025:250 COMPOSITION: ELECTRONIC MEDIA I
Fall 2009
Assignment 2.1

1. Assignment 2.1 will be presented in class on Wednesday, Oct. 7.

2. The source material for Assignment 2.1 was generated in Assignment 2.0. A summary of this is shown below.
   a. 12 of the best of 17 hybrids, labeled LFA…LFL.
   b. 12 of the beginning portion of the transpositions of + 1 semitone, labeled LFAa…LFLa.
   c. 12 of the middle portion of the transpositions of + 2 semitones, labeled LFAb…LFLb.
   d. 12 of the ending portion of the transpositions of -1 semitone, labeled LFAc…LFLc.
   e. 12 of the free-form cut/paste/reverse/fade versions of the transpositions of -2 semitones, labeled LFAd…LFLd.

[As a side note, consider the 5 neighborhoods A<B<C<D<E discussed earlier in class. Remember that motion in
   a continuous gesture of contiguous neighborhoods resemble the examples below.
   a. C D E D C B C B A
   b. A B C D C D C D
   c. E D C D E D C B
   d. Now, what if the following associations were made:
      A = LFAd…LFLd at transposition -2
      B = LFAc…LFLc at transposition -1
      C = LFA…LFL at transposition 0
      D = LFAa…LFLa at transposition +1
      E = LFAb…LFLb at transposition +2
   e. With a certain amount of mental effort and imagination, one can see how the 60 soundfiles of Step 2 above
      could be used to create continuous gestures based on the parameter of pitch.
   f. At this point, I will close the discussion on continuous gestures and will not return to this side note again. The
      concepts explored in this side note will not be used in the making of Assignment 2.1. The seed has been
      planted.]

3. Note that the following appears to be true:
   a. LFA… are made of hybrids that have a transposition value of 0.
   b. LFAa… are made of hybrids that have a transposition value of +1.
   c. LFAb… are made of hybrids that have a transposition value of +2.
   d. LFAc… are made of hybrids that have a transposition value of -1.
   e. LFAd… are made of hybrids that have a transposition value of +2.

4. It was mentioned in recently in class that we could transpose these 60 soundfiles by extreme values ranging from
   -48 semitones to +48 semitones as a way of generating new kinds of sounds. Note that an extreme pitch-shift,
   particularly when the preserve duration box is unchecked in Peak, can produce new sounds that are qualitatively
   and expressively different than the original sounds. In order to find these new sounds, we will need to apply
   transpositions over as much as an 8-octave range. There are two ways of going about this: either transpose all 60
   soundfiles by every interval in an 8-octave range, or find a small number of transpositions that is musically
   meaningful, as discussed below.

5. Class discussion of the concept of imposing structure on an unstructured collection of elements.

6. The following steps need to be done:
   a. Change the naming scheme of "LFA...LFL" to "LFA..."
   b. Write these in a new order, shown below:
   LFAb... = +2
   LFAa... = +1
   LFA... = 0
   LFAc... = -1
   LFAd... = -2
   c. Change the notation of pitch change + or − a number of semitones to mod 12 transposition values, shown below:
   LFAb... = +2 = 2
   LFAa... = +1 = 1
   LFA... = 0 = 0
   LFAc... = -1 = 11
   LFAd... = -2 = 10

7. Consider the table below:

	T0	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11
LFAb...	2	3	4	5	6	7	8	9	10	11	0	1
LFAa...	1	2	3	4	5	6	7	8	9	10	11	0
LFA...	0	1	2	3	4	5	6	7	8	9	10	11
LFAc...	11	0	1	2	3	4	5	6	7	8	9	10
LFAd...	10	11	0	1	2	3	4	5	6	7	8	9

   a. Note that, for example, T3 is equivalent to changing pitch by +3 semitones, +15 semitones, +27 semitones,..., and -9 semitones, -21 semitones, -33 semitones,...

   b. Consider the effect of transposing the 60 soundfiles discussed above by T0 and T6:

	T0	T6
LFAb...	2	8
LFAa...	1	7
LFA...	0	6
LFAc...	11	5
LFAd...	10	4

   c. Note that T0 and T6 acting on the 60 soundfiles will not produce any unisons or octaves.

   d. Consider the effect of transposing the 60 soundfiles by T0, T3, T6, T9:

	T0	T3	T6	T9
LFAb...	2	5	8	11
LFAa...	1	4	7	10
LFA...	0	3	6	9
LFAc...	11	2	5	8
LFAd...	10	1	4	7

   e. Consider the effect of transposing the 60 soundfiles by T0, T4, T8:

	T0	T4	T8
LFAb...	2	6	10
LFAa...	1	5	9
LFA...	0	4	8
LFAc...	11	3	7
LFAd...	10	2	6

f. Consider the table below:

	T0	T4	T8	T3	T7	T11	T6	T10	T2	T9	T1	T5
LFAb…	2	6	10	5	9	1	8	0	4	11	3	7
LFAa…	1	5	9	4	8	0	7	11	3	10	2	6
LFA…	0	4	8	3	7	11	6	10	2	9	1	5
LFAc…	11	3	7	2	6	10	5	9	1	8	0	4
LFAd…	10	2	6	1	5	9	4	8	0	7	11	3

g. How can the table above be understood?

8. Plan of work for Assignment 2.1.
   a. Create a transpositional structure of your own making consisting of 3-6 transpositions, including T0.
   b. Convert the transposition numbers above to specific octaves and semitones within a range of -48 to +48 semitones.
   c. Use the Peak batch processor to transpose the 60 soundfiles to these values.
   d. Label the files in a meaningful way.
   e. Proceed to Step 10.

9. In class demo of Step 8. You may use this demo for your assignment or you may create your own realization.

10. You should now have 180, 240, 300, or 360 soundfiles, as shown below:
    60 x 3 = 180
    60 x 6 = 360
    60 x 4 = 240
    60 x 5 = 300

11. Create a Pro Tools session, drag and drop the files from Step 9, and create 17 gestures, as discussed in class.
    a. The overall duration of the gestures should be:
       1._____
       2._____
       3._____
    b. The overall register of the gestures should be:
       1._____
       2._____
       3._____
    c. The pitch contour should be:
       1._____
       2._____
       3._____
    d. The attack contour of the gestures should be:
       1._____
       2._____
       3._____
    e. The overlap contour of the gestures should be:
       1._____
       2._____
       3._____
    f. The loudness contour should be:
       1._____
       2._____
       3._____
    g. The panning contour should be:
       1._____
       2._____
       3._____

12. Bounce the 17 gestures to interleaved stereo files that are normalized, have no silence at the beginning or end, and are named in a reasonable way.