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A study of Lou Harrison's Concerto for Violin and Percussion Orchestra and Concerto for Organ and Percussion Orchestra

Burwasser, Daniel A., Ph.D.

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300 N. Zeeb Rd.
Ann Arbor, MI 48106

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A STUDY OF LOU HARRISON'S CONCERTO FOR VIOLIN AND PERCUSSION ORCHESTRA AND CONCERTO FOR ORGAN AND PERCUSSION ORCHESTRA

by

Daniel A. Burwasser

A dissertation submitted to the Graduate Faculty in Music in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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7/13/93 — Carol J. Oja
Date — Chair of Examining Committee

13 July 1993 — Ann W. Matter
Date — Executive Officer

David Olan

David Del Tredici

Joel Lester

Philip Lambert

Joseph Straus
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PREFACE

The most significant elements of Lou Harrison's music are melody and form. With respect to melody, Harrison's often uses a single-line (sometimes a chordal melody) with rhythmic accompaniment of drones or ostinatos, something which reflects the composer's appreciation for non-Western musical traditions. Some of Harrison's percussion-based music such as the First Concerto for Flute and Percussion (1939), Concerto for Violin and Percussion Orchestra (1940/1959), the Concerto in Slendro (1963), and the Concerto for Organ and Percussion Orchestra (1973) incorporates this idea. In addition to these works, Harrison wrote other music for percussion alone. Composed in the late 1930s and early 1940s, this body of work helped to legitimize the role of percussion in musical literature.

In many respects, these early works stylistically anticipate some of the later ones. Particularly in two aforementioned pieces, related by virtue of their instrumentation and standard usage of forms, the Concerto for

Violin and Percussion Orchestra and the Concerto for Organ and Percussion Orchestra, the composer deploys a palette solely made up of percussion instruments together with a single melodic instrument. That these works are concertos rather than purely percussion pieces, immediately sets them apart from the others and merits this study. The purpose of this study then is to analyze two instances of Harrison's approach to orchestration -- more specifically, the interaction and balance between the solo/melodic instruments and the percussion accompaniments.

With regard to the element of form in Harrison's music, the writer will address the issue of how the composer creates a variety of musical forms from using non-conventional (and non-pitched) resources. Harrison has employed two different working methods to produce a pair of works which combine Western formal procedures with a non-traditional accompaniment. The interaction of these two elements will be explored in this thesis.

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I. ORIGINS AND INFLUENCES

Lou Harrison's music, including The Concerto for Violin and Percussion Orchestra (1940/1959) and The Concerto for Organ and Percussion Orchestra (1973), is the product of different yet interrelated influences; these are Far-Eastern music, modern dance, and musical experimentation. Probably the most prominent of these influences is Far-Eastern music. Born in 1917 in Portland, Oregon, Harrison is a composer best known for fusing techniques from the European classical tradition with Far Eastern as well as African, Spanish, and Native American musics. His eclectic foreign tastes were enhanced greatly by early exposure to non-Western music and art objects during his childhood and to Henry Cowell's course "Music of the World's Peoples" in which he enrolled following high school graduation. These and the colorful and percussive nature of Balinese and Javanese music exerted the earliest and most lasting influences on his later creative work.

Many of Harrison's percussion pieces display this global flavor. In both concertos, he has developed his own brand of Asian music by combining non-Western musical practices with

European influences -- non-Western in the use of percussion as the sole orchestral support for the soloist, and European in their adherence to traditional, Western forms and procedures. Thus, the percussion orchestra in these two works functions in both novel and familiar ways.

The Violin Concerto, for example, combines a variety of non-Western influences, including African and Far-Eastern. The composer has stated that the Violin Concerto "finds its solid groundwork and foundation in world music" and that the idea of having a single melodic part above a strict percussion accompaniment is "worldwide".[1] The Organ Concerto is more related to gamelan music, reflecting the composer's involvement with it beginning especially in the early 1960s. In addition, the Organ Concerto employs certain instruments like the "great bells" which emulate a gamelan sound.

Both works, although composed much later, also have stylistic roots in the modern dance period of the 1930s in which Harrison was directly involved as teacher, composer and accompanist for dance classes at Mills College. The dance

element in Harrison's music was also significantly fostered by the teachings and music of Henry Cowell. Cowell, who opened many creative doors for Harrison in his early years and with whom Harrison worked closely on many aspects of music, summarized the effect modern dance has had on the writing of percussion-based concert works like Harrison's concertos:

> "...Percussion instruments are essential as aids in defining rhythmic change. All dance is of course dependent on a well-defined beat; when the beat shifts constantly, as in much of modern dancing, it is vitalizing to have the changes sharply indicated on percussion instruments. Having mastered the gamut of the instruments used in the studios, they [the composers] naturally proceed to compose for them works in larger forms, with enough tone qualities and rhythms to achieve independent musical compositions."[2]

In both concertos, Harrison utilized a combination of conventional, symphonic percussion instruments and a variety of unusual homemade instruments -- i. e., several sound-producing objects not normally used as musical instruments which he modified for musical purposes. This practice reflected Harrison's interest in the wave of musical experimentation

which captivated certain composers of the late 1930s and early 1940s. Harrison was a member of a group of West Coast composers including John Cage and William Russell who sought a new world of sound, often through the use of found instruments, i. e., ones made of common household materials. The group's aim was creative independence -- emancipation from the artistic limitations and financial burdens imposed by the musical establishment. Harrison has amplified this notion in an interview:

> "As you can readily understand, it [the percussion ensemble] has built-in abstraction, especially if you are not using symphonic percussion. When we were doing lots of percussion concerts on the West coast, way back in the 30s, we did not use classic symphony percussion because that got you involved with the symphony orchestras and traditional players and the union and everything else. Whereas, what we were creating, actually was a way of making music outside the traditional music world, and we did. It was, in fact, the same impulse that carries a lot of the young people into electronics instead of learning symphonic practice and getting acquainted with conductors and musicians and so on...We did the other thing; we went outside the establishment in every sense. We picked up brake drums and flower pots and such instruments as we could find in Chinatown. We gave our own concerts, we had our own friends to play it [sic], we

> did our own publicity, we hired the hall...it was the establishment of a whole realm, a whole literature, and it did, it turns out, put the percussion ensemble on the map in western music, which it was not before."[3]

Along with the creation of new sounds produced in the artistic environment described above, Harrison became fascinated by unusual and unorthodox instrumental combinations. Like Cage, he believed that any physical object can be incorporated into a musical composition. He has stated, "in every new piece I sometimes [sic] think of a new instrument."[4]

The instruments used in the concertos are many of the same type found in his early percussion pieces. The Organ Concerto, written approximately fourteen years after the Violin Concerto had been completed, integrates a similar combination of instruments with some new, unique homemade instruments designed by the composer and his friend William Colvig. These include a large rasp, three wooden drums, and six "great bells" -- all of which represent novel additions to Harrison's

percussive pallette, adding a greater variety of tonal color to his work. Other instruments Harrison uses in both concertos are constructed in graduated sets such as metal pipes and flower pots.

In order to understand the compositional techniques employed in these concertos, it is helpful to place them in the context of percussion works by Harrison that share the influences and characteristics described above-- these are some of his earliest works for percussion ensemble: the First Concerto (1939), Fifth Simfony [sic] (1939), Canticle No. 1 (1940), Double Music (1941), Canticle No. 3 (1941, rev. 1989), The Song of Queztecoatl (1941), Fugue (1941), and Suite for Percussion (1942). All of these works were composed within a brief span of time (1938-1942) when Harrison resided in San Francisco.[5] A discussion of them will provide an overview of Harrison's percussion style which directly reflects certain methods used in the both concertos.

Harrison's First Concerto for solo flute and two percussionists embraces the world view of a solo melodic

instrument with purely rhythmic accompaniment. It also resembles the later concertos in the juxtaposition of long, sustained melodic lines against articulated, non-sustaining ostinato percussion.

The Fifth Simfony is one of fourteen "simfonies" written during the years 1938 to 1941.[6] The Fifth Simfony seems to have been a favorite of the composer. "It is absurdly simple, yes, but I have always liked that. People will be bored but a surprising number of them are not bored."[7] The piece displays the use of short ostinato patterns in contrapuntal dialogue and canonic movement of all four voices produced by various timbres of wood, metal, and skin.[8] The simplistic rhythmic nature and use of mixed percussive timbres in the Fifth Simfony are important features seen in the later concertos.

Canticle No. 1 , composed specifically for the dance, is more rhythmically complex and features a more rigorous use of independence of voices. The conclusion, for example, is comprised of a five-voice, multi-timbral texture with each line

playing a different two-measure rhythm. Harrison has called the work "a simple waltz...the time is 3/4, but this fact is hidden by innumerable syncopations and exceptional rhythmic phrasings...the characteristic swing of the waltz is not there."[9]

Double Music, written in alternate parts (lines one and three by John Cage, two and four by Harrison) demonstrates a more extensive use of graduated sets of instruments than ever before. Much of the writing for these sets displays a continuous flow of overlapping melodies.[10] These melodies are intervallically short-ranged and only "implied" (high and low sounds) because each set of non-pitched graduated instruments at most produces only six possible notes. These implied melodies are also treated in a similar fashion in the two concertos. Also, with its clangorous metalic sounds and persistent running eighth note activity, the overall flavor of Double Music is Asian.[11]

Harrison says that the Canticle No. 3 was "written at a time I was most interested in Indian and Mexican music."[12] The

instrumental requirements in Canticle No. 3 are unusual, including muted iron pipes, muted and suspended brake drums, a wooden box (like a bass woodblock),[13] water buffalo bells (dry, metal-sounding, oval-shaped bells),[14] and for the first time in Harrison's music, a "small xylophone" comprised of only three specified pitches, D#, F#, G#.

The Canticle No. 3 is a concert work which features the use of "melodicles" or neumes so that "they may be combined and recombined in lovely ways."[15] "Melodicles" are small groups of notes which are combined to form melodic patterns (ostinati), much like the ones abundantly found in Harrison's percussion music. In manipulating these "melodicles", the notes may appear inverted, in retrograde, and in augmentation or diminution while in combination they weave a complex contrapuntal fabric. A similar, yet not so strict form of this technique is also used in the first movement of the Violin Concerto. In general, motives or groups of melodicles of varying lengths are often canonically treated in many other percussion works by Harrison as well. In a

thematic context, the various sets of metal, wood, and skin instruments suggest actual melodies, however with an intervallically short range, like Double Music.[16]

Like Canticle No. 3, the Song of Queztecoatl was also not intended to be used as a dance piece but as a concert work.[17] The piece which was inspired by the ancient Aztec diety, again requires the performers to play some unusual instruments, such as mounted glasses and brake drums in graduated sizes. It calls for no fixed-pitch instruments but again does allude to relative melodic writing in the instrumental sets. Other familiar features of the work include canonic ostinatos, overlapping contrapuntal textures like those found in Canticle No. 3 and Fifth Simfony, and brilliant tutti sections -- concepts which were taken up again in the two concertos.

In the Fugue, the composer deviates rhythmically from the previous percussion works. The most important difference for our purposes is the presence of cross-rhythms or "grupetti" as labeled by the composer.[18] The composer has stated that the

brief appearance of "cross-metrics" in the last movement of the Violin Concerto for example, is a vestige of the early percussion pieces, most notably the Fugue.[19] Harrison also said that "grupetti" help to create interesting and complex contrapuntal textures.[20]

The Suite for Percussion was composed just prior to Harrison's departure for Los Angeles to study with Schoenberg. It was also the last piece that Harrison composed with an emphasis on percussion until the Violin Concerto in 1959.

Harrison has said that the main elements binding the early percussion pieces to the concertos were contrapuntal methods, i. e., cross-metrics (Violin Concerto), layered ostinati, and motivic juxtaposition -- horizontally and vertically (Organ Concerto). Aspects of the concertos not found in the early pieces include formal procedures (the earlier works are more freely composed -- the concertos are more formally modeled after the western classical tradition). Also, in the case of the organ concerto, an intermediate body of tonal percussion are distinctive features never before seen in any percussion work by Harrison.[22]

ENDNOTES FOR CHAPTER I

1. Lou Harrison, record notes for Concerto for Violin and Percussion Orchestra, performed by the Los Angeles Percussion Orchestra, conducted by William Kraft, Eudice Shapiro, violin (Crystal Records, S853).

2. Henry Cowell, "Drums Along the Pacific," Modern Music 2/1 (Nov./Dec., 1940), 48-49.

3. Lou Harrison, interview by Virginia M. Rathbun, 1976, as quoted in "Lou Harrison and His Music" (Unpublished M. A. Thesis, San Jose State University, 1976), 119. This volume contains numerous and extensive quotations from interviews by its author. It has provided me with considerable background material.

4. Lou Harrison, interview by Virginia M. Rathbun, as quoted in Rathbun, 126.

5. Harrison's best known percussion ensemble works originate from1938. They are the focus of the following dissertation which has given me considerable backgound information on the early percussion works. Don Russell Baker, "The Percussion Ensemble Music of Lou Harrison: 1939-1942" (Unpublished D. M. A. Dissertation, University of Illinois at Urbana-Champaign,1985).

6. Rathbun, 122.

7. Lou Harrison, interview with Don Russell Baker, as quoted

in Baker, 135.

8. Ibid., 138-139.

9. Lou Harrison, as quoted in Paul Price, record notes for Concert Percussion for Orchestra, performed by the The Manhattan Percussion Ensemble, Paul Price, cond. (Time S-8000)

10. See the discussion of Double Music by Ron Keezer in "A Study of Selected Percussion Ensemble Works of the 20th Century," Percussionist 8/1 (1970), 15.

11. Keezer, 17.

12. Lou Harrison, interview with Don Russell Baker, as quoted in Baker, 150.

13. Baker, 154.

14. Ibid., 153

15. Lou Harrison, Lou Harrison's Music Primer (New York: C. F. Peters Corp, 1971), 1.

16. The ocarina line, which appears at the top of each system in the score of Canticle No. 3, is treated in somewhat concerto fashion -- as a sustained, lyrical solo voice accompanied by a percussion group.

17. Baker, 160. Not all of Harrison's percussion music was intended for the dance. Exclusively concert works include, Bomba (1938), Canticle No. 3, Fugue, and Suite

for Percussion.

18. For more discussion on "grupetti", see Harrison, Primer, 19.

19. Author's interview with Lou Harrison, 10/31/90.

20. Harrison, Primer, 19. See also article by Stuart Smith, "Lou Harrison"s Fugue for Percussion," Percussionist 16/2 (Winter 1979), 47-56.

21. Interview with Harrison, 10/31/90.

22. Ibid.

II. HISTORY AND DESCRIPTION OF LOU HARRISON'S CONCERTO FOR VIOLIN AND PERCUSSION ORCHESTRA AND CONCERTO FOR ORGAN AND PERCUSSION ORCHESTRA

A. THE CONCERTO FOR VIOLIN AND PERCUSSION ORCHESTRA

As indicated in Chapter I, Harrison began the Violin Concerto in 1940 when he was working with Cage and Cowell in San Francisco, however, he did not complete the work until 1959. It is therefore stylistically associated with Harrison's percussion pieces of the "San Francisco" period, borrowing from and combining the various influences of world music, modern dance techniques, and instrumental experimentation.

Upon hearing the premiere recording of Alban Berg's Violin Concerto around 1940, Harrison was moved to begin composing his Concerto for Violin and Percussion Orchestra. Work on the concerto was not continuous, however. After composing a good portion of the work, Harrison stopped writing the piece for a time when he moved from San Francisco. (In his early years, he had done the same with many other works already in

progress.)[1] Harrison said that he had originally composed a "fair amount" or "most of it" at the earlier date, especially the violin part -- much of the accompaniment was added later.[2] The piece however did change quite a bit. The composer states, "generally, whenever I take up something that I began sometime ago, it does change a fair amount."[3]

The early sketches of the concerto were expanded several years later in 1959 when the violinist Anahid Ajemian asked Harrison to compose a work for violin. The idea of finishing the already-begun concerto also reactivated Harrison's interest in the percussion orchestra.

> "She [Anahid Ajemian] wanted to commision a piece for violin with small chamber ensemble. She had commisioned Ben Weber, Ernst Krenek, and several other composers, and she wanted a work from me. So, I said well, I had something I had already begun, why don't I just pick it up and go with it."[4]

Harrison later said that this "summoned up that [early] period" after a lengthy gap of composing music other than for percussion.[5]

The Violin Concerto is cast in a classical three-movement scheme:

MOVEMENT I : ALLEGRO MAESTOSO, ALLEGRO VIVACE
MOVEMENT II: LARGO CANTABILE
MOVEMENT III: ALLEGRO VIGOROSO, POCO PRESTO

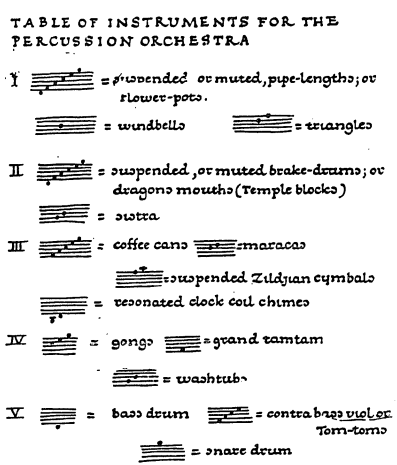
The concerto was premiered on November 19, 1959 at Carnegie Recital Hall in New York; Paul Price conducted the New York Percussion Ensemble and Anahid Ajemian was the soloist. Critics have said the following about the piece from two different performances:

> "The reception accorded the Koncherto [Esperanto spelling], by a normally conservative audience, left no doubt that he has scored high again...nervous titters gave way to rapt silence, and finally tumultuous applause at the conclusion. Harrison knows with uncanny sensitivity what music is all about."[6]

> "While much of the percussion works had a gamelang-like [sic] flavor, they were essentially original rather than imitative of Balinese music. When extended writing for actual pitches was involved, as in the concerto for violin and percussion orchestra, Harrison displayed a fine sense of melody and proved himself capable of spinning long, intensive and expressive lines. 7

The Violin Concerto is the first of Harrison's percussion-based works for which he provides notes on nomenclature and specific details regarding individual selection, sound properties, and construction of the homemade instruments. Much of the information on instruments and notation can be sought from the "Table of Instruments for the Percussion Orchestra" portion from the beginning of the score as supplied here:

Figure 2-1. Violin Concerto: Table of Instruments for the Percussion Orchestra.



Additional information can also be found in the "Notes" section of the score (supplied in Appendix A). In this commentary, the composer discusses pitch range, general physical properties, and construction of the homemade instruments.

Five percussionists are required for the Violin Concerto, playing a total of twenty different instruments. (A set of graduated items constitutes a single instrument.) These instruments create two distinct types of sounds, sustained and dry. In general, Harrison says in the score that the "suspended instruments had all ought [sic] to have a powerful sweetness of tone and very long sustaining power."[8] Based on the "Table of Instruments" provided above, each player uses a fairly equal distribution of sustained and dry types of instruments. This distribution is derived from the following table showing eight sustained and twelve dry instrumental timbres:

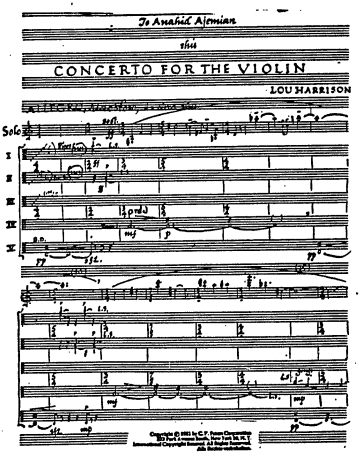
Figure 2-2. Violin Concerto, distribution of dry and sustaining instruments.

	TOTAL # INSTR.	SUSTAINING	DRY
PLAYER I	5	3	2
PLAYER II	4	1	3
PLAYER III	4	2	2
PLAYER IV	3	2	1
PLAYER V	4	0	4

The score is published in the composer's own hand on twenty-stave score paper.[9] This made it possible to write the music in three systems of six lines (five percussion lines under one solo line). Each of the five percussion lines contains a neutral clef consisting of two vertical parallel lines often seen in contemporary percussion scores. The instrumental lines are notated throughout on conventional five-line staves which suggest five and six-note relative melodies produced by the graduated sets of instruments (see "Table of Instruments"). The pitch range of the instruments is generally indicated by the height of the part in the score so as to create five distinct voice parts with the higher sounding lines at the top and the

lower ones at the bottom (similar to a traditional string orchestra arrangement). To illustrate this idea, the first page of the score is shown here:

Example 2-1. Violin Concerto, first page of score.



B. THE CONCERTO FOR ORGAN AND PERCUSSION ORCHESTRA

The Organ Concerto was completed in 1973, approximately fifteen years after the Violin Concerto. As noted earlier, it is similar to the earlier work in embracing traditional forms but with an unconventional instrumentation. Also, like the Violin Concerto, the characteristic feature of the Organ Concerto is melody with essentially rhythmic accompaniment. This approach reflects Cowell's influence (especially the cluster writing) and Harrison's San Francisco percussion pieces.

Unlike the Violin Concerto, the Organ Concerto was composed with an "integrated" approach, meaning that the solo organ part was written at the same time as the percussion parts (as opposed to the Violin Concerto where the solo line was composed before the orchestra parts). The composer further describes the origins of the Organ Concerto:

> "In 1972 I was asked by Philip Simpson who was then teaching organ at San Jose State University for a work for his instrument. Within a day or so I also

> received a request from Anthony Cirone, Director of [The] San Jose State University Percussion Ensemble, for a work for his year's concert. The two requests came so close together that it occurred to me that I might try combining the two, which I then did. It also seemed to me that since the percussion orchestra can make a lot of sound and the pipe organ can make a lot of sound, too, to put the two together and see what would happen."[10]

The Organ Concerto received its first performance in April 30, 1973 at San Jose State University. The dedication in the score reads "to Gibson Walters [the chairman of the music department who supported Harrison and his music at the university], who made it possible, and Anthony Cirone and Philip Simpson who asked for it..."[11]

The Organ Concerto is cast in five movements, labeled as follows:

MOVEMENT I: ALLEGRO
MOVEMENT II: ANDANTE (Siciliana)
MOVEMENT III: LARGO
MOVEMENT IV: CANONS AND CHORUSES
MOVEMENT V: FINALE

The composer has supplied the following about the arrangement of the movements:

> "I often think in terms of the overall form first. I knew about the organ concerto that it would probably be five movements instead of three because I didn't want to struggle with three very large concerto movements. Besides it shouldn't be more than fifteen minutes. [The piece is actually about twenty-five minutes in duration.] Three medium-size movements and two little interlude movements will about answer that."[12]

One critic from the San Francisco Chronicle commended the fine melodic style of the "chromatic second movement, the Andante, for organ alone." He added that the magnificent Largo in the middle" was paralleled with "the best in Dallapiccola and Bartok, but distinctively all the same."[13] Another critic spoke of "big bangy sections, soft almost impressionistic sections, and curious diddle-diddle-diddle accompaniments unlike any I have ever heard in Harrison's music before."[14] The same writer

also praised the fourth movement.

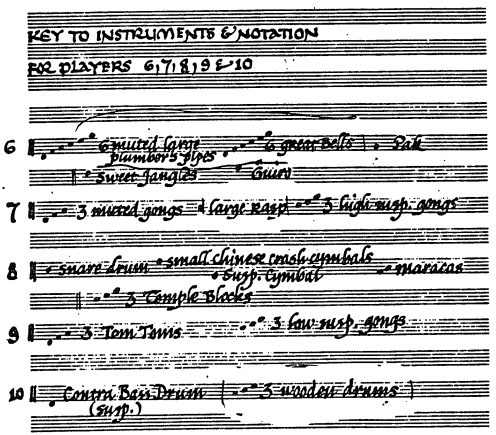
Harrison has said, "I have been so bold as to try several of the ways in which I think classic Asian musics might of themselves, and together, evolve in the future, and have combined instruments of several ethnics directly for musical expression."[15] This statement may help elucidate the artistic ideals expressed in the Organ Concerto. Like the earlier written concerto, the composer has created his own brand of Asian music, combined with a European western framework. The work distinguishes itself from the Violin Concerto not only by the number of movements but more readily by its instrumentation; the composer incorporates what he calls "a gamelan section of modern instruments".[16] In combination with homemade and conventional instruments of unspecified pitch, the composer employs an additional group of five players performing on traditional keyboard percussion instruments of definite pitch. The composer explains: "Because the organ is a sustaining tonal instrument and much of the percussion I wished to use was to be of abstract sound without specified

fixed pitch, I felt that an intermediate group of percussion instruments of fixed pitch ought to be used. Thus, there is a choir of piano, glockenspiel, vibraphone, celeste, and tube chimes which bridge between the organ and the abstract percussion section."[17]

Harrison had help in designing and building some of the unique instruments used in the Organ Concerto. In 1967, when Harrison joined the faculty at San Jose State University, he met William Colvig, a craftsman and electrician who shared Harrison's affinity for Esperanto and ethnic music. Colvig helped Harrison design and construct a variety of percussion instruments to achieve the unique sounds of his music. The Organ Concerto is one piece which incorporates some of these instruments (another work is La Koro Sutro [1972] for chorus and instruments which uses some of these same non-pitched percussion instruments as the Organ Concerto). These instruments represent a renewed interest for the composer in the creation of new instruments made predominantly from household materials -- something that Harrison abandoned after composing the early percussion pieces and the Violin

Concerto. The composer said that finding and selecting the proper sounds for the homemade instruments for the concerto was an arduous task.[18] However, he and Colvig managed to create some novel instrumental timbres and designs. The following shows the "Key to Instruments and Notation for Players 6, 7, 8, 9 &10" as printed in the score of the Organ Concerto:

Figure 2-3. Organ Concerto: Key to Instruments and Notation for Players 6,7, 8, 9 & 10.



According to the table above, the implied pitch ranges of these instruments are basically the same as those of the Violin Concerto. Treated in European/classical fashion, as in the earlier work, these ranges are indicated by the placement of the line. In other words, the top three voices contain the higher-pitched instruments and the lower two provide the lower-pitched timbres.

Also in the score of the Organ Concerto are notes for the "Special Instruments for Lou Harrison Compositions" (appearing in Appendix B). These pages function similarly as those in the score of the Violin Concerto, providing details on the construction and physical properties of the homemade instruments. (These same preliminary pages are also found in the score of La Koro Sutro.)

The timbres provided by the instruments of the "gamelan" section are uniformly resonant throughout the concerto (except for an occasional indication for players four and five to play clusters). The division of dry and sustained sounds of players six through ten is more equal in numbers and evenly distributed than in the violin concerto (9 sustaining, 8 dry). Based on the

"Key to Instruments and Notation", a chart illustrating this is provided below (again, a set of three or more "like" instruments constitutes a single instrument):

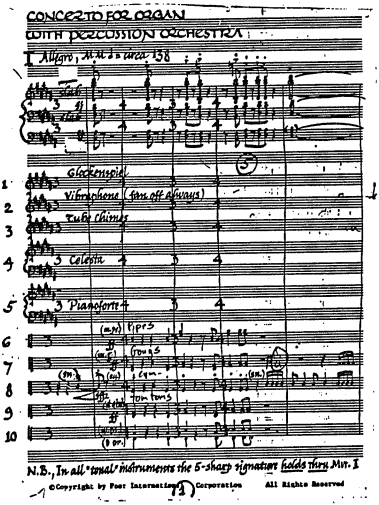
Figure 2-4. Organ Concerto, distribution of dry and sustaining instruments.

	TOTAL # INSTR.	SUSTAINING	DRY
PLAYER 6:	5	3	2
PLAYER 7:	3	2	1
PLAYER 8:	5	3	2
PLAYER 9:	2	1	1
PLAYER 10:	2	0	2

The score is published in manuscript form like the Violin Concerto.[19] The notation of the individual musical lines is conventional with five line staves used throughout for all instruments with neutral clefs for the non-pitched percussion. Something not mentioned in the score is the indication of an "x" in place of a regular notehead; this means to play the

instrument on the rim as in the earlier concerto.[20] Below is the first page of the score:

Example 2-2. Organ Concerto, first page of score



Harrison has composed two similar works, through their instrumentation, although with different compositional histories and working methods. The Violin Concerto, while started in 1940, was later finished in 1959. Because much of the early sketches of the piece consisted mainly of the violin part, the composer subsequently added or filled in the accompaniment to the early 1940 draft and completed the work upon commission in 1959.

The Organ Concerto on the other hand, was begun and completed within a year. The accompaniment and solo lines of the work were written concurrently since there were no early sketches of the work. These diverse working methods may yield differences and similarities in orchestrational techniques between the two concertos. The orchestrational methods of these works will be analyzed in the ensuing chapters.

ENDNOTES FOR CHAPTER II

1. Virginia M. Rathbun, "Lou Harrison and His Music" (Unpublished M. A. Thesis , San Jose State University, 1976, 98.

2. Author's interview with Lou Harrison at the Grammercy Park Hotel, NYC, 10-31-90.

3. Ibid.

4. Lou Harrison, as quoted in Rathbun, 98 - 99.

5. Interview with Harrison, 10/31/90.

6. Dean Wallace, San Francisco Chronicle, printed in: BMI: The Many Worlds of Music (November, 1965), 19 -20.

7. Walter Allen, Los Angeles Times, printed in: Bulletin of the American Composers Alliance (September, 1960), 30.

8. "Notes" section from Lou Harrison, Concerto for Violin and Percussion Orchestra (New York: C. F. Peters Corp., 1961).

9. Ibid.

10. Lou Harrison, record notes from Concerto for Organ and Percussion Orchestra, performed by the Los Angeles Percussion Ensemble, William Kraft, conductor, David Craighead, organ (Crystal Records S858, 1977).

11. Lou Harrison, Concerto for Organ and Percussion Orchestra

(New York: Peer International Corp., 1977, 1978), title page.

12. Harrison, as quoted in Rathbun, 49 - 50.

13. Robert Commanday, The San Francisco Chronicle (August 26, 1974), 40. As cited in Rathbun, 49.

14. Leighton Kerner, The Village Voice (November 22, 1973), 44.

15. Herbert Russcol, The Liberation of Sound (Englewood Cliffs: Prentice Hall, Inc., 1972), 24.

16. Harrison, as quoted in Rathbun, 49.

17. Lou Harrison, record notes from Organ Concerto.

18. Rathbun, 50.

19. Lou Harrison, Concerto for Organ and Percussion Orchestra (New York: Peer International Corp., 1977, 1978)

20. Author's interview with Harrison at the Grammercy Park Hotel, NYC, 10-31-90.

III. ANALYSIS AND DISCUSSION OF THE CONCERTO FOR VIOLIN AND PERCUSSION ORCHESTRA AND CONCERTO FOR ORGAN AND PERCUSSION ORCHESTRA.

Writing for a single pitched instrument with a battery of percussion instruments yields artistic problems for the composer -- the most important of which includes instrumental balance (so as not to obliterate the soloist and to musically define specific instruments, whether they are individual or combined) and the problem of formal clarity (referring to the ways in which the composer creates divisions within each movement using non-pitched instruments). The objective here is to determine how the Harrison deals with these domains when using a non-traditional orchestra. These problems, and with their solutions, will be discussed through a study of the composer's orchestrational procedures in these two works.

A. THE CONCERTO FOR VIOLIN AND PERCUSSION ORCHESTRA

Movement I

To aid in understanding Harrison"s orchestrational procedure, it is first appropriate to outline the form of the movement. The first movement is in a tripartite form -- the divisions of which are created wholly and in part by various changes of tempo and general musical character:

Figure 3-1. Violin Concerto, form of first movement.

INTRODUCTION.....mm.1-31

SECTION A
a.....mm.32-51
b.....mm.52-67
a.....mm.68-80
transition.....mm.81-101

SECTION B
1st Half.....mm.102-131
2nd Half.....mm.132-165

SECTION A
(Intro).....mm.166-188
a.....mm.189-208
a2.....mm.209-237

CADENZA

CODA.....mm.239-263

By using a traditional "string orchestra" approach, Harrison creates a proper instrumental balance and clarity by incorporating a variety of accompanimental textures to highlight the soloist. In general, Harrison treats the five lines of percussion as in a traditional string orchestra, meaning he incorporates the top two voices as the principal melodic voices (like first and second violins), and the other lower voices as complementary to the top lines (see also NOTES section in Appendix A,). For example, in the introduction to the movement, Harrison reserves the low and resonant instruments for slow sections. In this instance, these instruments provide pedal points, and create continuities akin to bass lines.[1]

Another method used to achieve proper balance is a give-and-take technique common in tonal music. For example, when

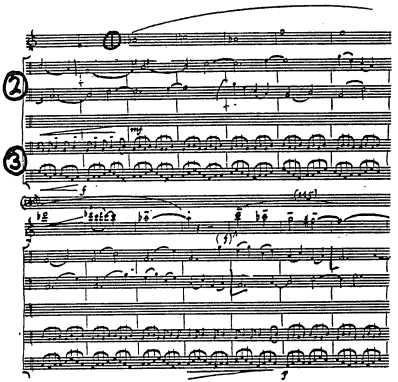
the violin plays a sustained note, rhythmical movement occurs in the accompaniment, and vice versa. The musical lines hence do not conflict with one another so that either soloist or orchestra is featured separately. At the same time the lower, sustaining instruments supply the foundation to the moving solo line.

In the Allegro (m.33), the composer counters the previous section with a more homogenous, equal texture among the soloist and accompaniment. As in the composer's early percussion works, there is a different repeating ostinato line for each player so that each line contributes to a single ongoing fabric. Although the violin line plays rhythmically similar to the orchestra, the separation between the two is maintained in a few ways. First, all five instrumental lines continuously play one dynamic level softer than the violin. Second, the instruments selected for this passage exhibit a dry, staccato sound which contrasts with the longer notes of the violin. Additionally, for variety the composer changes timbres for players one and two at m. 44, probably to distinguish sub-

sections (this is part B of an internal ABA structure) as well as to benefit instrumental balance and clarity of parts.

A new textural heirarchy is introduced in the Come Vivace section (m.102), the large middle portion of the movement (see example 3-1). The three textural levels are: the violin melody, the canon in the top two percussion lines, and the eighth note accompaniment in the lower two accompanimental lines. In contrast with the preceding large section, Harrison rhythmically isolates the violin line from the other two textural levels to achieve prominence for the soloist. Thus, the transparency of the violin line is emphasized by contrasting it with three different rhythmical ideas and timbres in the accompaniment:

Example 3-1. Violin Concerto, first movement, three textural levels.



Here in addition, the slowest moving line, the violin, is the most prominent as the other lines work as delicate, repetitive accompaniment. The violin functions in contrast to everything else since it is more melodically variable. The orchestra is also again one dynamic level softer than the violin line.

We have seen that within each large section of the first movement, the composer utilizes various methods for achieving instrumental balance and formal clarity. This balance and clarity is achieved by utilizing a traditional string orchestra approach in the accompaniment.

In working with a pitched solo instrument against a nonpitched accompaniment, the composer also achieves formal coherence by stressing certain pitches at the beginnings and endings of sections, creating a sense of tonal centricity and formal definition out of a predominantly chromatic and non-pitched musical language.

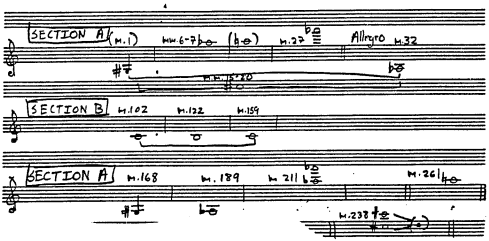
Although the music is highly chromatic, a pitch centricity creates definite structural boundaries and overall formal cohesion (see figure 3-2). From the onset of the piece,

two pitch classes, A-natural, and even moreso, Ab in the violin help to define key structural moments and actually provide a sense of pitch centricity (even though the violin is the only pitched instrument) since the notes are noticeably emphasized in many places. In mm. 6 and 7 for example, the pitches appear sustained in high registers. The "Ab" appears again as the highest pitch of the section at m. 27 and winds its way down three octaves to the start of the Allegro Vivace. G# is also the very first pitch of the concerto. The Ab thus functions as bookends to the first two large sections of the first movement.

Other notes function as subsidiary tones. The note C# acts as a medial or pivotal resting point for the Ab (like a dominant harmony) as it too appears consistently emphasized at important structural moments. For example, at mm. 15 - 20, the C# is sustained in the middle of the opening section of the movement and flanked by the Ab". Mm. 43 and 51 signify phrase endings where the C# is the final pitch. M. 238 marks the conclusion of the cadenza where the C# acts as a leading tone to the following D.

The Come Vivace section is approached by an oscillating G#/A figure (m.99). The G# here acts as a leading note against the "A" which leads into the next large section. This Come Vivace exists in an entirely new tonal plane from before (like a modulatory section or development). The key resting pitches here are C, B, and C based upon three phrase divisions. Thus, the section coheres (although not quite evenly) through an inner ABA scheme based on a corresponding pitch centricity of C, B, and C. (The first two sections comprise approximately the total amount of measures of the third section.) These divisions are as follows: C: mm. 102-121, B: mm. 122-134, and C: mm. 135-165. A diagram illustrating the pitch centricity of the first movement appears below:

Figure 3-2. Violin Concerto, first movement, pitch centricity.



Movement II

To understand the orchestrational procedure in the Largo, it is again important to outline the form of the movement first. The Largo is comprised of an ABCABC structure, the divisions of which are dictated primarily by thematic repetition and textural changes:[2]

Figure 3-3. Violin Concerto, form of second movement.

SECTION A.....mm.1 -12

SECTION B
- Intro.....mm.13-45
- Theme.....mm.20-30
- Closing.....mm.31-34
- Episode.....mm.35-45

SECTION C.....mm.46-67

RECAPITULATION

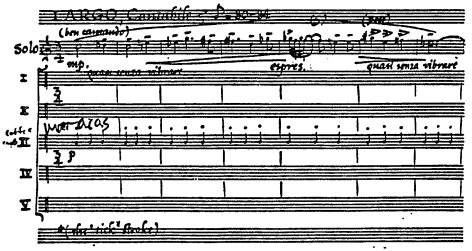
SECTION A.....mm.68-87
closing.....mm.80-87

SECTION B.....mm.88-97

SECTION C.....mm. 98-126

There are a few technical differences in the Largo from the previous movement, yet instrumental balance and a logical formal procedure are still maintained. First, the Largo displays a progressive shift from thin to thick instrumental textures -- the second half of the movement involves denser textures than the first. For instance, the movement begins with an accompaniment of light, dry pulsations or "tick strokes" of the maracas to a full five-voice canon at the recapitulation.

Example 3-2. Violin Concerto, second movement, mm. 1 - 7.



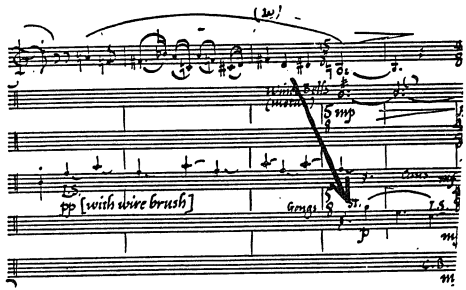
Harrison also employs greater transparency and economy in his orchestration. When added to constantly shifting textures, this produces a sense of endless, free-flowing melody in the violin line. In fact, while the violin plays at an almost continuous rate, the accompaniment is often thin and occasionally absent.

Even more important is a marked difference in the orchestrational style from the first movement -- a change from a predominantly homogenous sound to a heterogenous texture. In other words, a combination of all available timbres are explored here. The instruments include some not used in the first movement, such as glass windbells, triangles, sistra, and maracas. Through these general shifts in compositional methods, the composer creates both instrumental balance and clarity through sparse textures and the blending of different tone colors, sustained and dry. The following presents some specifics regarding these techniques.

Because of the variety of tone color presented in the Largo, Harrison treats each instrument with greater equality

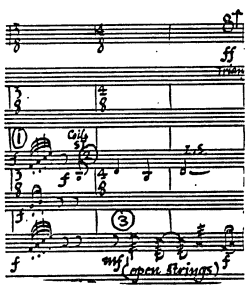
than in the first movement. He tends to bring out the soloistic possibilities more and does not always group the lines as systematically as in the first movement. He also uses the percussion more for contrapuntal purposes, not just with other percussion instruments as before, but with the violin. Mm. 8 - 12 typify both the sparse textures and contrapuntal treatment of accompaniment and soloist:

Example 3-3. Violin Concerto, second movement: mm. 8 -12 .



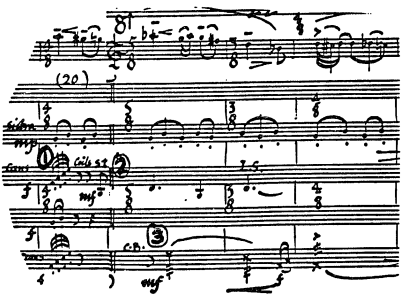
The composer achieves clarity and equality of instrumentation within this variety of tone colors by exposing each timbre through linear counterpoint. In doing this, the composer combines three contrasting melodic cells in the percussion. These cells are defined primarily by their melodic contour -- the first of which ascends, the second moves up and down, and the third moves downward. An example of this counterpoint is shown here from mm. 15 - 17:

Example 3-4. Violin Concerto, second movement, mm. 15-17.



Harrison then repeats and rhythmically alters those same ideas in mm. 20 -23 where he adds a dry discant voice in the sistra:

Example 3-5. Violin Concerto, second movement, mm. 20 - 23.



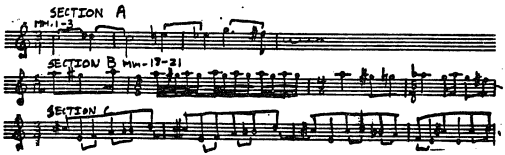
The composer contrasts the C section (mm. 46 -66) by employing a sparse and homogenous sustaining texture in the accompaniment.

In the second half of the movement, the composer transforms the main thematic material in specific ways which help to unify the movement. In the A section, he resorts to the system of instrumentation used in the first movement by reserving the lower three voices for the foundation to the upper two. He also uses the lower three voices timbrally for dry sounds and the upper two for resonant sounds. This A section also involves more simultaneous staccato sounds, where, in the first A section, the sounds were primarily heterogenous. This is especially evident at the canon from mm. 75 -85. From the new B section to the conclusion of the movement, the orchestration remains timbrally mixed until there is no accompaniment.

As in the first movement, a type of pitch system helps determine structural sub-divisions of the movement (see figure 3-4). However, rather than resorting to centric or pivotal

tones, the composer uses recurring intervals at key structural points to help unify the movement. The melodic minor second is especially used; because of its frequent appearance, it is a sturdy unifying device. Specifically, the minor second is more pronounced in the first two large sections of the movement, while in the third section it is subtle and camouflaged. The B section illustrates a type of elaborative procedure based on the melodic semitone. In the C section, the interval is used less frequently than in the previous two sections, rather it becomes transformed and hidden between larger intervals. An example of various rhythmic settings of the minor second is seen below:

Figure 3-4. Violin Concerto, second movement, rhythmic transformations of the minor second.



Movement III

The last movement is a Rondo scheme, the divisions of which again are created by motivic repetition and textural changes:

Figure 3-5. Violin Concerto, form of third movement.

SECTION A.....mm. 1-35
2nd episode.....mm. 24-35

SECTION B.....mm. 36-63

SECTION A.....mm. 64-104
2nd episode.....mm. 79-104

SECTION C.....mm. 105-124
(Development)
Climax/Cadenza....mm. 125-135

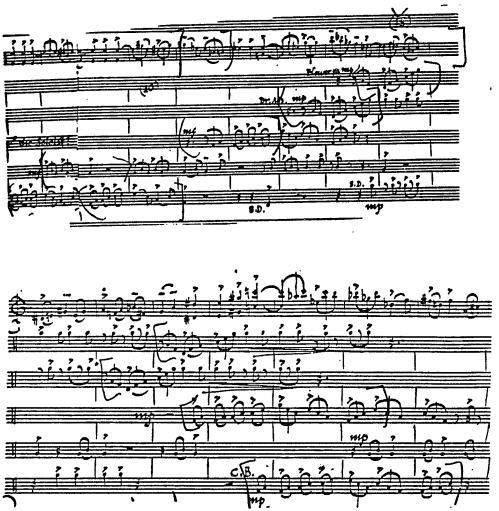
SECTION A.....mm. 136-160

SECTION D..... .....mm. 161-182
(CODA)

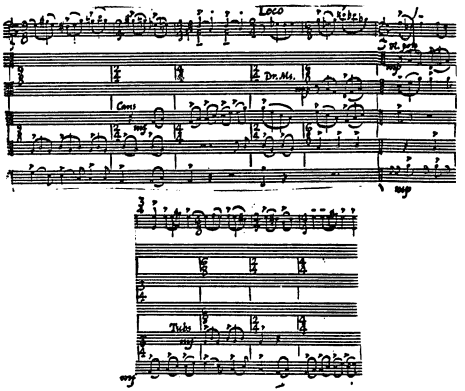
To rectify problems of instrumental balance and formal coherence in the Rondo, the composer borrows and combines techniques from the first two movements, and includes some new ones as well. More specifically, the final Allegro shares with the second movement an equal distribution of the five accompanimental lines, but with predominantly homogenous, monothematic textures like the first movement.

The Rondo introduces some five-part textures in which each line shares the main motives (see figures 3-6, 3-7 and 3-8). (This technique is used rather than having the lower voices filling in a complimentary rhythmic part as was seen earlier.) Here are examples showing all five equally contributing voice parts:

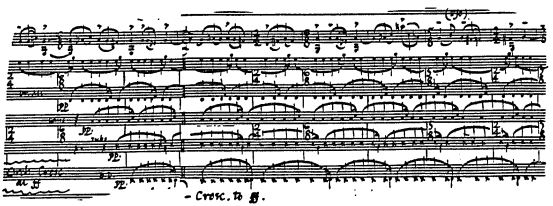
Example 3- 6. Violin Concerto, third movement, mm. 7-22.



Example 3-7. Violin Concerto, third movement, mm.72 -81.

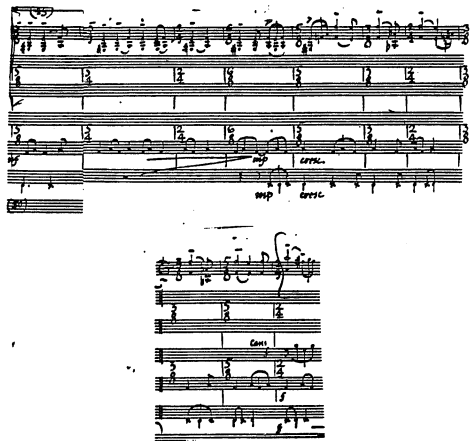


Example 3-8 . Violin Concerto, third movement: mm. 163 -170.



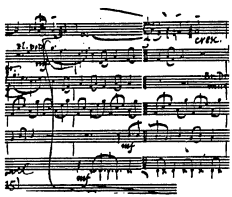
The lower two voices are also paired more soloistically (like a duet) than before as in mm. 7 -10 and in the B section, mm.45 -54:

Example 3-9. Violin Concerto, third movement, mm. 45 - 54.



An unprecedented example of the lower voices sharing motives with the upper ones is shown at mm. 111 - 113:

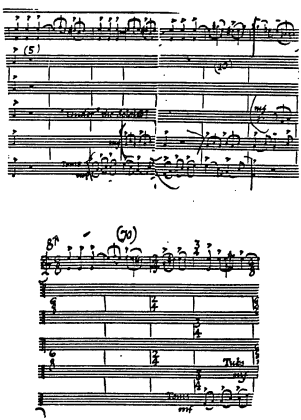
Example 3 -10. Violin Concerto, third movement, mm. 111 - 113.



As in the first movement, the violin is often aligned rhythmically with the accompaniment (especially in the A sections). In any piece using this instrumentation, this technique will obliterate the soloist by the orchestra and cause other balance problems; the composer avoids this in a few different ways. Instead of initiating certain sections with accompaniment as in the first movement, the composer first gives the theme to the violin alone (occasionally with one other

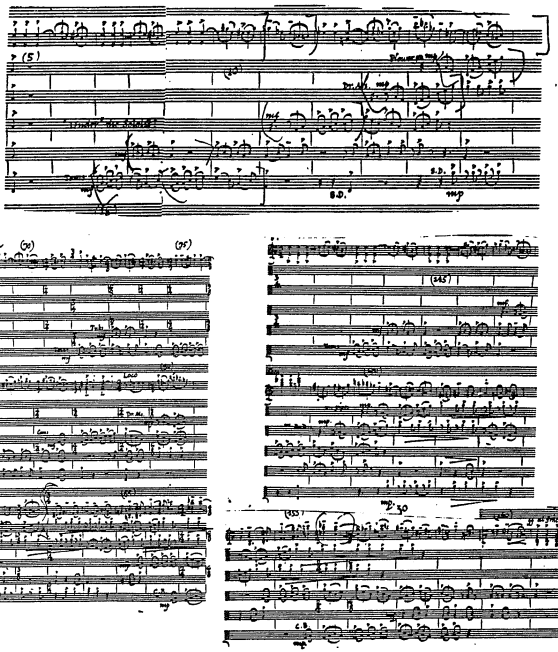
instrument) followed briefly by accompaniment (see Example 3 -11). This allows for stronger prominence of the main theme in the violin. (The ear would also tend to linger on the initial sound of the violin.) An example of this is seen at mm. 5 - 8 and mm. 69 -72:

Example 3-11. Violin Concerto, third movement, mm. 5-11 and 69-72.



To further enhance the clarity of writing, the initial violin motive is followed by a gradual layering of accompaniment from one to five voices (however, not all five voices play at the same time). This technique is used exclusively in each A section from where the following examples are taken to illustrate: mm. 5 - 15, mm. 69 - 87, mm. 141 - 161, and for that matter all of section B which uses only four voices, mm. 36 - 63:

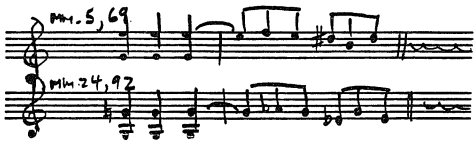
Example 3- 12. Violin Concerto, third movement, gradual layering of accompaniment



This approach subtly brings to the attention of the listener each new percussive timbre as the soloist plays continuously. The violin line also moves with each orchestral apex. In other words, as the percussion moves gradually upward (from lowest voice to highest) the violin also ascends gradually. This appears consistently throughout the movement.

In addition to these techniques for creating balance and formal clarity, Harrison also remedies potential problems of pitch function in the movement by drawing upon methods used in the first movement. The composer again uses pitch centricity in the violin to help unify the movement. In this matter, important structural emphasis is consistently placed on the notes E and G in bookend fashion. For example, the opening A section which is in two parts, the emphasis is on the note E in the first part (mm. 5 - 23, seen in the head of the main motive). The note G is emphasized in the second part (mm. 24 - 35) in the same motivic guise and acts as a transpositional bookend to the first part. A thematic diagram is supplied below:

Figure 3-6. Violin Concerto, third movement, main motives.



In the B section (mm. 36 - 63), a developmental procedure unfolds as the tonal emphasis remains on the opening E. The accentuation is more ambiguous to the listener because the note is embellished by double stops of the sixth and blurred through melodic semitones. (The melodic contour in general, through the ample appearance of the melodic semitone, recalls the linear writing of the Largo.) The section concludes again with an emphasis on the note G as it elides with a repeat of section A (mm. 61 - 65).

New pitch methods distinguish the next section (C) from the others. In this two-part section (mm. 105 - 124), the composer reverses the tonal process seen earlier by equally

sustaining and emphasizing the G first, then E (mm.105 - 114). In the second part (mm.115 - 124, for added tonal contrast similar to the middle section of the first movement), a new tonal plateau is reached with a build to the climax note of the movement, Bb. To match this Bb, it is accompanied by a completely new orchestral tutti.

The final bar of the cadenza uses a cadential-like figure with the violin oscillating between D# and E. As the end of the final A section overlaps into the start of the coda (m.161), the G remains the "tonicized" pitch to the end -- an ironic consistency (or inconsistency for that matter) relevant to the first movement where the final pitch is A, rather than Ab.

B. THE CONCERTO FOR ORGAN AND PERCUSSION ORCHESTRA

In the Violin Concerto, Harrison used only non-pitched percussion to accompany the soloist. With this unusual instrumentation in a concerto form, he overcame potential problems of orchestral balance and formal coherence by incorporating a variety of orchestrational techniques and organizational principlesto. With the inclusion of a keyboard percussion group in the Organ Concerto, Harrison sought to "bridge the gap" between pitched and non-pitched instruments as a way of overcoming compositional problems.[4] Although adding a definite pitched element in the accompaniment potentially increases the variety of musical invention (and even observable harmonic movement), the composer still faced the imperative issues of integrating and balancing the instruments to highlight the soloist and creating logical forms.

While the Violin Concerto is instrumentally two dimensional, the Organ Concerto is three. To that end, the

latter will be analyzed in a slightly different light from before, but will nevertheless serve as a paradigm for exposing the same problems and solutions outlined earlier.

In addition to this, the Organ Concerto was composed under different circumstances and hence with a different compositional method than the Violin Concerto. This concerto's "integrated" approach, as outlined in chapter II, may account for the various technical differences from the Violin Concerto.

Movement 1

The first movement maintains a large ABA structure which is largely created by a variety of motivic and textural changes:

Figure 3 -7. Organ Concerto, form of first movement.

SECTION A.....mm. 1-71
Episode 1 .....mm. 1-24
Episode 2.....mm. 25-58
Episode 1.....mm. 59-71

SECTION B.....mm. 72 -143

SECTION A.....mm. 144-200
Episode 1.....mm. 142-167
Episode 2.....mm. 168-192
Episode 1.....mm. 193-200

CODA.....mm. 201-216

Instrumental balance is achieved in a few ways in the first movement. First, there is a clearly defined timbral division which adds cohesion to the movement. The non-pitched percussion group is featured in a series of ritornello-like interludes. These flank the outer sections of the movement where the organ is lightly accompanied by resonant, sustained percussion. While these outer A sections (episode 1 of each larger A section) involve predominantly dry, pitchless timbres, the middle B section gradually introduces the entire accompaniment. This pattern in turn warrants a sturdy structural symmetry. To help underly this conclusion, a graph below outlines the periodicity of the different timbral groups of the entire first movement and illustrates an internal symmetry:

Figure 3 - 8. Organ Concerto, first movement, periodicity of timbral groups.

SECTION A: mm.1 - 24 -------- DRY/NON-PITCHED
mm. 25 - 58 ------- SUSTAINED/MIXED TIMBRES
mm. 59 - 71------- DRY/NON-PITCHED

SECTION B: mm. 72 - 101 ------ DRY/NON-PITCHED
mm. 102 - 127 ----- MIXED TIMBRES/NON PITCHED
mm. 128 - 143 ----- MIXED TIMBRES/PITCHED/NON PITCHED (Climax)

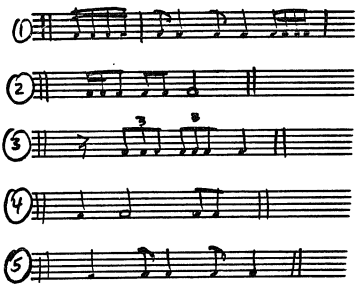
SECTION A: mm. 144 - 167 ----- DRY/NON-PITCHED
mm. 168 - 192 ----- SUSTAINED/MIXED TIMBRES
mm. 193 - 216 ----- DRY/NON-PITCHED

To coincide musically with its accompaniment, the organ is deployed in an equally organized fashion. More specifically, the composer makes musical sense out of mainly non-melodic materials. The introductions to the outer sections involve sharply accented organ clusters which create a non-pitched percussive effect and blending mechanism when amplified against a non-resonant, non-pitched accompaniment. The composer then deploys the organ as a non-pitched, percussive instrument since both orchestra and soloist are blended rhythmically (or arhythmically) together in the

introduction. The organ is melded with the orchestra while the true presentation of the solo organ is effectively delayed.

In the second part of the A section (mm. 25 - 58), a cumulative process unfolds. As the organ is now presented in a more melodic guise from before (pentatonic scale encircling D#) with intermittent octave clusters and piano accompaniment, the non-pitched percussion is reserved for the middle of the section. The repetitive nature of the gongs and jangles does not obscure the solo line (a technique seen in the Violin Concerto for similar reasons -- in addition, the trademark ostinato feature so prevalent in Harrison's percussion music is preserved):

Figure 3 - 9 . Organ Concerto, first movement, ostinato figures.

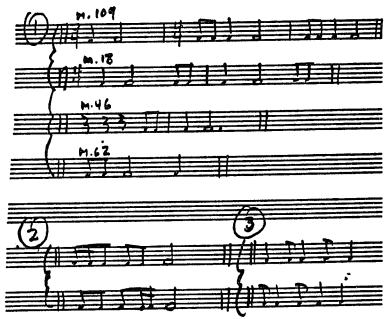


For the purpose of maintaining unity in the movement, the sectional divisions illustrate a developmental process where the middle division represents a musical conglomeration or *dumping ground* (italics mine) for motives and techniques used earlier (see figure 3-10). The organ here combines motives and techniques seen originally in the outer sections. For example, at the start of the B section, the organ displays a dry, percussive texture and continues to play in the pentatonic mode

from before. A cumulative process (for intensification) occurs through a registral shift, the use of octave palm clusters (m. 120) and thickening accompaniment (exactly every six bars) which all culminates in a tutti climax.

To further unify the movement, the two juxtaposed motives in the percussion (mm. 109 - 127) are also variants of previously used ideas from the A section. At the tutti, these motives are conjoined along with others taken from the ritornello sections. The piano and celeste also borrow the slab technique from the organ, thereby producing their own cluster effects. The diagram below shows three distinct groups taken from the main ostinato figures (see figure 3-9) along with their variations. These figures or motives are either metrically displaced (Ex.1) or slightly inverted (Ex. 2 & 3):

Figure 3 -10 . Organ Concerto, first movement, motivic relationships.



Although motivically related as seen above, each of the three sections of the Allegro undergoes a unique musical process. The composer also systemizes his orchestration to achieve balance and clarity of instrumentation. He consistently distinguishes between each of the three instrumental groups by alternating the louder, dryer sounds with softer, sustained sounds. He reserves the softer percussion sounds for

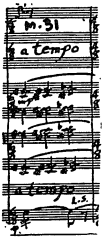
highlighting the solo organ line. He also reserves an exclusive role for the pitched percussion in a tutti choir-like section in the middle segment of the movement.

Movement II$\bar{P}$

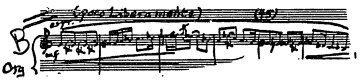
The Largo suggests a seamless progression of musical events -- a through-composed method where one idea organically connects with each subsequent one. The focus of inquiry here will then be based on how musical coherence is made from an essentially nondescript form.

A look at the thematic treatment is foremost for comprehending any formal scheme used in the movement (see Example 3-13). After the introduction, the rest of the movement is pieced together with three contrasting ideas: the celeste and piano octatonic sonorities (fingered percussion) seen initially at m.31; a chordal countermelody to these sonorities in the organ (mm.47 - 65); a new unaccompanied organ motive (mm.41 - 46) placed between the first two ideas, which is extended and treated later in canonic fashion with the piano. These three ideas are shown below:

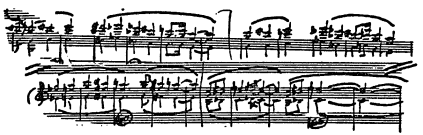
Example 3 -13 . Organ Concerto, third movement, main motives.



Mm.41-46



Mm.47-65



Yet aside from the third mentioned idea, the motives are never shared among other instruments; they are always presented in their original instrumentation, thereby maintaining optimum clarity of orchestration when pitted against each other. Harrison presents the first motive by itself

(m.31) as a type of passacaglia, reusing it later underneath the organ melody (mm.47-65).

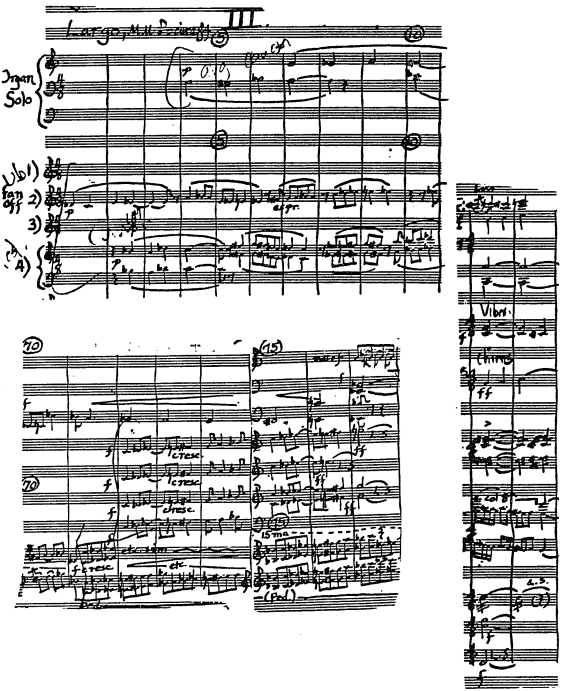
Instrumental clarity is exemplified in the introduction to the movement as well. At the three-voice canon, the organ line complements the accompaniment as it proceeds in longer note durations. (This technique is also seen in the Violin Concerto, which incorporates contrasting note values against the orchestra to achieve optimum clarity of writing.)

In another respect, non-pitched percussion is not cast in a prominent thematic role as before. Instead, for proper balance and variety, a reduced number of these instruments are used as unifying devices only; jangles, gongs and bass drum are employed throughout to accentuate phrase divisions and punctuate highpoints of the movement, thereby helping to highlight divisional boundaries. Harrison otherwise deploys the pitched group as the principal accompaniment. (Examples of this approach are too numerous to illustrate, it would be more practical to see the score at the following places: mm.31, 36, 47, 53, 87, 98, 104, 114, 120.) These isolated

moments often appear simultaneously with the first sonority of the main chord series helping to define the internal organization of the movement -- they indicate new sections or phrases.

Harrison also symmetrically incorporates the keyboard percussion at key structural points in the movement -- another example of a systematic orchestrational approach (see Example 3-14). Three examples of this are found: the introduction (vibraphone and celeste), a transitional section involving vibraphone and chimes (and celeste mm.70-77), and the recapitulation (m.98) where the vibraphone doubles the outer notes of the chord sequence and the chimes double an inner voice of the organ line. These points indicate a method of organization where mallet instruments outline the beginning, middle, and concluding sections of the movement:

Example 3-14. Organ Concerto, third movement, keyboard percussion highlighting key structural moments.



The pitch structure in the Largo also helps reveal formal boundaries. (The treatment of centric pitches in the Organ Concerto is similar to that of the Violin Concerto where certain tones are prolonged at key structural moments.) Important to this end are the pedal point notes in the organ -- the pitch scheme of which moves through the pitch classes C, Eb, Db, and C -- creating clearer sectional divisions. Not including the introduction, the note C is emphasized in the outer sections (mm.47 - 60 and mm.98 - 124), while the Eb and Db appear in the middle section (mm.70 - 97), forming a tripartite scheme. The basic form of the movement is primarily dictated by thematic and textural changes:

Figure 3 -11. Organ Concerto, form of third movement.

INTRODUCTION.....mm. 1-30

Idea A .....mm. 31-40

Idea B.....mm. 41-46

Idea C (includes A and B).....mm. 47-76

Idea B (canonic development).....mm. 77-97

Idea C (recapitulatory).....mm.98-115

CODA.....mm. 116-124

Movement IV

In contrast with the Largo, the fourth movement is a straightforward structure -- cast in an even two-part form. It is scored predominantly for organ and the pitched percussion group with only single gong strokes opening each of the two sections. The sound of the movement is stereotypically Far-Eastern -- involving harmonies made up of parallel fourths and fifths, and melodic material based simultaneously on two pentatonic systems, one centered on D, the other on C.

The orchestration is two dimensional, divided between the two elements which make up the title of the movement: the "canons" are given to the organ and the "choruses" are

designated for the accompaniment which is written in chorale style throughout. All accompanimental voice parts are seen in total in the piano part and distributed among the remaining members of the group. Clarity is maintained throughout as the percussion moves at a constantly slower rhythmic rate than the organ.

Movement V

Instrumental clarity and balance are achieved in a variety of ways in the Finale. The form of the movement is a Rondo-like ABACA (similar to the third movement of the Violin Concerto) with each section distinguishable through a different instrumental combination and musical technique. The basic formal divisions then are created from the various textural and thematic changes:

Figure 3-12. Organ Concerto, form of fifth movement

SECTION A.....mm. 1-35

SECTION B.....mm. 36-67

SECTION A.....mm. 68-99

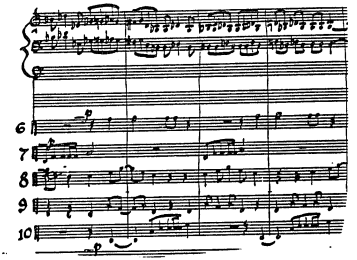
SECTION C.....mm.100-131

SECTION A.....mm.132-159

CODA.....mm.160-166

The A sections are characterized by dry, non-pitched percussion against a non-tonal cluster organ (like the first movement). Here, a complex accompanimental fabric (similar to the first movement but non-imitative) is weaved by five distinct repeating motives (a technique which traces back to the San Francisco pieces and the Violin Concerto). The combination of these motives creates a light, perpetual support for the soloist who plays at a louder dynamic throughout. As rhythmic activity of one motive ceases, another takes over as shown below:

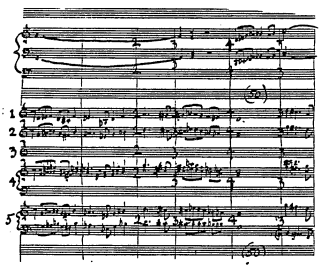
Example 3-15. Organ Concerto, fifth movement, mm.11-14.



Harrison also uses a type of "hocket" technique between the soloist and orchestra, a feature prominently displayed in this movement (less so in the first). For example, in the case of this work, whenever there is a duration longer than a dotted half note in the organ line, the accompaniment takes over and continues the rhythmic activity. This technique, while important for preserving instrumental clarity and balance, is

also crucial for maintaining rhythmic flow. (This concept is further developed in the next section.) An example is shown below:

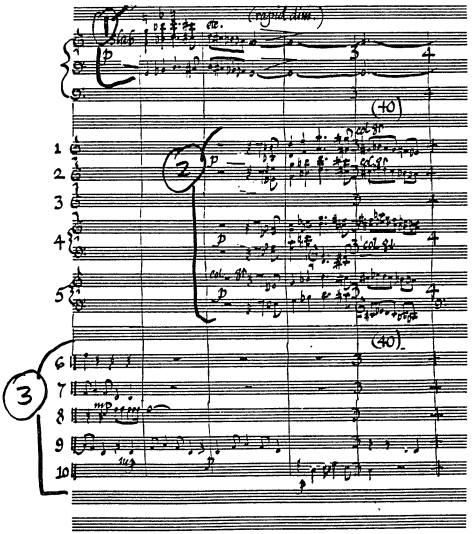
Example 3-16. Organ Concerto, fifth movement, hocket technique



Harrison contrasts the A section by presenting the entire pitched group in the B section. Here, the two pitched elements are antiphonally treated (solo and pitched group). The pitched group in turn contributes to a three-dimensional texture along with the organ and the non-pitched group -- each a separate

musical entity. (The three tom-toms and three wooden drums provide a continuous ostinato figure taken from the first movement). This section also illustrates motivic individuality of the two main melodic lines. It is not a strict canon between two lines as seen earlier, but an alternation of two individual ideas forming a transparent texture. This is also a place where the rhythmic interplay of the various motives (seen earlier) becomes magnified -- this time as one voice sustains, the other line takes over and resumes the ongoing momentum:

Example 3-17. Organ Concerto, fifth movement, three-dimensional texture.



The C section mm.100 - 131, technically a transition back to the final recapitulation, is distinctly marked from previous material typically by its instrumentation and overall character. Reduced to piano and celeste octave slabs, this section indicates a greater melodic distance between accompaniment and soloist. Furthermore, the organ is given a more dominant role, having more melodic sustenance than the other instruments.

The Finale serves as the bookend to the concerto because it brings back motives used in the first movement. It distinguishes itself however by reducing the amount of timbral contrast (dry and sustained sounds). Harrison incorporates predominantly dry sounds (except for the end) to correspond with the persistent use of slab technique, but he varies the sound with more complex textures and a wider spectrum of musical invention. These elements help bind the movement producing a complex, yet lucid structure.

ENDNOTES for CHAPTER III

1. Confirmed by the composer in an interview with the author, 10-31-90. See also "Table of Instruments" in Appendix A.

2. Confirmed by the composer in an interview with the author, 10-31-90.

3. Lou Harrison, record notes to the Concerto for Violin and Percussion Orchestra.

4. Lou Harrison, record notes for the Concerto for Organ and Percussion Orchestra .

5. Since the second movement is an organ solo, a discussion of the issues of balance and clarity do not apply.

IV. SUMMARY AND CONCLUSIONS
(A COMPARISON OF THE TWO WORKS)

Presented in this dissertation are analyses of two concertos by Lou Harrison, both of which incorporate unusual or untraditional instrumentation for the genre. Despite the unconventional means in these works, they pinpoint novel orchestrational techniques for obtaining optimum clarity of writing and instrumental balance . Some of the methods are shared between the two works, for example, the use of ostinati (a hallmark of the composer from his San Francisco days). Within the non-pitched groups in both works (especially in the outer movements), one-measure patterns are evenly distributed to all the voices creating highly contrapuntal textures. In both works, these ostinati function as a light, yet sturdy and articulate foundation for the soloist. More importantly, their brevity and repetitive nature helps define the solo line better. This can be justified by the fact that any rhythmic change or variant of the motives could upset the balance by detracting from the solo line.

Although pitch organization was not a central issue in

this study, both works share similar approaches to formal organization based on pitch centricity. Pitches emphasized at key structural moments created a sense of tonal heirarchy in each work (moreso in the Violin Concerto than in the Organ Concerto), i. e., cyclical use of pedal notes in the organ, sustained violin notes etc.. Other elements helped to delineate the forms in each work, such as alternation of pitched and non-pitched percussion and timbral periodicity especially seen in the Organ Concerto, and varied textural levels, textural changes (thin to thick) and motivic repetition evident in both concertos.

Although the two concertos display similar technical features, these similarities are outweighed by a variety of disparate elements. All of these elements contribute to the overall instrumental and formal clarity discussed in detail in Chapter III. Such musical differences are not only owed to the respective self-imposed instrumental demands and requirements, but to some extent to the two opposing working methods. These two contrasting compositional approaches aid in yielding two different treatments of the soloist: one, a continuous violin line, the other, a "start/stop" method.

The respective "separate" and "combined" methods of these works reveal definite clues to the overall stylistic patterns associated with each work and consistencies regarding the relationship of soloist and accompaniment. Because of the "combined" method composition and the pitched percussion element in the Organ Concerto, the organ is often blended in with the orchestra (third movement, mm.76 - 98) and often doubled in the accompaniment (first movement, C section). Consequently, the organ becomes a component of the accompanimental fabric while at the same time maintaining a solo importance due to its contrasting timbral qualities. In the Violin Concerto on the other hand, with its "separate" method of composition and lack of pitched accompaniment, the soloist functions more independently as in a conventional concerto. Furthermore, there are cadenzas in the Violin Concerto where there are none in the Organ Concerto.[1] For this reason alone, a more typically classical/romantic concerto approach is used in the Violin Concerto. One can conclude that the Violin Concerto illustrates more continuous playing in the solo line and a more "start/stop" approach in the orchestra. The Organ Concerto

reverses that concept, so that the soloist is deployed in a "start/stop" fashion and the orchestra plays continuously.

Stylistic differences are also witnessed by the varied types of musical techniques explored in each. In the Violin Concerto, more than in the Organ Concerto for example, the solo line functions as a more viable solo voice; the continuous nature of the line and frequent use of percussion pedal points allowing for melodic activity, indicates that the violin line could exist on its own, almost as if an instrumental template was placed over the violin music. There are virtually no orchestral pedal points in the Organ Concerto, instead the soloist and orchestra in the Organ Concerto are treated in a more antiphonal fashion.

The percussion orchestra of the Violin Concerto also serves more efficiently as an accompaniment by rhythmically supporting the soloist and reinforcing cadential points and climaxes. However, with the inclusion of a pitched group of percussion instruments at his disposal in the Organ Concerto, Harrison was able to deploy the non-pitched percussion more sparingly (and traditionally) as punctuation and for defining

divisional boundaries (Organ Concerto, third movement).

Another feature of the Organ Concerto (other than a few passages in the outer movements) is a more striking and prominent use of percussion tutti passages, whereas in the Violin Concerto there is greater individuality of the accompanimental lines. The textures of the Organ Concerto are such that the non-pitched lines are often rhythmically aligned with one another. Except for the repeated ritornello idea of the last movement, the orchestra of the Violin Concerto involves predominantly multi-voiced counterpoint. The composer uses these unison passages consistently either without organ or with a fairly marked organ passage (fifth movement, B section, duet with tutti percussion -- mm.123 - 127; third movement, doubling of solo line with pitched percussion). The composer, in working with an organ which has the potential to produce dry percussive effects, probably realized that the instrument could blend well with the orchestra and occasionally accompany the many unison orchestral passages. The violin, however, would need a strong contrapuntal background to enhance its lyrical qualities.

Yet another important distinction between the two works is the treatment by the orchestra directly at the close of one section of a movement into the next; there is noticeably more "start/stop" technique in the Violin Concerto than in the Organ Concerto. The Violin Concerto displays a consistent method of ending a section with greater impact, whereas in the other work there is greater use of elision between sections. For example, in the several transitional measures where the A section moves into the B section of the first movement of the Violin Concerto, the composer uses a long pedal point in the orchestra producing a smooth transition from one section to the other even though all rhythmic activity has ceased. The final movement of the organ concerto for example, hardly without a single moment of repose, utilizes a method where an ongoing ostinato in the lower voices overlaps with a new idea (mm. 33 - 40). This provides greater continuity from one section to the next but with less perceptible sectional definition.

In the late 1930s and early 1940s, Harrison, along with

other composers, helped place the percussion family "on the map" as an important musical resource.[2] Harrison's early percussion pieces stylistically anticipate the later concertos, however, the concertos represent a musical departure from the early pieces chiefly because they are concertos rather than works written solely for percussion. They are truly unique works in this light.

In the concertos, Harrison has used unconventional resources and fitted them into a traditional European symphonic framework. Even with these instrumental contraints, these studies help to reveal the composer's varied musical techniques used to achieve proper orchestral balance and formal logic.

Harrison's involvement with the percussion orchestra has helped to define and shape his sound. His own influences of Far-Eastern music, experimental methods (instrument building), and modern dance, when combined, have made percussion a perfect vehicle of expression for him. Harmony is unimportant to Harrison. Through these two works, his music can best be defined as an amalgam of musical tastes all

through which melody prominently flows alongside rhythmic propulsion. There are other pieces written in this manner throughout the composer's output. This accomplishment is testimony to the composer's innate sensibilities and artistic vision.

ENDNOTES FOR CHAPTER IV

1. The organ solo of the second movement may make up for the lack of any cadenza in the entire concerto.

2. Harrison, interview with Virginia M. Rathbun, as cited in Rathbun, 119

APPENDIX A

NOTES on The Concerto for Violin and Percussion Orchestra

NOTES

The pitch-range of the instruments is generally indicated by the height of the part; roughly – I, high : II, medium high : III, alto-tenor : IV, bass-baritone : V, bass & contra.

The pipe-lengths may be of ordinary plumbers pipe ("Conduit" pipe, preferably, for the muted, & an even more sustaining kind for the suspended, if so desired). The pitches of muted & suspended instruments had ought to be quite different from one another. The pipes, from ½ to 1" in diameter, should be cut in assorted lengths from about 6-7', to 25-15", & mounted at nodal points with strong rubber cord. Muted ones may, if desired, rest flat on felt or sponge-rubber.

I prefer that the muted brake-drums (upside down on felt) be played, at least in the "f", & above, with heavy hardwood beaters, on the rims of the inside axle-holes. Chinese lutes used to have tuning-pegs shaped so: ♀, which were ideal for the purpose. Should metal beaters be used they should be heavy metal pipes. However they be sounded, these instruments should "trumpet" in the loud places.

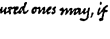
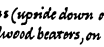
Sistra are here meant to be the New Years, or childrens-toy kind, which consist of two non-touching, rippled, semi-hemispheres of metal fixed to a handle, & between which something (?) rattles.

For the windbells I would actually like two kinds used – for the 1st entry the new metal kind, & for the second the older glass kind. For either use the plain "tourist" kind, not something from an art-gallery or florist.

Coffee cans had ought to be selected for comparative depth of wine, of the 1 lb. size, & suspended bottom-face-front (like small gongs) by drilling or punching (carefully) two holes at the nodal & balance points through the rims, so that they hang vertically. Cork, or rubber-ended pen-holders make good beaters for these, & are best for the clock coils as well.

These latter are two of the chime-coils found in old striking clocks, & should be mounted at the nodal points of a large box resonator, redwood preferably, (perhaps 2-3' large) or on the body of an old guitar. However resonated, depth & size of wine should be aimed for.

The grand Tam Tam should be very deep & large, & the bass drum too.

Tune a Standard Contrabass Viol so:  ; then lay it down between two padded supports, so:  . Play it (ordinarily) below the bridge, but when × is shown then strike

the open strings. Medium-heavy rod beaters will be best for both uses. If it be possible, similar rods covered with adhesive tape, or otherwise softened, would best play the rolls in Mvt. II.

For the washtubs (medium & large sizes), drill holes (¼) up from center on the sides of inverted galvanized-iron tubs & suspend by strong elastic cords to some kind of supporting frames, star-wise, like drums. Medium large rubber-ball type beaters will elicit good mellow tones. Use strong, hard, rod for x on rim, & also for the same direction on drums.

"L. S." means "let sound" — "St." means "stop", & means to stop the sound of the preceding stroke exactly at the moment of sounding the next, so producing a perfect legato of the melody.

Korean Dragons Mouths (round wooden instruments) are refered to now as Temple Blocks & it is these which I mean, not the rectangular hardwood Woodblocks.

Flower-pots will be the ordinary unglazed terra-cotta ones, & should be on the large size, the smallest being about 6" across the top.

Suspended instruments had all ought to have a powerful sweetness of tone & very long sustaining power. If no pre-communist Chinese gongs are available, then use modern Indonesian ones, for most of the gongs now coming out of Hongkong are simply no good, I think. If the suspended brake-drums are not of the sweetest (& long-lasting), then use, instead, a set of large Belgian or English "hand-bells" (but mounted, of course) — in any pitches desired.

During rehearsals in Los Angeles for the 2nd performance of this Koncerto, the violinist Eudice Shapiro, the conductor William Kraft, & the instrumentally inventive percussionist Forrest Clark, gave me generous help in making clear my intentions as to instrumental masters, tempi, & general formal expression. They have my gratitude for this, as for the tape of their performance which enabled me to bring the score of this work to its present form.

Lou Harrison

APPENDIX B

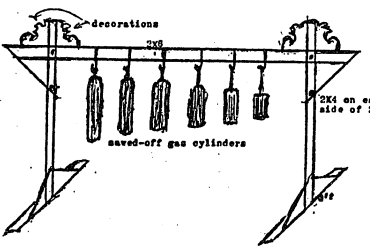
NOTES for SPECIAL INSTRUMENTS FOR LOU HARRISON COMPOSITIONS

SPECIAL INSTRUMENTS FOR LOU HARRISON COMPOSITIONS

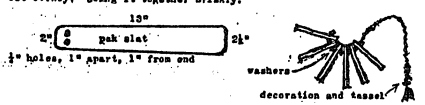
(This list is particularly for "Concerto for Organ with Percussion Orchestra"

"6 muted pipes":
Lengths: vary from 17" to 34" approximately.
Sizes: 1¼" thickwall steel electrical conduit, or, 1½" steeltube electrical conduit, or, 1½" thickwall aluminum conduit.
These are "trade sizes"--approx. internal diameters.
Beaters: 8"-long pieces of ¼" trade size rigid pipe.
Tonal range: These suggested sizes and types of pipe, cut at random, will produce random tones over about 2 octaves, starting about F above middle C.
Mounting: Lay pipes on folded wooly blanket for proper muting, not on foam cushion.

"Great bells":
Entity: industrial steel gas tanks. (Defective ones are low cost.) Oxygen, CO_2, or nitrogen tanks are usable.
Sizes: Random lengths of 7, 8, 9½ or larger diameter cylinders. 6 are needed so 3 tanks would do if not sawed too close to their bottoms. (About 1' minimum length.)
Mounting: suspended from heavy rack: 10'-2X6 crossbar on doubled 8'-2X4 stanchions suggested.

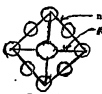


"Pak"
Entity: Korean clacker.
Materials: Solid hardwood, about 3/8" thick. 6 slats, tapered.
Spacing: about 3/16". 3 standard 3/8" cut washers will do.
Construction and operation: Tie the slats and spacer washers firmly together with rawhide or nylon cord. Grasp the end slats and pull the lower ends wide apart, so that all 6 slats should fan out evenly. Swing it together briskly.



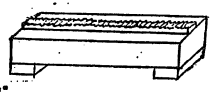
"Sweet Jangles"
Entity: a bell tree, the Balinese "gentorak".
Material and construction: brass bells such as made-in-India ones sold in strings. Sizes vary from 1" to 2" in height (not counting the eye). Tree can be made with 1" dowel trunk 12" long and #9 iron wire branches in three tiers, 8 bells to the tier. Pedastal can be heavy wire also and handle a 2" rubber ball. [illegible]
Substitution: Several brass-tube wind chimes might do.

Suggested construction. Sweet gentorak could also be made entirly of wooden strips.



Top view

"Rasp"
Construction: The resonator box is 22" long by 7" wide by 4" high, with 1" plywood sides and top, 3/4" ends, and no bottom. It sits on 2 pads of polyurathane foam about 1" thick and 2" wide. The rasp is a 3/4 X 3/4" fir strip sawed 1" deep every 1" then filed at the slits to make scallops. It is glued on top of the resonator box.
Operation: Try various sizes of round sticks to find desirable sound level.



"3 wooden drums"
Entity: wooden cubes, open underneath, suspended from a rack.
Sizes: #1: 21" square, with 5/8" plywood sides and 1" plywood top.
#2: 16" square, with 1/2" plywood sides and 1" plywood top.
#3: 12" square, with 1/4" plywood sides and 1/8" ply top.
Construction: Top may be oversize for locks and strength; 1" or so overhang. All joints must be thoroughly glued and nailed.
Beaters: large soft drum sticks like tympani sticks.

Cluster Bars
Purpose: for playing octave or 2-octave clusters on keyboard instruments.
Requirements: 3- 1-octave bars and 2- 2-octave bars.
Construction: pine sticks, about 1½" wide by 1" high, 6-5/8" long for 1-octave bar and 13-1/8" long for the 2-octave ones. Scraping in a little on the sides and leaving them rough will help the grip. Pad with cotton batting, foam, or something and pull felt over snugly for a cushion about ½" high.

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