David Orvek

Program Notes

   Mabel Wood Hall is an electronic piece using recorded sound. 12 sounds were recorded throughout Mabel Wood Hall on a Sony PCM-D50 linear recorder and extracted, cut, and pieced together using Audacity. These sounds were as follows: the air ventilation system outside the first floor entrance (referred to as blower), the closing of a stairway door (referred to as door), the cooling fan of the drinking fountain on the first floor (referred to as drinking fountain), the beep of the electronic time clock (referred to as beep), the squeak of the choir folder cabinet (referred to as cabinet), the hand sanitizer dispenser (referred to as hand sanitizer), the assistance bell in the listening library (referred to as bell), a different squeak from the same folder cabinet (referred to as squeak), the crash of the rolling shelves in the music library (referred to as shelf), the sound of footsteps on the stairs (referred to as stairs), the slice of the paper cutter (referred to as slice), and the metal cover of the 3-hole punch (referred to as hole punch). These 12 sounds were randomly assigned a number from 0-11 using a random pair generator resulting in the following assignments:

<div align="center">

0=Blower
1=Door
2=Drinking Fountain
3=Beep
4=Cabinet
5=Hand Sanitizer
6=Bell
7=Squeak
8=Shelf
9=Stairs
10=Slice
11=Hole Punch

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   A time interval of 3 seconds was arbitrarily chosen and divided into 12 equal time points at intervals of .25 seconds. Each of these time points was assigned a number as follows:

<div align="center">

0=0
1=0.25
2=0.50
3=0.75
4=1.00
5=1.25
6=1.50
7=1.75
8=2.00
9=2.25
10=2.50
11=2.75

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The following 12-tone row was created: 0, 1, 10, 11, 9, 8, 2, 3, 5, 4, 7, 6. This row has symmetrical properties such that the second hexachord is R_6 of the first hexachord and thus $P_x=R_{x+6}$ and $I_x=RI_{x+6}$. This results in a row that generates only 24 unique forms as opposed to 48. These 24 unique forms were then grouped randomly using a random group generator and randomly assigned a number as follows:

$$0=P_0 \ \& \ I_8$$
$$1=R_{11} \ \& \ I_9$$
$$2=RI_0 \ \& \ I_1$$
$$3=I_{11} \ \& \ R_0$$
$$4=R_4 \ \& \ R_3$$
$$5=RI_{10} \ \& \ P_1$$
$$6=P_{11} \ \& \ RI_{11}$$
$$7=I_{10} \ \& \ P_2$$
$$8=P_3 \ \& \ P_4$$
$$9=RI_8 \ \& \ R_2$$
$$10=R_1 \ \& \ RI_9$$
$$11=RI_{11} \ \& \ I_0$$

In each of these groups, the left form is used for sounds and the right for time point.

The prime form of the row was used to order these groups, which then prescribed the ordering of the sounds, and the time point on which they entered. Thus the entire form of the piece from the individual sound to the entire duration of the piece is generated from the row.

	I_0	I_1	I_{10}	I_{11}	I_9	I_8	I_2	I_3	I_5	I_4	I_7	I_6	
P_0	0	1	10	11	9	8	2	3	5	4	7	6	R_0
P_{11}	11	0	9	10	8	7	1	2	4	3	6	5	R_{11}
P_2	2	3	0	1	11	10	4	5	7	6	9	8	R_2
P_1	1	2	11	0	10	9	3	4	6	5	8	7	R_1
P_3	3	4	1	2	0	11	5	6	8	7	10	9	R_3
P_4	4	5	2	3	1	0	6	7	9	8	11	10	R_4
P_{10}	10	11	8	9	7	6	0	1	3	2	5	4	R_{10}
P_9	9	10	7	8	6	5	11	0	2	1	4	3	R_9
P_7	7	8	5	6	4	3	9	10	0	11	2	1	R_7
P_8	8	9	6	7	5	4	10	11	1	0	3	2	R_8
P_5	5	6	3	4	2	1	7	8	10	9	0	11	R_5
P_6	6	7	4	5	3	2	8	9	11	10	1	0	R_6
	RI_0	RI_1	RI_{10}	RI_{11}	RI_9	RI_8	RI_2	RI_3	RI_5	RI_4	RI_7	RI_6	