six guqin excerpts occupy one or more of the following regions: $P_0$, $P_3$, or $P_1$. In these excerpts, the ensemble cycles through the pentatonic scales that complement what is found in the melody of guqin. Example 2d is a passage with such a design, where $P_3$ is complemented first by $P_0$, and then by $P_2$. In measures 57–8, the guqin excerpt, the fourth in the work, "Mist over the River" appears in $P_0$, which is supported by the string quartet playing $P_4$ and the double bass playing the 06 dyad, \{3, 9\}. In measures 59–61, the guqin excerpt, continuing on $P_0$ and now joined by another plucked instrument, the guitar, is accompanied by the harp and violins playing $P_2$, with the vibraphone playing the 05 dyad, \{4, 9\}. The first pair of scales and the dyad appear together in a row as marked on the chart of Example 2a; the second pair of scales and the dyad appear stacking up on the right of the same chart, as marked a by dotted line. Notice too, these dyads differ from each other only by one note.

In *Qin-Tun* the articulation of the dyads compositionally leads to a perception of their functioning as the marker of a particular type of pentatonic progression, one that involves a sequence of three pentatonic collections that complement the same pentatonic scale. The remaining dyads from each pair of pentatonic scales that complete the aggregate are often isolated instrumentally or registrally, oscillating between 05 and 06, referencing to their respective pentatonic pairs.\(^{14}\) Frequently the motion from one such dyad to another requires merely the altering of one note. In a sequence of three such pentatonic pairs, the pitch classes of the three pairs of dyads, two 05 and one 06, constitute a 0167 tetrachord, which is, not surprisingly, characteristic of the bass line in *Qin-Tun*. 

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Example 2d: Luo Zhongrong, Qin-Yun, Measures 56–61

$P_e$ (Guqin)

$P_4$ (Vl. 1, Vl. 2, Vla., Vc.)

06 dyad (C-b.)
P₁ (Guqin, Guit., C-b.)
P₂ (Arpa, Cel., Vl. 1, Vl. 2)
05 dyad (Vib.)
EXAMPLE 2D (CONT.)
The fluidity with which Luo employs this unique progression to accentuate the pitch structure of the *gōqin* excerpts provides an intricate web of sonority that contrasts with the *gōqin*’s pentatonic excerpts, yet enhances its unique sonority. It thus creates a kind of mirror image whose reflection is, on the surface, anything but faithful. Much of the use of serialism in Luo’s work is about maintaining a distance from any immediate imitation of pentatonicism, on the one hand, and constantly invoking what he considers the extracted essence of pentatonicism on the other hand. The most remarkable aspect of his approach is perhaps the degree to which he internalizes the pentatonicism in his interpretation of the twelve-tone space through pentatonic structure. In *Qin-Yun*, while the sonic attribute belonging to the *gōqin* tradition remains uncompromised, its juxtaposition with the ensemble of Western instruments does not render a conflict or tension between two types of expression. Rather, the atonal writing of the ensemble yields pentatonic and dyadic strands, resulting in an aggregate music that has the pentatonicism of the *gōqin* at its core. The approach differs greatly in an earlier work that Luo wrote for *zhēng* and orchestra, *The Faint Fragrance (An Xiang)* (1988–9). (The *zhēng* is also a Chinese zither.) Although the design of the pentatonic aggregate in *The Faint Fragrance* remains the same as that of *Qin-Yun*, the *zhēng* solo is newly composed, divorced from references to its traditional styles, and the work is rendered more atonal and less pentatonic.

**CHEN QIGANG**

The second mode of integration illustrates less concern for aggregate completion, yet constitutes rigorous play with various means of saturation of pentatonic subsets. Chen Qigang’s work in the past fifteen years exemplifies an extraordinary effort to reinterpret pentatonic sonority from this angle. Chen Qigang, a graduate of Beijing Central together with Tan Dun and Chen Yi, studied with Luo Zhongrong. In the 1980s he studied with Oliver Messiaen for four years, and was influenced by seminars at IRCAM, and by the Academia CHIGIANA, among others. There are undoubtedly some resemblances between Chen’s choice of pentatonic chords and those found in Luo Zhongrong’s, most notably the maximum intersection pentatonic collections, which I will discuss later. Unlike Luo, however, Chen’s integration of pentatonicism is less than systematic, and the completion of aggregate or articulated statement of a single pentatonic scale is carefully reserved as a dramatic device. It is the pentatonic subsets, especially the tetrachords and dyads, that are used extensively and kept close to the foreground level. This involves not
only pairs of non-intersecting pentatonic scales, but also pairs of maximum intersecting pentatonic scales.

Poème Lyrique II (1991), a setting of a famous Chinese poem, is written for baritone and nine instruments. The poet uses the separateness of the earthly and the divine to allude to an unattainable union. The moon, a symbol of reunion, signifies a promise at first, but as the promise fails, it soon becomes a sad reminder, and only at the end is transformed into a sign of reconciliation. In the following, I will discuss how two pairs of non-intersecting pentatonic scales play important roles in Poème Lyrique II: the $P_c/P_t$ pair (e1368/t0257) and the $P_7/P_8$ pair (79024/8t135). In particular, I believe that these two pairs of pentatonic scales, as well as $P_0$, take on a range of signification in communicating symbolic meaning expressed by the poem (see Example 3a). Through extensive use of two pentatonic tetrachords, [0257] and [0358], Chen establishes the first pair of pentatonic scales as the main sonority of the first part. The unique position of [0358] among pentatonic tetrachords must be mentioned here. A pentatonic scale can be divided into five tetrachords, that is, two 0247s, two 0257s and one 0358, yet the only symmetrical tetrachord that can unambiguously indicate a particular pentatonic scale is 0358. Chen’s ample use of 0358 takes advantage of the symmetrical intervalllic structures by juxtaposing pairs of perfect fourths. Two forms of [0358] are especially important in establishing the sense of pentatonic region, [6, 3, e, 8] and [5, 2, t, 7], indicating $P_c$ and $P_t$ respectively. These two tetrachords, ubiquitous throughout the instrumental prelude, firmly establish the two pentatonic regions. Example 3b illustrates the structural points of the song with a reduction graph. The measure numbers are noted above the graph. (The notes in the top staff are taken from the vocal part, with the text written underneath. The notes in the three lower staves are taken from the instrumental ensemble. The analysis of the vertical pentatonic sonorities below the graph uses symbols similar to those in the previous section.)

\[
\begin{align*}
P_c & \quad \text{the mundane suffering on earth} \\
P_t & \quad \text{the ethereal realm of Heaven} \\
P_0 & \quad \text{a declaration of the discord between the two worlds} \\
P_7/P_8 & \quad \text{a shift to reconciliation}
\end{align*}
\]

**EXAMPLE 3A: CHEN QIGANG, POÈME LYRIQUE II, SYMBOLIC MEANINGS OF PENTATONIC SCALES**
Chen’s use of the pentatonic collection carries symbolic meaning in a significant way. With $P_e$ representing the mundane suffering on earth, and $P_t$ representing the transcendence to the ethereal realm of Heaven, the first verse “ming . . .” (“When will the next moon shine?”) begins on an $F_b$—an element of $P_e$ appearing as a vertical chord. The text’s shift to the divine on the word “gwi . . .” (“Flying to the ethereal realm of Heaven on the wind’s wing”) falls on $C$, accompanied by a sudden shift of the sonority to $P_t$. A declaration of the discord between the two worlds is represented by a new pentatonic scale, $P_0$, this time supporting a new pitch, $D$, in the voice on the word “bu . . .” (“No one should be disappointed / When the moon remains round / At the moment of parting”). Both $P_0$ and $P_t$ are non-intersecting with $P_e$, consequently the change from $P_e$ to these two pentatonic collections effects a more drastic change of sonority, a gesture that reflects the dramatic moment of the poem. At the end of the song, in contrast to the $P_0/P_e$ pair, the $P_7/P_6$ pair emerges as a new area a tritone apart, portraying a fresh shift to reconciliation (“It alone attains a long life which permits us to admire / In the same instant, the same moon / While a thousand leagues separates us”). The interplay between the vocal line and the various pentatonic pairs constitutes an important expressive means, the detail of which I have discussed in another article.¹⁵

EXAMPLE 3B: CHEN QIGANG, POÈME LYRIQUE II—NON-INTERSECTING PENTATONIC PAIR AND THEIR 0358S {6, 3, e, 8} AND {5, 2, t, 7}
The orchestral work *Extase II* (1997) employs the principle of minimum-intersecting and maximum-intersecting pentatonic pairs in interesting ways. The opening section constitutes an expansive accumulation of melodic figures that builds up to a complete statement of the folk tune, "Dao Qing," on the solo oboe in measures 169–84 (Example 4a), the first of three such appearances. The folk tune is based on a Chinese pentatonic mode, *Zhi*.\(^{16}\) Here the melody appears in P\(_5\). (All grace notes and the F\(^\#\) in sixteenth notes on the downbeats are embellishments of the main melody.) This melody's opening gesture—C–D–G, an ascending major second followed by a perfect fourth—is made prominent through a series of fragmentations that precedes it. In fact the composition begins with the oboe solo of this motive—F\(^\#\)–G\(^\#\)–C\(^\#\), in the disguise of an embellished rhythmic figure. Example 4b reproduces the opening and two subsequent repetitions of this gesture. Notice the F\(^\#\) in measure 1 is a tritone away from the corresponding note in measure 169, C (Example 4a), similar to the relation between their pentatonic regions P\(_e\), implied by the former, and P\(_5\) of the later. These two pentatonic scales are non-intersecting, thus enhancing the sense of distance between the two respective passages. The prominence of F\(^\#\) is intensified most notably in measures 71–5, as will be discussed in relation to Example 4c.

Before we examine Example 4c, however, let us briefly return to Example 2b for a reconsideration of the interconnection among pentatonic scales. As discussed earlier, a pair of maximum-intersecting pentatonic scales—sharing a 0257 in common—is a pair of pentatonic scales separated by a perfect fourth. Together a pair of maximum-intersecting pentatonic scales forms a diatonic hexachord, namely, 024579.\(^{17}\) In other words, any two vertically connected pentatonic scales on Example 2b form a diatonic hexachord, 024579. And a single pentatonic scale can be read as an intersection between two diatonic hexachords in the vertical column. As a result of Chen's preference in connecting pentatonic scales using the maximum-intersecting relation, diatonic hexachords are ubiquitous in *Extase II*. The passage in Example 4c is a case in point. It
begins with $P_6$ on the harp, piano, and vibraphone in measures 71–2. Then swiftly a succession of diatonic hexachords moves from $P_2/P_9$, through $P_9/P_4$ and $P_4/P_6$, and ends with $P_e/P_6$ in measures 72–7. In this succession, each diatonic hexachord overlaps with the next by a pentatonic scale. In the meantime, the sequence of diatonic hexachords supports a full-force F# in the oboe solo, the invariant pitch class shared by the four pairs of pentatonic scales. The concluding pentatonic scale of this succession is, not surprisingly, $P_6$, also the pentatonic scale that precedes this progression. (We can easily conclude the inevitability of $P_6$ using the chart in Example 2b. Find any $P_2/P_9$ pair on the chart, and then the above-mentioned succession of pentatonic scales can be traced downward vertically. Take the first column for example: $P_2/P_9$ is followed by $P_9/P_4$, then by $P_4/P_e$, and finally by $P_e/P_6$.) Many similar pentatonic progressions are used in Extase II to connect the fragmented, yet increasingly augmented statements of the primary melodic material.

The climax of Extase II is the amalgamation of complete statements of the “Dao Qing” melody successively in different regions, supported by designs of pentatonic complex using the maximum-intersecting pentatonic chords (see Example 4d). The pentatonic regions of the three statements of the melody—$P_5$, $P_e$ and $P_2$—relate in an interesting way. The pentatonic regions of the first two statements are maximum intersecting. In the first statement, the same pentatonic region of the melody, $P_5$, is used in the supporting vertical sonority. Yet the second statement in $P_e$, a composed-out acceleration, is accompanied by frequent changes of pentatonic blocks, creating a fragmented effect. Each change of pentatonic block coincides with the division of subphrases, and the maximum-intersecting pentatonic sequence moves twice from $P_5$,
EXAMPLE 4C: CHEN QIGANG, EXTASE II, MEASURES 71–5,
SUCCESSION OF MAXIMUM-INTERSECTING PENTATONIC PAIRS
EXAMPLE 4D: CHEN QIGANG, EXTAZE II, PENTATONIC REGIONS OF THEMATIC SECTION, MEASURES 169–288. EACH BOX REPRESENTS PENTATONIC REGION(S) AS INDICATED; THE RELATIONSHIP BETWEEN REGIONS IS EXPRESSED BY THE LINES CONNECTING THE BOXES; THE SIMPLE LINE LINKS THE MAXIMUM-INTERSECTING OR THE SAME PENTATONIC REGIONS; THE ARROW LINES INDICATE NON-INTERSECTING RELATIONS.
through \( p_0 \) to \( p_3 \). The direction of the melody is slightly obscured by
appearances of melodic fragments of the same theme in different, though
closely related, pentatonic regions. Then a brief passage preceding the
beginning of the third statement hints at the change of regions: this pas-
sage is in \( p_2 \), one that is non-intersecting with the previous \( p_1 \) and \( p_3 \), yet
is maximum-intersecting with \( p_2 \), the region of the third statement.

The multi-pentatonic regions that surround the complete statements of
the "Dao Qing" melody begin soon after the beginning of this sec-
tion. After the first statement of the "Dao Qing" melody a repetition of
it, also in \( p_3 \), immediately follows, creating an effect of echoing. Here,
however, the "echo" is distorted by a simultaneous juxtaposition of the
melodic phrases in three pentatonic regions: \( p_3 \) is first joined by \( p_c \) and
\( p_0 \), and then by \( p_c \) and \( p_4 \), creating a thickened sound. The relation
among the three simultaneous sounding pentatonic regions was previ-
ously described by the triangle (\( x \)) in Example 2c. In the superimposi-
tion, the melody is heard—or not heard—in three pentatonic scales
simultaneously. In this work, Chen's play with the extensive use of dia-
tonic hexachords, the contrast of maximum-intersecting and minimum-
intersecting pentatonic pairs all reveal the composer's unique way of
moving around the chromatic space pentatonically. The concept of
collection-class invariance is at the core of his reinterpretation of penta-
tonicism. It seems that the pentatonic fragments dissipate easily into various
pentatonic regions, pulling the fragments in different directions. Yet at the
same time, the momentum of the piece is piled up as the constellation of
the primary motive in a wide variety of angles all point similarly toward a
one large gesture.

Chen's aesthetic style is at the core of his pitch structure. This is per-
haps best described in his own words. In the following quote he refers
more specifically to his other work, Le Souvenir (1985), yet much of it
also applies to Extase II:

The organizing principle of a composition, in terms of aural percep-
tion and temporal sequence, is one of augmentation. The work begins with a brief motive, which is then gradually expanded and
augmented in its figurations, intervals, duration, and rhythm as the
piece moves along, until its shape is richly enhanced and built up,
and until the audience's impression of it is gradually strengthened
and made ever so poignant to the extent of a total grasp. Yet in
terms of compositional practice, it is just the opposite. I start with
the most complete and expansive presentation of the materials,
namely the climax. . . . Then I eliminate from it till the essence of the
material [emerges]. This essential material then constitutes the main
motive of the piece and its intervals and harmony, framing the piece as a whole...19

In *Extase II*, the way in which the pentatonic fragments of the "Dao Qing" melody were gradually expanded and enriched in the various pentatonic regions of the chromatic field is much like that of a kaleidoscope that mirrors objects from many different angles. The momentum gradually increases as the figuration is built up, the pentatonic regions piled up, and the overall shape of the melody becomes ever more transparent. When the melody finally appears in full, the fragmented sound is finally bundled up into a whole, and the suspense is at last resolved.

Although the two compositions discussed here are rather different in their design and their sense of drama, they both illustrate Chen Qigang's rigorous control of the saturation of pentatonic subsets in the chromatic field, and the ways pentatonic regions become differentiated in terms of their relation to one another. The obvious pentatonic sonority here is therefore the result of the carefully woven chromatic threads.

LU YEN

The third mode of integration uses serialist thinking only to accentuate and underscore a free play with pentatonicism. Pentatonic melodies and non-pentatonic tone rows are juxtaposed in an antithetical manner. The effect of the pentatonic melody here is heightened by the use of completely contrasting pitch materials.

Lu Yen, the first of an important generation of American-trained Taiwanese composers, returned in 1979 to Taiwan after 15 years in the U.S. and became an influential composition teacher. While in the U.S., he studied with Mario Davidovsky, George Rochberg, and George Crumb. His compositions around this time can be described as quasi-pentatonic, and through his use of contrapuntal texture, he avoids the problem of pentatonic-melody harmonization. Lu Yen's compositions from the early 1980s distinctly reflect characteristics of serialism. Having studied in the U.S. during the late 1970s, he was well-versed in Allen Forte's theory, as well as the repertoire of classic twelve-tone works.20 In his compositional plans, the prime forms of set classes are sometimes notated in Forte numbers, such as the appearances of 6-Z23 (023568), 6-Z49 (013479), 4-12 (0236), and 4-Z29 (0137) in his String Quartet (1987). In his *Fantasy for Orchestra No. 1* (1987), the compositional materials include his own twelve-tone row, as well as the tone row of Anton Webern's op. 21, emphasizing its hexachordal design, and the
tone row of Webern’s op. 28, emphasizing its tetrachordal design (BACH motive). Although an ardent atonal composer whose scores are frequently accompanied by pages of compositional materials that include matrices and charts of pitch-class collections, Lu only loosely follows the practice of serialism. In his pages of compositional materials the permutations of transposition and inversion are always listed in two separate matrices. The segmentation, marked clearly on the matrix, reflects a great variety of divisions of the twelve elements, including $4 + 5 + 3, 6 + 4 + 2, 2 + 5 + 3 + 3, 5 + 7, 4 + 8, 4 + 4 + 4,$ or $6 + 6.$ In his later work, where the tone “rows” are no longer limited to twelve notes, the connection between their segmentations and motives is more apparent.

While the pitch structure of his work relies partly on tone rows, it just as often flows into free atonality or extreme chromaticism. However, the structures of his twelve-tone rows do not contain inherent pentatonic qualities. Rather, Lu seems to be drawn to the symmetrical quality of a wide variety of non-pentatonic pc sets. Collection-classes such as the 0369 tetrachord, the 0145 tetrachord, the 048 trichord, the 036 trichord, or the 06 dyad have a special place in his tone rows, and are strategically and explicitly placed. His ample use of 0145 and pc sets with tritones is completely at odds with pentatonic sonority, as semitones and tritones are the only two intervals not included in pentatonic scales. Indeed, the pitch organization of his accompaniment underneath the melodies seldom fosters any kind of pentatonic sonority. The melodies, on the other hand, frequently break into pentatonicism, or simply quote at length pentatonic tunes. The effect is one of antithesis.

In an earlier twelve-tone composition, *A Bird Flying By* (1988), charts of transpositions and inversions of the row at the end of the score (Example 5a) show a design based on inversional combinatorial hexachords: $(0, 6, 3, 4, 8, 7, e, 5, t, 2, 9, 1).$ Both hexachords of the row begin with a tritone, an important characteristic of this row. The composer’s own brackets above the matrices mark the position of augmented trichords found in the two hexachords respectively. At the beginning, the pitch structure of both the voice and the accompaniment strictly follows the tone row. However, as the text indicates *erhu*, a traditional Chinese two-string fiddle, the voice swiftly switches into a fragment of a familiar *erhu* melody in pentatonic region $P_9.$ (See measures 5–6 in Example 5b). The melody returns in a longer version later in the piece, as shown in measures 33–6 in Example 5b. The melody, in $P_9$ again—accompanied almost exclusively with a succession of 01 dyads, 06 dyads, and 036 trichords—is punctuated by accompaniment using hexachords of the tone rows $T_1$ and $T_2.$ Responding to the poem’s rather leisurely and almost humorous idling state of mind, either Lu Yen’s brief flow into pentatonic
EXAMPLE 5A: LU YEN, MATRICES FOR A BIRD FLYING BY,
OPENING ERHU MELODY

fragments or his lengthy outpouring of familiar pentatonic tunes seems capricious and playful.

Although the pitch structure of the song is only partly derived from the tone row, the effect of the row's structure is nonetheless explicit. Two subsets of the row's hexachord, 012458, are used particularly extensively—the 048 trichord and the 06 dyad. (The hexachord contains one of each.) They are often connectives among different forms of the tone row, and, through their frequent appearance, constitute an important sonority in this song. The importance of the 06 dyad is apparent from the opening, as it frames the piano prelude in prominent and characteristic gestures, as well as throughout the song. This is shown with brackets in Example 5c.\textsuperscript{22}

The 048 trichord's prominence here is linked to the hexachord's unique structure. From a 012458 hexachord, only one 048 trichord can be extracted, leaving behind a 014 trichord.\textsuperscript{23} Because of its symmetry, the same 048 trichord can be joined by six different forms of the 014 trichord to constitute six different pc collections of the 012458 hexachord. Example 5d lists four such groups of 012458 hexachord pc collections, each characterized by a 048 trichord and its six complementing 014 trichords.\textsuperscript{24} Such a structural relation is employed in an interesting way in measures 7–11 (see Example 5e). In measures 7–8, the vocal melody (quasi-erhu) in pentatonic region \( P_4 \) is accompanied by a succession of septachords and hexachords from tone rows, \( T_5, R_I, T_7, T_0, T_1, \) and \( T_0 \). A chain of different 048 trichords appears in the lowest register of the
EXAMPLE 5B: LU YEN, A BIRD FLYING BY, ERHU MELODIES,
MEASURES 5–6 AND 33–6
accompaniment, themselves forming a complete aggregate, a design made explicit by the stepwise motion between the first three trichords. Contrastingly, in measures 9–11, a single 048 trichord, \{1, 5, 9\}, appears four times, each time joined by a different complementing 014 trichord or its shortened figure, the 03 dyad. The structural base of this design is detailed in Example 5d. In measure 11 two appearances of another augmented trichord, \{0, 4, 8\}, are accompanied by two different 03 dyads in similar ways. Comparing to measures 7–8, the pace of change in harmony and melodic figuration here slows down, and the phrases become stretched, as the verses depict the poetic image of the erhu’s bowing, which is so drawn-out that it “extends the length of the alley by our home like a

<table>
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<th>{0,4,8} and six different 014s</th>
<th>Place in the row</th>
<th>{1,5,9} and six different 014s</th>
<th>Place in the row</th>
<th>{2,6,4} and six different 014s</th>
<th>Place in the row</th>
<th>{3,7,6} and six different 014s</th>
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<td>T_{2h_2}</td>
<td>159</td>
<td>e2t</td>
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<td>159</td>
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<td>T_{2h_4}</td>
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EXAMPLE 5D: FOUR GROUPS OF 012458 PC COLLECTIONS ACCORDING TO 048; T REFERS TO THE TRANPOSITIONAL LEVEL OF THE TONE ROW, H_{1} REFERS TO THE PC COLLECTION OF THE FIRST HEXACHORD, AND H_{2} REFERS TO THE PC COLLECTION OF ITS SECOND HEXACHORD
long strand of wet hair." The effect of text painting here is derived at least in part from the play of 048 trichords and their 014 complements.

In a more recent song, Furniture Music (1998) Lu Yen includes a complete chart of eighteen-tone rows in the score, each row using only eleven pitch classes (Example 6a). This chart reads more like a list of three basic motives and their transpositions than a typical matrix. Nevertheless, the ordering within the three motives, which I label as Segments
X, Y, and Z, is seldom changed when they appear. The interval succession of the tone row, just as in *A Bird Flying By* consists of mainly non-pentatonic intervals. The tone row is saturated with tritones. The 0369 tetrachord is glaring in Y (the middle four notes) and in Z (the last four notes), whereas X is based exclusively on 01 and 06 intervals. In addition, Z is based on the 01369 pentachord which is a subset of the 013679 hexachord on which Y is based. From a different perspective, Z is the hexachordal complement of Y minus one note. The 0369 tetrachords in Y and Z of the same row differ by one semitone. The pair of tetrachords in their respective segments—for example, [2, 5, 8, e] in Y and [4, 7, t, 1] in Z—is found predictably in the transformation related by ic 3: T₀, T₃, T₆, T₉. Furthermore, because of the hexachordal structure, two Y segments in rows whose transposition levels are separated by 6 semitones share the same pc collections.

Example 6a: Lu Yen, Furniture Music, Tone Rows and Charts of Their Transpositions (Top) and Inversions (Bottom)
Example 6b reproduces the first complete statements of the row in $T_0$. Segment $X$ reappears in this gesture frequently, introducing the entrance of new verses in a similar fashion. Segments $Y$ and $Z$ often appear in juxtaposed relation. Briefly, before the entrance of the first verse, Segments $Y$ and $Z$ appear in $T_0$ sharing the same pairs of 0369 tetrachords with the opening. The vocal lines for the first four of the five stanzas in the song consist of intervals similar to that of the tone row. For example, the verse for the first stanza is set to a melody based on the pc collection of Segment $Y$ in $T_1$. The characteristics of the fourth stanza change swiftly, however. All of its four verses are in the pentatonic region of $P_3$.

Example 6c reproduces the first two verses in this stanza, “In the songs I hear/In the words I speak” (measures 129–36). In the accompaniment, the three segments of the row in $T_6$, $I_4$ and $T_7$ again punctuate the vocal phrases. Here the invariant 0369 tetrachords provide many connections in a short span of music: $\{1, 4, 7, 1\}$, shared by $Z$ in $T_6$ and $I_4$, appears in the middle voices of measures 131 and 135; $\{0, 6, 3, 9\}$, shared by $Y$ in $T_7$ and $I_4$, appears in the outer voices in measures 135 and 136; $\{8, 2, 5, e\}$, shared by $Z$ in $T_7$ and $Y$ in $T_6$, appears in measures 131 and 136. The last notes of both vocal phrases are pitches belonging to the $X$ segment in their respective rows. Later on, another dimension is added to the juxtaposition of pentatonic sonority and tone row—a $C$-minor chord, in which sonority the song is finally brought to an end. The poem by Chen Li describes the most ordinary daily routine, whose nature of minimal expressiveness is reflected by an almost mechanical repetition of phrase.
patterns in the verses. It is almost antithetical that such a minimalist text would be set in such complicated, serialized music. Yet the composer’s repetition of melodic patterns corresponds fittingly to that of the verse. The poem’s unspoken yet omnipresent loneliness is revealed in the last verse, “in the solitude I remain,” which is accompanied by the repetitive droning of a lone C-minor chord.

The unambiguous, and almost funky quality of the quotation of pentatonic melodies forms a sharp contrast with his design of non-pentatonic tone rows as in A Bird Flying By. On the other hand, the solitude in Furniture Music is portrayed through a juxtaposition of these two different designs of pitch structure, with perhaps a hint of a third. One realizes that the two very different expressive means and sonorities are after all not meant to be merged seamlessly, but rather to become a commentary.
on one another in an unsettling juxtaposition. To have one without the other would be unthinkable for the aesthetic expression of these songs where a densely composed atonal idiom is placed side by side with characteristics of pentatonic tunes. The flow of pentatonic melody is rendered acute against the background of a contrasting, serialized sonority. And the fluent way that Lu’s pen traverses the two realms constitutes an important aspect of his style.

* * *

Since the beginning of the twentieth century many Western composers have sought alternatives to the diatonic system and its tonal functions. Similarly, throughout this century Chinese composers have grappled with the new meaning and roles of pentatonicism in their work. Adopting the twelve-tone concept as a mode of thinking is one way that many Chinese composers choose to reinterpret not only the technical aspects of pentatonicism but also their roles in the individual compositional aesthetic. In this sense, Luo Zhongrong’s approach of including the pentatonic characteristics in the tone row represents the most obvious solution. Many other Chinese composers who have adopted serialism have also explored in the same direction.\(^{25}\) However, Luo Zhongrong’s approach remains unique in his elevation of pentatonicism to abstraction, allowing its effect to recede into the background structure. With a firm grasp of the richness and intricacy of even partitioning and aggregate formation, each of Luo’s designs sheds some light not only on the pentatonicism but also on the chromatic universe. Chen Qigang’s use of foreground pentatonicism and collection class invariance represents a freer, seemingly intuitive, adoption of the integral concept of serialism. His use of pentatonicism is unabashedly obvious at times, yet he avoids the disadvantage of a monotonic effect through the ample use of minimum and maximum-intersecting pentachord pairs. Much of the fluidity and tonal surface in his music is closely related to his skillful play with collectional invariances and his full exploration of the chromatic space through the pentatonic path. This results in complicated webs of pentatonic sonority which are often hidden behind a much more obvious and simplified foreground. And finally, on the surface it would seem that Lu Yen’s pursuit of serialism is totally divorced from his almost nostalgic approach to pentatonicism. The compositional materials accompanying his scores reflect a rigorous consideration of the pitch designs and a preference for non-pentatonic intervals and subsets. His practice of various uneven partitionings of the twelve-tone row, as well as his use of them as simply chords and melody, reflects his motivic approach to serialism. In this light
his reference to the classic twelve-tone work in his composition is best viewed as an inclusion as compositional materials, or an homage to the twelve-tone masters, rather than a move toward traditional serialism. And the fact that the interval classes used in his tone row are themselves negations of pentatonicism indicates the relation between the two realms in his work. The aesthetic principle of his mode of integration is characterized distinctively by the distance he maintains between the two realms.

As we have seen, serialism in twentieth-century music plays a role in the three Chinese composers’ pursuit of pentatonic sonority. A common thread among these three composers’ approaches is their move to reinterpret pentatonic sonority as they view it through a chromatic lens. To put it differently, their responses to the compositional constraints of the twelve-tone methods turn out to have been deeply grounded in the compositional constraints posed by pentatonicism. Their varied aesthetic principles are at the core of their compositional interpretations of the ways in which pentatonic scales relate to one another in the twelve-tone pitch space. In this light, Luo Zhongrong’s approach emphasizes the pentatonic intervals, subsets, or scales as much as it endeavors to create unique atonal idioms, thus avoiding any obvious imitation of pentatonicism. Chen Qigang, on the other hand, effectively employs the structural relation of pentatonic scales in the chromatic space, so that the complicated relations work together in a seamless way to shape, highlight, and celebrate the expressiveness of pentatonic sonority. And finally, Lu Yen’s artistic effort is an attempt to disrupt any unity at the center, so that it is at once the serialism and the pentatonic tune, sometimes even the diatonic as well. In their individual processes of integration both realms—pentatonicism and serialism—are undoubtedly transformed. Their resulting repertoires thus offer unique ways to revisit the past as well as present differently organized realities of the future.
NOTES

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1. Yayoi U. Everett makes a similar point in a general discussion of the contemporary East Asian music. See Locating East Asia in Western Art Music, ed. by Yayoi U. Everett and Frederick Lau (Wesleyan University Press, forthcoming). Andrew Jones provides a survey of how as early as the late nineteenth century, the inclusion of Western music “was explicitly and inexplicably tied to the imperatives and exigencies of China’s nation-building project.” See his Yellow Music: Media Culture and Colonial Modernity in the Chinese Jazz Age (Durham, N.C.: Duke University Press, 2001), 24. See also Nancy Yunhwa Rao’s review of Barbara Mittler’s Dangerous Tunes: The Politics of Chinese Music in Hong Kong, Taiwan, and the People’s Republic of China Since 1949 in CHIME: Journal of the European Foundation for Chinese Music Research 12–3 (Spring/Autumn 1998), 191–2. The historical importance of this song type is also seen in the emphatic ways that it is treated by writers of recent Chinese music history. For the period of 1885 to 1949, see chapters 2–4 in Liu Chin-chih, Zhongguo Xin Yin Yue Shilun (A Critical History of New Music in China) v. 1 (Taipei: Yao-Wen, 1998), 26–387. For the period of 1949 to 1989 in mainland China see chapters 1 and 2 in Wang Yuho, Zhongguo Dangdai Yin Yue (Chinese Contemporary Music) 1949–1989 (Beijing: Beijing Guanbue Xiuyuen, 1992), 1–39. Both Zhao Yuanren and Huang Zhe are art song composers and household names. Chinese art songs in tonal idioms have played a special role in recent Chinese history, musically, politically, and economically. They thus constitute a category separate from Chinese art songs written in styles other than tonal idioms, especially those written in the last two decades of the twentieth century.

2. The use of songs in early Chinese films is the topic of a recent paper by Maria Chow, “In Search of a Voice: Dilemmas behind Early
Chinese Film Songs," delivered at the annual meeting of the American Musicological Society, Toronto, November 2000. She addressed the problems faced by different composers in the creation of early Chinese film songs. That film-going was popular is shown by a report in 1927 that indicates there were 106 movie theaters in 16 cities, totaling 68,000 seats. See Chapter 3: "The Urban Milieu of Shanghai Cinema" in Leo Ou-fan Lee, *Shanghai Modern: The Flowering of a New Urban Culture in China, 1930–1945* (Cambridge: Harvard University Press, 1999). Furthermore, the popularity of the gramophone also contributes greatly to the reform of musical life in the 1930s. See the chapter on "Gramophone in China" in Jones, *Yellow Music*, 53–72.

3. There are notable exceptions. Two of the most internationally famous mainland Chinese composers, Tan Dun and Qu Xiaosong, had considerably less training in the Western tonal music before they entered the conservatory. In general, however, familiarity with Western tonal music is necessary for composers in Hong Kong and Taiwan, where becoming a composer often requires intensive studies in Western music of the common practice period. In mainland China, however, the Cultural Revolution created a unique situation in which the study of music took on a totally different meaning. Because the Cultural Revolution interrupted or entirely blocked formal education for a large part of the young generation, in the late 1970s when the political movement was over, studying music became an important way to enter college for those with little schooling. A chance to study at the conservatories was a precious ticket distinguishing one from the less-educated masses. According to Li Xi’an, who administered the 1978 audition for the famous first entrance exam for the Central Conservatory of Music after the Cultural Revolution, two kinds of students stood out—those with considerable Western musical training and those who demonstrated extraordinary musical creativity and talent. In other words, many who were not so steeped in Western music training, yet managed to illustrate their musical talent in other ways, got ahead in this situation. This special historical context gave rise to the unusual background of some mainland Chinese composers, of which Tan Dun and Qu Xiaosong are examples. (Personal interview with Li Xi’an, May 27, 2001.)

4. In mainland China, for example, after the publication in 1980 of the first significant Chinese composition using twelve-tone technique (Luo Zhongrong’s song to be discussed below), the tone row used in this composition was adopted by Chen Mingzhi in two
compositions: *Eight Small Piano Pieces* and *Prelude and Fugue*. Several composers of the older generation also followed suit in writing twelve-tone works, including Ding Shangde in his *Sixteen Simple Piano Etudes* (1988) and Zhu Jian'er in his Symphonies Nos. 1, 2, 5, and 6 (1977–86; 1987; 1991; 1994). Composers of the younger generation such as Xu Shuya also used it, as in his Violin Concerto (1982). Various articles and books that were subsequently published also reflect an interest in the topic. See in particular Zheng Yinglie, *Xuie Yinyue Xiezuo Jichu (The Foundation of Writing Serial Music)* (Shanghai: Shanghai Music Publisher, 1989; 3d printing, 1999). Wai-Ling Cheong also noted that “a surge of interest in 12-tone music arose around 1985.” See Cheong Wai-Ling “Theory Reception in China: Report on Journals of Central Conservatory and Shanghai Conservatory of Music,” *Music Theory Online* 3, no. 4 (July 1997), and “Identity and Influence: New Music Research at Wuhan Music Conservatory,” *Music Theory Online* 6, no. 3 (August 2000). This trend might have been aided by another significant event occurring around this time: the visit of Alexander Goehr from Cambridge University in the fall of 1980. His lectures at the Central Conservatory of Music in Beijing on twentieth-century composition techniques were attended by hundreds from all over the country. He also gave individual composition lessons to a select few: Chen Yi, Zhou Qinru, Chen Dehong, Ge Ganru, and Ye Xiaogang. Goehr was given credit for being the first to introduce various modern compositional techniques of the West, including the twelve-tone technique.

It is also worth mentioning the influence of Wolfgang Fränkel and Julius Schloss during their tenure at the Shanghai Conservatory in the 1940s. Fränkel, a student in Arnold Schoenberg’s Berlin classes and a personal friend of Gustav Mahler, taught composition from 1941 to 1947. He was succeeded by Schloss, a student of Alban Berg, who introduced *Wozzeck* to the Conservatory. Fränkel’s students included Song Tong, Ding Shande, and Zhang Hau. However, according to Song, Fränkel’s teaching led students to delve deeply into counterpoint and atonal idioms rather than twelve-tone techniques. Phone interview with Song Tong, May 27, 2001. Also see Song Tong, “In Memory of Fränkel and Schloss,” *Yinyue Yishu (Art of Music: Journal of Shanghai Conservatory of Music)* 12, no. 1 (1990): 10–2.


9. Hindemith’s theories were introduced to Luo while he was at the Shanghai Conservatory in the 1940s. Although he suffered during the Cultural Revolution, he secretly translated Hindemith’s works, which were finally published after the Revolution. Paul Hindemith, *The Craft of Musical Composition* (New York: Associated Music, 1941–2); Paul Hindemith, *A Concentrated Course in Traditional Harmony: With Emphasis on Exercises and a Minimum of Rules* (New York: Associated Music, 1944); Allen Forte, *The Structure of Atonal Music* (New Haven, Conn.: Yale University Press, 1973); George Perle, *Serial Composition and Atonality: An Introduction to the Music of Schoenberg, Berg, and Webern* (Berkeley: University of California Press, 1962). Luo’s translation of Hindemith’s *The Craft of Musical Composition* was published in 1983, and has been reissued in 1992 and again in 2001. His translation of Hindemith’s *A Concentrated Course in Traditional Harmony* was published in 1983, and was reissued in 1997 and 1999. The translation of Forte’s *The Structure of Atonal Music* was not published; rather, it was used for pedagogical purposes in Luo’s seminars. There are actually several Chinese translations of Perle’s work, and Luo’s translation is a more recent one. More detailed bibliographic information can be found in Luo...

There is certain irony in the role played by the Chinese communist ideology in the development of serialism in mainland China. During the Cultural Revolution, modern music of any kind was strictly banned and condemned in communist China. Yet through a translated Soviet booklet on the topic of “Music Servicing the Anti-Revolutionists,” Luo, for whom information from the contemporary West was inaccessible, learned of the twelve-tone method. The musical examples from this little booklet became Luo’s, as well as other composers’ only connection with Western musical modernism.

10. He exerted great influence on his students, many of whom became outstanding composers, including Chen Qigang, Zhou Long, and Mo Wuping. A prolific writer on technical aspects of compositional theory, he continued to publish theoretical and analytical articles, as well as to compose new work. Along with Zhu Jian’er, he is currently the most original and prolific composer of his generation.

11. Years later, he returned to the same constraints and discovered many more rows, which he used to compose an orchestral work, *From Luo Zheng’s Canvases—Untitled No. 48* (2000).

12. The *guqin* excerpts are as follow: “Ode to the Narcissus,” “The Secluded Orchid,” “Wild Geese over the Sandbank,” “Mist over the River,” “Pu’an’s Incantations,” and “Flowing Stream.” These are all famous masterpieces.

13. For example, it is also used in *The Faint Fragrance (An Xiang)* for *zheng* and orchestra (1988–9).

14. For further analysis of this composition as well as a complete catalogue of Luo’s composition, see Nancy Yunhwa Rao’s “Imaginary Space in the Pentatonic Twelve-tone World: Luo Zhongrong’s *Qin-Yun*” in *Papers and Proceedings of the Sixth Seminar on History of New Music in China: Its Form, Craftsmanship, Aesthetics*, ed. C. C. Liu (Hong Kong: Hong Kong University, 2000), 263–87. For yet another approach to serialism, see Luo Zhongrong, “A Composer’s Notes on CHANG’E.”

16. Each of the five modes of the Chinese pentatonic scales has its own tonic. The tonic for Gong mode is do, for Shan mode is re, for Jiao mode is mi, for Zhi mode is sol, and for Yu mode is la.

17. The complement of this diatonic hexachord is the pair of pentatonic scales diagonally across from it in the next column. The diatonic hexachord [024579] is one of the all-combinatorial hexachords described by Milton Babbitt. See Babbitt, "Some Aspects of Twelve-Tone Composition," *The Score and I.M.A. Magazine* 12 (1955): 53–61. Here I make reference to this hexachord because it represents a set of properties that is commonly known by the readers in the music theory community.

18. Furthermore, the pitch structure of this melody makes such a connection even more interesting, as the antecedent phrase of this sixteen-bar melody is comprised of the invariant tetrachord 0257. The fifth note of the pentatonic scale does not appear until the beginning of the consequent phrase. This provides a smooth transition from P₅ to P₁, since the first half of the melody in P₁ uses only the notes that it shares with P₅.


20. Lu Yen was much influenced by both Schenkerian theory and set theory, which he might have studied while in Mannes College of Music and the University of Pennsylvania. He introduced the works of Felix Salzer, Carl Schachter, and Allen Forte to students in Taiwan in the early 1980s, which had an important influence on younger composers such as Wu Dingliang and Hong Chongkun. See Chen Li, *Lu-Yen (Biography of Lu Yen)* (Taipei: Shibao, 1999), 121–2.

21. The episodic melodies are not actual erhu tunes; they are melodies composed of familiar fragments of fiddle-string (jinghu) accompaniment in Peking opera. In consulting books on music for jinghu accompaniment of Peking opera, I found several fragments of bridge music to be relevant to the episodic melodies. See Yen Tongzhou, *Jinghu Yenzo Fa (Performing Method of Jinghu)* (Beijing: Renmin Yinyue, 1999), 180–1 and 187.

22. The drawing above the score is by the composer, indicating a man on a lounge chair with a lighted cigarette on a side table, newspapers on the floor, and a bird flying by. It depicts the setting of the poem.

23. In other words, a 012458 hexachord can be partitioned into a 048 and a 014 trichord.
24. By the same token, when one 06 dyad is extracted from a 012458 hexachord, a 0145 tetrachord is left. According to the property that each 06 dyad can be joined by four different forms of the 0145 tetrachord in forming the hexachord in question, the twenty-four hexachords on the tone-row matrix can be divided into six groups.

Lauri Chambers: *not titled*, 2002, oil on masonite; 49 by 48 inches; Francine Seders Gallery Ltd.