

Reading Response: *Artful Design* Prelude + Chapter 4

Recently, I have been working on an algorithmic composition I call *Primal*, which is basically a project that strives to unite music and mathematics in some meaningful way. I developed a process to map prime numbers to chords and let that dictate the harmonic structure of the piece (performed on a piano), but beyond that the entirety of the melodic structure is open to a synthesizer soloist. In this sense, the duality of the piece allows for both local independence (the two parts, synthesizer and piano, moving as individual voices) but global coordination in that the melody of the synthesizer follows the chordal structure laid out by the piano. This construction of complexity from simple elements closely follows that laid out on page 180. In addition, just like code can be a musical score (especially in the case of Paul Lansky's *Homebrew*), the prime numbers lay out a musical score for *Primal*, and any person familiar with the algorithm could immediately deduce the structure of the piece, similar to Steve Reich's *Clapping Music* (played in class). In this way, the algorithmic piece *Primal* follows many of the programmability design elements laid out in this chapter.

However, there were many takeaways regarding potential improvements for my piece. It is strange that dynamics are often overlooked in computer composition; indeed, the crescendo is one of the first symbols we learn in music. I failed to include much of any direction regarding volume in *Primal* and will definitely be returning to that aspect of the piece. Furthermore, my texture is somewhat monotonous (piano chords with punctuated synth interludes), and my temporal play isn't particularly interesting. The design of ChuckK and the aesthetic parameters laid out on page 167 have caused me to view my own piece in a different light, and I have another lens through which I can critique my own work.