

Homebrew Compositional Tactics

Elements for Creating Your Personal Musical Filter

Music 220b | Ge Wang

These are a few techniques or ideas for working with existing (recorded) sounds to leverage their inherent qualities and subsequently transform them. More generally, these are good basic fundamental elements to consider and master when composing, especially with the aid of the computer.

Filters | shape the general spectrum of the sound; to emphasize certain parts, to attenuate others; to fill/balance (or unbalance) the spectrum; specialized filters (e.g., Comb) can be used to emphasize certain aspects (e.g., arbitrary harmonic frequencies) while attenuating the rest.

Examples: LPF, HPF, BPF, BRF, ResonZ (resonance with equal-gain zeros), Comb, combinations of the above, time-varying versions;

Comb Filters | impose pitch onto existing sounds; can impose a fundamental frequency with equal-amplitude harmonics, as function of delay line length; feedback coefficient controls the sharpness of the resonances; generally the richer the existing spectrum, the more pronounced comb filters will be; can be varied over time; can be put into banks of comb filters (for chords); might filter to further sculpt the spectrum. The feedback coefficient can also render a sound more or less recognizable from the original; from zero (the original sound) to very close to 1 (high resonances imposed).

Playback Rate | slow, fast, reverse, subtle variations (especially when playing many instances in layers or repetition) may have pronounced effect; note changing playback rate changes both duration and pitch; can be used to “tuned” pitched sounds.

Pitch Shift | change/”tune” the pitch content without the duration/speed of the playback; depending on implementation may have significant artifacts (especially for larger shifts); may be used in tandem with playback rate to compensate for pitch changes;

Dynamics, Playback Amplitude, and Envelope | dynamics (loudness, relative loudness of different sonic events) and articulation (hard, soft, staccato, legato) may seem so trivial that one may forget to pay attention; subtle variations of amplitude can have pronounced effect over time. Envelopes can be applied to create different contours and gestures over time, and can greatly shape the perception of a sonic event’s “arrival.”

Pan | another seemingly simple parameter that can be used to great effect and subtlety, even for stereo; can be used to create a “field”, give space to the overall sound; add compositional interest; can be used to simulate moving sound sources; refer to equal-power panning and ITD (inter-aural time difference); much to explore in multi-channel situations;

Structure / Form | how is the composition organized at the highest, macro, structural level? How does it progress? Are there sections (ABA, ABA', ABBA, ABACA, etc.)? Is it "through-composed" (non-repetitive)? What does it mean to progress? Thematically? Harmonically? Or a progress from "recognizable" to "something different"? How are material and themes introduced and later developed? Are they brought back and referred to?

Layer and Texture | elements that comprise the sound/music at some given time; related to the character/timbre of the elements; also related to sparseness and density; experiment with both, sometimes an absence of a sound as important as its presence, especially if set up with craft;

Rhythm vs. A-rhythm | Are there "rhythmic" elements? Where do they live in the composition? Are they the "backbone" of a section or even the entire composition? Or are they layered into a mixture? Are the rhythmic elements pitched or unpitched? How they created, and how do they fit, aesthetically, into the rest of the composition? For example, percussive sounds can be "lifted" out of recordings of everyday sounds, and perhaps also filtered, or otherwise altered (e.g., via playback rate).