

**An Analysis of Raymond Helble's 1st and 2nd Preludes for
Marimba**

By Robert Bridge

This analysis is of Preludes for Marimba Numbers 1 and 2, by Raymond Helble. It will show that both Preludes are built around inclusion properties. And, it will show that both preludes were composed using a twelve-tone row. I also hope to shed some light on how the original performer, Leigh Howard Stevens, influenced Mr. Helble's compositions.

The numbering of the preludes, and the fact that they are published with a third Prelude in one set, is deceptive. These pieces were written at different times in the composer's life. The first Prelude was written while Mr. Helble was still a graduate student at the Eastman School of Music, in the early 1970's (the composer says that it was either in the fall of 1972 or the spring of 1973). The second prelude was written a few years later.

Both pieces were written for Leigh Howard Stevens. In the early 1970's, Mr. Stevens (also attending Eastman at this time) was developing a new technique for playing the marimba with four mallets. His technique allowed him to do many things that were previously impossible for one player. However, there was very little music where these techniques were applicable. So, Mr. Stevens asked Mr. Helble to write some music for him that employed these techniques. Prelude No. 1 for marimba was the first of these pieces.

It is of some interest that when this piece was written, it was assumed that no one but Stevens would ever be able to play it. (Helble recalls Mr. John Beck saying something of this nature at the premier of the first prelude.) Now, in 1995, it is within the technical abilities of most graduate students in percussion performance degree programs (and quite a few undergraduates).

Prelude No. 1 is based on the twelve tone row: 9108B326A745. I reconstructed this row by comparing four separate areas of the piece. This was necessary because Helble never gives a clear example; he states two or more of the pitches simultaneously. However, by comparing these four areas, I was able to define the order of the row in the following manner:

Measure 1-beat 2 of ms. 2

1	0	3	6	7	4
9	8	B	2	A	5

beat 3 of ms.2-ms.3

4	7	6	9	1	5	2	B
8	3	A					0

last eighth of ms. 3-ms. 5

0	?	?	B	2	6	5	9	1	7	8
								A		

(The ? will be explained below.)

And, the last eighth of ms. 10-ms.11

4	8	7	3	6	A	9	1	5	2	0
										B

The first example is the most obvious; it opens the piece stating that there is a row. The second example, does the same, but it also begins to show some ordering to the pitch classes. The third example is a bit tricky, because of two questionable pcs, pc 3 and pc 4. I believe that there is a misplaced accidental here.ⁱ With the corrected accidental, this is P₀.ⁱⁱ

The fourth example supports this with the ordering of the first three notes. Now view the examples, transposed and immediately above each other.

1	0	3	6	7	4															
9	8	B	2	A	5															
9	0	B	2	6	A	7	4													
1	8	3					5													
9	?	?	8	B	3	2	6	A	4	5										
								1												
9	1	0	8	B	3	2	6	A	7	5										
																				4

See example 1 below for the complete row table.

With the row established, we can now begin to look at the properties that the row contains. The row is made of 2 hexachords: 6-z10 and 6-z39, which are Z related to one another. This prelude is built on this row and sets that have K/Kh relations to the row. 6-z10/6-z39 is the K/Kh nexus set for this composition. The sets used in Prelude No. 1 can be viewed in example 2 below.

There are also two other important hexachords in this composition. They are 6-z3 and 6-z36. These chords are z related to each other. They are also closely tied to 6-z10 by their interval vectors. Four of the ic entries in their interval vectors are identical, so they are R₂ related. Also, all four of these hexachords have the same invariance vector, <10000000>.

To further stress the relationship, Helble places the hexachord 6-z3 in the melody (uppermost voice) at both the beginning and the end of this prelude. At the beginning, 6-z3 is coupled with 6-z10 below it; and at the end, 6-z3 is coupled with 6-z39 below it. Also there are six held notes (either rolled or continually re-articulated) in the piece, 70B9A6,

which are the set class 6-z3. The complement of set class 6-z3 is 6-z36; and it is found in this piece as well.

Helble also uses the row to divide the form of the prelude. In the first section, measures 1-12, there are clear rows. In the second section, measures 13-17, there are only row fragments and K/Kh related sets. and in the final section, measures 18-22, the rows are present again. (Although, there is not a full statement of the row to end the piece.) And, as stated above, the piece ends like it began with 6-z3 in the melody.

Another interesting aspect of this row is that its first four diads are major thirds. As stated above, this piece was written to feature Leigh Howard Stevens' new marimba technique. Mr. Stevens edited this edition and provides us with some insight about why the row was constructed this way.

The only outstanding technical issue in this prelude (other than hitting all of the notes, which is no small feat) is how he has indicated that these thirds be played. The opening gesture, which repeats when this material comes back at measure 18, is played by crossing the mallets, uncrossing them, and crossing them again. This is quite a stunning visual effect and can only be performed with Mr. Stevens' technique.

To conclude the information on the first prelude, Mr. Helble organized his composition with inclusion and similarity relations. All of the sets that I have identified in the composition (other than the R_2 related hexachords 6-z3/6-z36) are K/Kh related to the nexus set of 6-z10/6-z39. This is the row, and it is found in its complete form in the first and last sections of the piece.

Prelude No. 2 is more closely linked to the row table throughout the composition. The only occasions where this is not true are in measure 8, and the final measure. In these measures, Helble uses fragments of the row and pitch class sets that are included in the row.

Again, as in the first prelude, the opening made it obvious that there was a row form to the piece. However, the row was not written without simultaneous notes until the last two measures. Starting with beat three of measure 19 and ending with the first note of measure 20, the row reads: A10B97825346. The Row Matrix is shown in Table 3 below.

The first seven measures of the score contain six complete statements of the row. Measures 1-3 are the P₃ form of the row. beats 3 and 4 of measure 4 are the P₄ form of the row. However, there are two slight ordering problems:

4	7	6	5	3	1	2	8	B	9	A	0
4	7	6	5	1	3	2	8	9	B	A	0

The top row is the ordering from the matrix, and the bottom row is how the pitches appear in the composition.ⁱⁱⁱ This slight deviation allows the line to be moving up and gaining excitement through each four note grouping.

Measures 5 and 6 contain IR₈ and P₅. P₅ is also slightly out of order and its beginning overlaps, by two notes, with the preceding row. Measure 7 begins with set class 5-1; and it is followed by R₁₁ and IR₁ which also overlap.

Measure 8 seems to follow no obvious plan. It, like ms. 7, starts with set class 5-1. Set classes 6-5; 6-2; and 4-1 follow, and conclude the first half of this measure. All four of these set classes are important to the composition. The prelude ends with set class 5-1 followed by set class 6-5; and 4-1 is the opening set class and a part of the row. Set class 6-2 is also a part of the row (as mentioned above).

The second half of the measure is made up of 6z-25 over 4-2; 5-2; 5-10 over 4-21 and 6-z28. A more interesting way to view this, and perhaps more insightful, is to look at the trichords in the top line: 3-2 over 3-4; 3-2 over 3-2; 3-2 over 3-5; and 3-5 over 3-4. The prelude also ends with obvious statements of these trichords.

Measures 9, 10, 11, and 12 have three statements of the P_3 form of the row. The second and third are tied together with a loose statement of the P_A form of the row. The only remaining anomaly is at the end of measure 11 where there is a triplet sc3-5 in the upper voice. This is a part of the P_A form of the row, but it is also the same trichord that ends the piece, and it signals the ending of this section of the piece. This assumption is confirmed in measure 12 when the two original row forms, P_3 and P_4 , return (however, they return with inverted dynamics and the roll has been exchanged for articulation).^{iv} The remainder of this section shows row forms P_A and P_{11} .

The closing section of the prelude begins in measure 16. Helble reinstates the roll and mimics the beginning of the piece. He follows this with the final row statement of P_A and the set classes 5-1 (formed by 3-2 and 3-1), and 6-5 (formed by 3-5 and 3-4).

The technical aspects that Mr. Stevens has added are the stickings and the different rolls. (Which of the two decided on the dead strokes, is not readily apparent here.) The stickings have already been mentioned. The rolls are of two kinds: the “Musser” roll where the mallets move quickly 124312431243 etc.; and the traditional roll where the mallets in each hand strike the bars simultaneously and the hands alternate strokes quickly.

In conclusion, Prelude No. 2 is very tightly organized around the row. Row forms are almost always present, and the two exceptions are unified through inclusion properties. Both of these preludes are organized with inclusion; Prelude no. 1 uses K/Kh inclusion, while Prelude No. 2 is built almost entirely from complete row forms.

Example 1**Twelve Tone Row for Prelude No. 1**

9 1 0 8 B 3 2 6 A 7 4 5
5 9 8 4 7 B A 2 6 3 0 1
6 A 9 5 8 0 B 3 7 4 1 2
A 2 1 9 0 1 3 7 B 8 5 6
7 B A 6 9 1 0 4 8 5 2 3
3 7 6 2 5 9 8 0 4 1 A B
4 8 7 3 6 A 9 1 5 2 B 0
0 4 3 B 2 6 5 9 1 A 7 8
8 0 B 7 A 2 1 5 9 6 3 4
B 3 2 A 1 5 4 8 0 9 6 7
2 6 5 1 4 8 7 B 3 0 9 A
1 5 4 0 3 7 6 A 2 B 8 9

Example 2**K- and Kh relations that actually occur in Prelude No. 1:**

Kh10-3

Kh 10-4

Kh 3-1

Kh 3-2

Kh 3-3/9-3

Kh 3-4

K3-11

K4-1

K4-3/8-3 (4-3 in Rp with 6-z10)

Kh4-4

K4-5

K4-10

Kh 4-11

Kh 4-12

K4-13/8-13

K4-19

K4-27

K8-21

K5-3

K5-16

K5-26

K7-2

K7-4

6-z3 R₂ with 6-z10

6-z10 maximally similar to 6-z3; maximally similar to 6-z39 (their iv's have four ic entries in common)

6-15 R₂ with 6-z10; maximally similar to 6-z10

6-z39

Example 3**Row Matrix for Prelude No. 2**

A	1	0	B	9	7	8	2	5	3	4	6
7	A	9	8	6	4	5	B	2	0	1	3
8	B	A	9	7	5	6	0	3	1	2	4
9	0	B	A	8	6	7	1	4	2	3	5
B	2	1	0	A	8	9	3	6	4	5	7
1	4	3	2	0	A	B	5	8	6	7	9
0	3	2	1	B	9	A	4	7	5	6	8
6	9	8	7	5	3	4	A	1	B	0	2
3	6	5	4	2	0	1	7	A	8	9	B
5	8	7	6	4	2	3	9	0	A	B	1
4	7	6	5	3	1	2	8	B	9	A	0
2	5	4	3	1	B	0	6	9	7	8	A

Endnotes

ⁱ I think that the E flat at the end of ms. 3 should be an E natural while the E natural at the beginning of ms. 4 should be an E flat.

ⁱⁱ There are other mistakes in this score. In measure ten, the second A flat should be a B flat and the rhythm should be a sixteenth-note-quintuplet instead of the eighth-note-quintuplet that is notated. I discovered this by checking with an early handwritten manuscript (which is not dated).

ⁱⁱⁱ This slight deviation could also be explained by the marimba technique being used here. The 3 and 1 were switched for volume. The rotary stroke (for which Stevens is especially famous) is stronger as it moves from the outer mallet to the inner mallet. The B and 9 were switched to keep the arm moving in the same direction (up).

^{iv} In fact, this is the most opposite sound from the roll possible, since the indication is to mute any sustain through the use of dead strokes.