**025:250 COMPOSITION: ELECTRONIC MEDIA I**

**Fall 2010**

**Rigid and Non-rigid Transpositions**

1. Gestures may be transposed to create additional source material for the final composition project. These

transpositions may be non-rigid and rigid. In mathematics, any transformation on a set of points is rigid if the distance or interval between points is left unchanged after the transformation. A transformation is said to be non-rigid if the distance or interval between points is changed after the transformation. An example from geometry will be given in class. In music, a *real* transposition in rigid; a *tonal* transposition is generally non-rigid.

2. If you bounce the gestures from Assignment 3 and change the pitch in Peak, this will produce rigid transpositions. If

you stay in the Pro Tools environment and transpose the beginning of a gestures up by 1 semitones, the middle of the

gesture down by 1 semitone, and the end of the gesture down by 2 semitones, this will produce a non-rigid

transposition. The table below lists some of the non-rigid transpositions that can be performed on a gesture. Note

that *beginning* refers to any or all regions that occur in what the composer regards as the beginning of the gesture.

Similarly, *middle* refers to any or all regions that occur in the middle of the gestures, and *end* refers to any or all regions that occur at the end of the gesture.

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|  | Beginning: Raise 1-2 semitones  Middle: Lower 1-2 semitones  End: Lower 1-2 semitones  Beginning: Lower 1-2 semitones  Middle: Raise 1-2 semitones  End: Lower 1-2 semitones  Beginning: Lower 1-2 semitones  Middle: Lower 1-2 semitones  End: Raise 1-2 semitones  Beginning: Lower 1-2 semitones  Middle: Raise 1-2 semitones  End: Raise 1-2 semitones  Beginning: Raise 1-2 semitones  Middle: Lower 1-2 semitones  End: Raise 1-2 semitones  Beginning: Raise 1-2 semitones  Middle: Raise 1-2 semitones  End: Lower 1-2 semitones | Beginning: Raise 3-12 semitones  Middle: Lower 3-12 semitones  End: Lower 3-12 semitones  Beginning: Lower 3-12 semitones  Middle: Raise 3-12 semitones  End: Lower 3-12 semitones  Beginning: Lower 3-12 semitones  Middle: Lower 3-12 semitones  End: Raise 3-12 semitones  Beginning: Lower 3-12 semitones  Middle: Raise 3-12 semitones  End: Raise 3-12 semitones  Beginning: Raise 3-12 semitones  Middle: Lower 3-12 semitones  End: Raise 3-12 semitones  Beginning: Raise 3-12 semitones  Middle: Raise 3-12 semitones  End: Lower 3-12 semitones | Beginning: Raise *n* pseudo-octaves  Middle: Lower 1-16 semitones  End: Lower 1-16 semitones  Beginning: Lower 1-16 semitones  Middle: Raise *n* pseudo-octaves  End: Lower 1-16 semitones  Beginning: Lower 1-16 semitones  Middle: Lower 1-16 semitones  End: Raise *n* pseudo-octaves  Beginning: Lower *n* pseudo-octaves  Middle: Raise 1-16 semitones  End: Raise 1-16 semitones  Beginning: Raise 1-16 semitones  Middle: Lower *n* pseudo-octaves  End: Raise 1-16 semitones  Beginning: Raise 1-16 semitones  Middle: Raise 1-16 semitones  End: Lower *n* pseudo-octaves |