Make another “sound environment” in PD. Everything that was said to be desirable in the first patch is still the case.

However, not only should you try to improve upon your ideas, efficiency, clarity, and problems encountered, in the previous patch, in this one you must integrate the following three ideas.

1) abstractions (see below)
2) design your own sound(s), and these should include the use of a phasor and associated wavetable, some filter, perhaps delay, and some form of amplitude and frequency modulation. The input to this sound must be at the very least a MIDI note number or frequency, but should incorporate other inlets as well, like amplitude, modulation rates and indices, envelope information, etc. (explain what they are).
3) some “intelligent” melody algorithm that plays that (those) sound(s). Your melody algorithm should generate MIDI or frequency values, that your instrument should convert to whatever it needs (and do whatever it wants with those). This algorithm should be more than a random number generator, it must use some form of “logic” to determine the next sound event. You may also generalize the idea of melody as “some timed and computed sequence of events”, which might include durations, amplitudes, any series of values.

The melody algorithm and the sound should be abstractions, so that they could be used in other “main patches.” In this way, your main patch should be very simple, just a way of banging and sending control values to your melodic algorithm, which should “play” your sound(s). We should be able to plug your algorithm and sound into a very simple patch of my own (say, a metronome, and a generation of random pitch values). In other words, we are working with a “score” and “instrument” paradigm, except that your melodic intelligence must generate the “score” for your “instrument” in real-time.

As in the last assignment, your three pd files should:
- have titles, and your name, and Project 2 on each (Obama.project2.melody.pd, Obama.project2.sound.pd, Obama.project2.main.pd)
- be easy to read and understand (that is, well-organized)
- have clear comments, though not when unnecessary
- (optional) use LOADBANG to start it off (and load information).
- be accompanied by a written explanation (aside from the comments).

Send your PD patches and explanations to the Music 9 email account by 8:00 a.m, Tuesday, April 23rd.