

025:250 COMPOSITION: ELECTRONIC MEDIA I

Fall 2010

Microvariation

1. Microvariation defined:
 - a. The term was created by Prof. Fritts for electronic music composition.
 - b. A digital sound is microvaried when one or more parameters are varied to a small degree.
 - c. It is most often used when the sound is played more than once in the space of several seconds.
 - d. It is intended to prevent digital music from sounding mechanical and lifeless.
 - e. When an acoustical instrument plays a note repeatedly, it does not sound mechanical and lifeless to the same extent as a digital copy of that note.

2. Use of microvariation:
 - a. In Pro Tools, it is usually easier to import microvaried sounds than to modify them in the edit window.
 - b. In Max/MSP, it is usually easier to vary the values of certain parameters of a triggered sound.

3. Which parameters to vary in a microvaried sound:
 - a. Timing or quantification.
 - b. Loudness.
 - c. Envelope.
 - d. Duration.
 - e. Pitch.
 - f. Varispeed.
 - g. Filter or EQ.
 - g. Panning.

4. Since creating microvariations entails a certain amount of time and effort, the composer should try to do as little as possible in using microvariation to prevent digital sounds from sounding lifeless and mechanical.
 - a. If a sound is used several times in a work, but more than 10 seconds apart, the microvariation is not needed.
 - b. If a sound is used as repeated notes, as in 4 or more 16th-notes, then 2-3 microvariations are needed.
 - c. If more than 4 repeated notes are used in a short period of time, then 3-4 microvariations are needed.
 - d. No more than 4-5 microvariations should ever be needed in a composition. If they are, then it becomes a compositional issue.

5. Examples of microvariation
 - A.AcousticalRepeat
 - B.Timing Variation +/- 20 ms
 - C.Timing Variation +/- 100 ms
 - D.Gain Variation +/- 10%
 - E.Gain Variation +/- 20%
 - F.Attack Variation 0-20 ms fade in
 - G.Varispeed +/- 10 cents

Also: Pan