

## 025:250 COMPOSITION: ELECTRONIC MEDIA I

Fall 2010

### Long Tones

1. Function of long tones in electronic music:
  - a. To create a particular emotional atmosphere and sustain it. This is difficult to do with short sounds, but easy to do with long sounds.
  - b. To create unity and cohesion.
  - c. To create stasis.
  - d. To bifurcate the texture when combined with short sounds.
2. Problems with long tones in electronic music:
  - a. The emotional atmosphere can be dominated by a long sound and oppressed by it.
  - b. They can hold back or prevent musical change.
  - c. A sound can seem non-intentional after a period of time, as if the composer turned it on and walked away.
  - d. They can lose their sense of rhythm, purpose, and direction.
  - e. Acoustically, certain frequencies that are sustained at even moderate volume levels can be painful to the audience.
  - f. Acoustically, can mask or smear the attacks of other sounds.
3. How long tones are created in electronic music:
  - a. Synthesis.
  - b. Varispeed pitch-shift down.
  - c. Time-stretching.
  - d. Cross-fading copies of a region in Pro Tools.
4. Shortcomings of the techniques in Item 3a, above:
  - a. Prolonged synthesized tones can seem very mechanical and dull.
  - b. Varispeed pitch-shifts down creates low tones, making high tones difficult to produce with this method.
  - c. Time-stretching is a very popular technique that sounds better with some algorithms, plug-ins, and software than others. Artifacts are usually created, and attacks are elongated and smeared.
  - d. Cross-fading in Pro Tools works best with sounds that are relatively short. Care must be taken not to let the copies sound like mechanical reproductions.
5. Recommendations when using long tones:
  - a. The consequences of a long tone should be considered by the composer.
  - b. A long tone should generally be as short and as quiet as possible.
  - c. In addition to having a long tone be as soft as possible, consider the use of *non-intentional* automated volume changes. This helps keep the sound alive in the listener's mind.
  - d. More *intentional* techniques for keeping a sound alive include cross-fading the long tone to another sound of the same pitch, panning the sound, and re-acquiring the sound after a moment of silence.
  - e. Treat the long tone as a unique pitch not doubled by other tones sounding at the same time.
  - f. Use long sounds at the end of a phrase, rather than the beginning.
  - g. Use long sounds for a purpose, such as inharmonic timbres, clusters, and glisses.
  - h. Use little or no reverb.