YOUNGER AMERICAN COMPOSERS

CHARLES WUORINEN: The Politics of Harmony

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THE CONFLICT at Columbia during the spring of 1968 resulted in the cancellation of numerous cultural events, one of which was the final concert of the 1967–68 season by the Group for Contemporary Music. This concert was to have included the first performance of *The Politics of Harmony*, "a masque stolen out of ancient authors by Richard Monaco and set for voices and instruments by Charles Wuorinen," composed between September, 1966 and November, 1967. (The first performance finally took place at the Group's first 1968–69 concert.)

For this writer, basic ethical-moral-political issues involved in the Columbia furor and those of dramatic import in the masque are strikingly parallel; both situations concern virtue and corruption on an institutional and national level. In *The Politics of Harmony*, the conflict takes place in ancient China where, traditionally, the emperor and provincial dukes represent an ideological embodiment of individual—and, by extension, national—virtue. Traditionally the responsibility for the total welfare of the state rests with the monarch: if China prospers it is largely a result of a condition of perfection of the emperor's character; on the other hand, if China is plagued by internal disorder and natural calamity it is because of a basic flaw in that emperor's personal virtue. Being the symbol of a state and its øulture, what a ruling monarch lacks in virtue and refinement, all China lacks.

The masque, the scenario of which is drawn mainly from the writings of Ssu-ma Ch'ien (ca. 145-90 B.C.), traces a progression from order to disorder, from prosperity to calamity, from the pure to the impure, from virtue to corruption, all via the vehicle of personal greed. The personae include a narrator (alto), Duke Ling and Duke Ping (both sung by the same tenor voice, however), and two musicians (Ch'in masters, both sung by a bass). The chamber orchestra consists of two violins, two contrabasses, two harps, two flutes (including two alto flutes and one piccolo), two tubas, piano and percussion (xylophone, marimba, glockenspiel, vibraphone, twelve drums, four woodblocks, four chinese blocks, four wooden drums, four almglocken, four cymbals, four gongs, three triangles, and four timpani).

Duke Ling and his retinue are traveling to a neighboring province of Chin, ruled by Duke Ping. Awakening from a dream by the river Pu, Duke Ling hears a haunting melody being played from afar on the Ch'in. Enraptured by the music, he commands his youthful Ch'in master, Chüan, to learn the strange tune. After having done so, Chüan is uncertain of the virtuous significance of the music, and he implicitly cautions the duke against hearing

such unfamiliar notes:

Chüan: "I can play the tune now, but I do not know if it expresses rare

thoughts in solitude."

Ling: "The tune seems quite clear." Chüan: "But the notes are unfamiliar."

Upon arriving in Chin, Ling relates his experience to Ping, the latter subsequently demonstrating a surprisingly eager greed to hear such strange music. Kuang, Duke Ping's wise old Ch'in master, interrupts the recital with the admonition, "Music of a doomed state must not be heard." He goes on to explain that these Ch'in tunes were composed by a master Yen to please the ancient emperor Chou. Chou was eventually destroyed, whereupon Yen fled and drowned himself in the river Pu, the very banks by which Duke Ling heard this music. Such admonitions go unheeded, for the duke's greed cannot be contained. More forbidden tunes, increasingly sinister in nature, are commanded, corrupting the ears and eroding the virtue of the dukes. Consequently, a sequence of both natural and supernatural phenomena unfolds: an ominous appearance of sixteen dark cranes crying and beating their wings; a gathering of dark clouds; finally storm, wind, torrent and natural calamities—in short, total disorder—afflict the land of Chin.

The thirty-five sections of the masque fall into two triply subdivided categories:

- I. Concerted (instrumental) numbers
- a. prelude, postlude
- b. seven Ch'in tunes
- c. seven symphonies
- II. Vocal numbers
 - a. bass aria, alto aria
 - b. six narrations
- c. four dialogues.

Not unlike the nature of arias and instrumental sinfonias in a Baroque cantata, passion, or oratorio, the masque's two arias and seven symphonies project a sense of poetic elaboration and musical "description." Respectively, the seven symphonies depict or accompany the presentation of (1) a banquet, (2) the appearance of sixteen dark cranes, (3a) the crying of sixteen dark cranes. (3b) dancing of the same, (4) music to assemble ghosts and spirits, (5) black clouds arising in the Northwest (one measure long), (6) storm, wind, and torrent, (7) drought. An ecstatic mood, present in the text and conveyed mainly by rich melismatic writing of the opening bass aria, "The Yellow Emperor Creates Music in the Pure Chuëh Mode," establishes a sense of absolute virtue and perfection, against which the desires and deeds of the basically less virtuous dukes are to be presented in relief. The alto aria, "Trope: Another Description of the Sixteen Dark Cranes," is an elaborate, poetic projection of a dramatic decline to imminent catastrophe, a parallel to the second and third symphonies. In contrast to the earlier bass aria, the text here is devoid of a sense of ecstasy; formerly rich melismatic writing becomes

sinister in tone, progressing to a syllabic setting at the end; the opening sostenuto scoring for flutes, tubas, violins, and contrabasses is replaced here by a more brittle and *secco* instrumentation for harps and piano.

The Ch'in tunes, for violins, contrabasses, and harps, are a set of twelve variations grouped into seven disjunct sections. Dramatic action and musical description are absent, in favor of "pure" music. These tunes provide, perhaps, the largest unifying factor of the masque, continuity being achieved through the implicitly evolutionary nature of musical materials in such a set of variations.

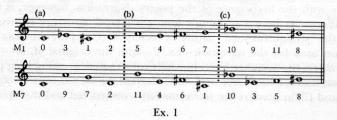
The pitch material of the masque is drawn from two "type A" hexachords:

Transformations, other than that of transposition and mirror forms, of these hexachords are achieved through multiplicative operations: by multiplying the numerical designation of the pitch classes by 1, 11, 7, or 5 (mod 12)—the only multiplicative operations capable of generating a twelve-pitch-class system—new set forms are created, set forms which, to this reviewer, are more organically related to the original material than those obtained by the more usual method of transformation by derived set extension. With M designating a multiplicative operation, the following are the principal transformations of the original sets:

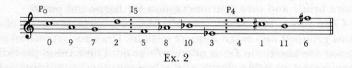
M_1	0	3	1	2	5	4	6	7	10	9	11	8
M_{11}	0	9	11	10	7	8	6	5	2	3	1	4
M ₇	0	9	7	2	11	4						
M_5								11				

It will be observed that M_{11} is the inversional complement of M_1 , and M_5 that of M_7 ; multiplication by 1 (M_1) defines the original prime set. Under M_7 all even numbers (the whole-tone scale) are invariant; M_5 complements even-numbered pitch classes (mod 12) as well as producing an invariant diminished seventh chord (0 3 6 9).

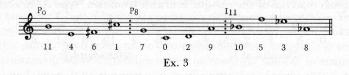
Derived sets, in traditional twelve-tone terminology, are employed for most of the narration, the utterances of the dukes, and the words of the Ch'in masters. Viewing the succession of hexachords 1 and 2 as a complete twelve-tone set, the three divisions listed above employ new twelve-tone sets, tetrachordally generated from the M₇ transformation:



Thus: $M_7(a)$, narration [derived from first tetrachord of M_7]:



 $M_7(b)$, dukes (derived from second tetrachord of M_7):



 $M_7(c)$, Ch'in masters (= R_4 of $M_7(a)$, derived from final M_7 tetrachord):

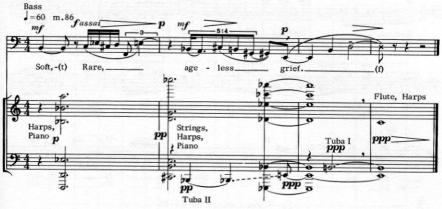


The Ch'in tunes use the basic twelve-tone set $(M_1$ and its inversion, $M_{11})$, the bass and alto arias hexachord 1 and 2, respectively, of that set. The symphonies are based upon M_7 of hexachord 1 plus I_5 of that transformation:



The application of such derived sets, based upon multiplicative transformations of the original set, provide musical characterization and reveal the composer's approach to dramatic structure and the requirements of dramaturgical emphasis. One is immediately struck by the variety of modes of expression and their judicious pacing throughout the masque. The basic referential sets for the big alto and bass arias with their "chromatic" aspects correlate with the luxuriance of the poetry. Narration, however, is treated quite differently; here a seemingly less "chromatic" structure is invoked to project the "straightforward" nature of recitative. (Compare the $M_7(a)$ transformation used for the narration—Ex. 2—with the original M_1 set—Ex. 1.) Furthermore, the arias are hexachordally constructed, creating long phrases and a multifaceted harmonic structure, whereas the M_7 sets for the narration, dukes, and Ch'in masters are tetrachordally constructed and therefore pro-

duce shorter phrases and a simpler, less complex harmonic scheme (Exx. 6 and 7).



Ex. 6. Bass aria, mm. 86-89



Ex. 7. Ch'in master, Kuang, mm. 328-30

Most interesting of all is the intervallic characterization of the two dukes: being simplemindedly rigid characters, the open and angular perfect fifth and fourth construction of their sets provides an effective and ingenious means of character projection:



Ex. 8. Duke Ling, unaccompanied, mm. 156-59

In matters of text setting there exists a close relationship between pitch-class structure and phonemic content. The bass aria demonstrates one procedure of pitch-class—phonemic association:



Ex. 9. Bass aria, mm. 14-25

In the above segment, individual pitch classes or pitch-class complexes are associated with specific phonemes so that recurrences are mutual. The chart on p. 161 illustrates the disposition of phonemes and pitch classes of the first verse; the lower line of text in Ex. 9 distributes the phonemes as indicated by the chart, though it must be emphasized that such phonemic distribution is completely in keeping with principles of accurate and natural delivery of the words by any good singer.

Significantly, phonemic order determines pitch-class order, producing new, contextually relevant set forms. Choice of general register is determined more or less by discursive aspects of the text, that is, words associated with the supernatural (ghosts, spirits, serpents, etc.) are sung relatively low, in a piano dynamic, whereas words referring to the Yellow Emperor, to the sky, to light, and so forth, are generally placed in a higher register (see Ex. 9).

Another procedure of establishing phonemic–pitch-class relationships is used in the alto aria, "Trope: Another Description of the Sixteen Dark Cranes." In short, a scale of phonemes, being generally a progression from vowels to consonants, from soft and open to hard and closed sounds, is set up as follows: aw, ah, ă, eh, ĕ, uh, ĭ, ē, ī, ay, oy, ow, ō, ōo, ŏo, u, y, w, m, n, ng, g, d, v, th (hard), z, r, l, t, s, sh, ch, f, th, p, k. To reflect this progression the aria is constructed in three verses with an introduction and intervening interludes, each successive verse becoming, analogously, less melismatic and more syllabic (though this progression is projected more forcefully by the accompaniment). The chart on p. 162 illustrates the phonemic – pitch-class associations for each verse; note that any given phoneme receives different or varying densities of pitch-class emphasis in each sequence and that the opening melismatic pitch-class associations, emphasizing liquid vowels, are gradually replaced by incisive, consonantal emphasis achieved through the reduction of pitch-class density (that is, the number of actual pitches) per vowel.

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Ex. 10. Bass aria, phonemic-pitch-class chart, mm. 14-25

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Throughout the masque, set progression and association rarely involve techniques of combinatoriality. For example, the 12×12 array for the first Ch'in tune, first variation (mm. 115–29)—constructed so that the inversion reads both down and across, thus producing only two set forms I and RI—is never used in a combinatorial manner with respect to pitches, in spite of inherently significant combinatorial properties. Set form progression is by successive pitch classes of the inversion: I_0 , I_9 , I_{11} , I_{10} , and so forth.

0	9	11	10	7	8	6	5	2	3	1	4	
9	6	8	7	4	5	3	2	11	0	10	1	
11	8	10	9	6	7	5	4	1	2	0	3	
10	7	9	8	5	6	4	3	0	1	11	2	
7	4	6	5	2	3	1	0	9	10	8	11	
8	5	7	6	3	4	2	1	10	11	9	0	
6	3	5	4	1	2	0	11	8	9	7	10	
5	2	4	3	0	1	11	10	7	8	6	9	
2	11	1	0	9	10	8	7	4	5	3	6	
3	0	2	1	10	11	9	8	5	6	4	7	
1	10	0	11	8	9	7	6	3	4	2	5	
4	1	3	2	11	0	10	9	6	7	5	8	

Ex. 12. First Ch'in tune, 12×12 array, mm. 115-29

For the Ch'in tunes the intervallic construction of the pitch sets affects more than just time-point rhythm in the temporal domain; the intervallic pitch proportions determine the tempo relationships of each successive variation, the only deviation from mm. =60 in the entire masque. The intervallic proportions of the prime (P_0) translated into tempo relationships produce the following results (rounded off to the nearest practical metronomic indication in order to avoid fractional divisions):

P₀: (pitch class) 0 3 1 2 5 4 6 7 10 9 11 8
Tempi:
$$J$$
 = 60 72 64 68 80 76 84 90 108 102 112 96
Ex. 13. Tempo relationships for Ch'in tune variations

In short, tempi are related logarithmically, determined by the initial formula $60 \times \sqrt[12]{2}$, and successive multiplications by $\sqrt[12]{2}$, producing an equivalence of

pitch and tempo proportions.

Another frequently used method of pitch set progression may roughly be described as a treatment of the array in a spiral fashion, working from the

"outside in": Most obviously, then, set progression involves the

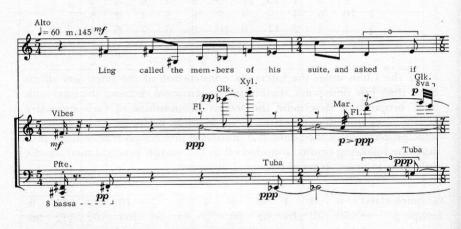
intersection of set polarities for which the opening of the bass aria may serve as a representative sample.

0	3	1	2	5	4
9	0	10	11	2	1
11	2	0	1	4	3
10	1	11	0	3	2
7	10	8	9	0	11
8	11	9	10	1	0

Ex. 14. Bass aria, a 6×6 array



Ex. 15. Bass aria, mm. 14-17





Ex. 16. Second narration, mm. 145-47

Rhythmic organization exists on two planes: (1) a more or less natural prosodic setting of the text—though the bass and alto arias are distinctly more melismatic—and (2) a time-point rhythmic structure.¹ Textually derived vocal rhythms with supporting accompaniment are most apparent in action situations, as Ex. 16 (p. 164) from the second narration should demonstrate. Note that the pitch material of the accompaniment as well as its rhythm is more often than not determined by that of the voice.

On the other hand, time-point structures organize temporal progression in the instrumental numbers, the Ch'in tunes and the symphonies. The Ch'in tunes begin by unfolding twelve-part pitch set forms (see Ex. 12) mapped onto evolving six-part rhythmic forms, this six-part aggregate then being reduced to a single resultant rhythm.

0 9 11 10 7 8 9 6 8 7 4 5 11 8 10 9 6 7 10 7 9 8 5 6 7 4 6 5 2 3 8 5 7 6 3 4

Ex. 17. First Ch'in tune, initial 6×6 array

Column One reduces to $\frac{3}{4}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{10}$ $\frac{1}{11}$, Column Two to

 $\frac{3}{4}$ $\stackrel{?}{\underset{4}{\stackrel{}{\stackrel{}{\stackrel{}}{\stackrel{}}{\stackrel{}}{\stackrel{}}{\stackrel{}}}}}$ $\frac{7}{\underset{8}{\stackrel{}{\stackrel{}{\stackrel{}}{\stackrel{}}{\stackrel{}}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}{\stackrel{}}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}}$ $\frac{7}{\underset{9}{\stackrel{}}}$ $\frac{7}{\underset{9}}$ $\frac{7}{\underset{9}$

modular transformations being employed as these set forms continue to unfold. The first Ch'in tune's opening two bars illustrate the procedure of mapping pitch sets onto six-part time-point aggregates expressed as a resultant rhythm (see Ex. 18).

Through a process of time-point "gathering," successive variations become thinner in texture, more chordal in appearance—especially evident in the latter part of the third Ch'in tune, continuing into the fourth and fifth tunes. Between these chords melodic solos for harp one are introduced which in turn generate a return to more complex pitch and rhythmic activity so that, indeed, the seventh Ch'in tune—this time with drums participating in rhythmic and registral procedures—becomes the most dense of the twelve variations from all standpoints.

Much more can be written, and indeed should be written, about such matters as the masque's extraordinary orchestrational design, the pacing and positioning of the thirty-five sections, the structure of the text, the dramaturgical plan, methods of dramatic and musical continuity, and so forth. However, much of what could be said in those realms would be relatively meaning-

¹ For an exposition of the basic concepts of the time-point system, see Milton Babbitt, "Twelve-Tone Rhythmic Structure and the Electronic Medium," Perspectives of New Music, Vol. 1, No. 1 (1962).

less without impractically massive quotes from the score. But I do wish, in conclusion, at least to express my belief that *The Politics of Harmony* is a major contribution to twentieth-century music drama.



Ex. 18. First Ch'in tune, mm. 115-16



Wuorinen: Bass Aria (mm. 14-37)





Wuorinen: Bass Aria (mm. 14-37)

Wuorinen: Bass Aria (mm. 14-37)