

## Algorithmic Demos:

Over the past year, I've found myself writing a lot of very small pieces - mostly as demonstrations of one kind of patch or equation or other. I liked them, but the question arose - what do you do with a collection of little shards of sound, each of which arose for a specific purpose? The obvious occurred to me - string them together and hear what happens. Surprisingly, they sounded quite good together, and I began shuffling them and rearranging orders, until I arrived at the order they're in now. Here's a little bit about each section.

***Irritating Song*** started life as a demo of the Arpeggiator contraption in AudioMulch. I later added the words, a found text treated with the Anagram Genius program. The text is sung by Anjali, the female Anglo-Indian phoneme set I bought from AT&T.

***Little March*** was made with ArtWonk, and a new accordion sample set I bought from Precision Sound. A series of random number and probability generators mapped to march rhythms and major scales provide a suitable bounce and snap.

***Playing the Lottery in Plano, part 1***, was a test of the data acquisition capabilities of John Dunn's DataBin software. Here the data was the list of winning numbers in one day's New South Wales lottery. This provided a source of sort-of less-than random numbers to map into Oboe and Piano playing in a sunny Phrygian mode. I thought the instrumental samples needed to be put into an environment of some sort, so I found an impulse response on the web of a church in Plano, Texas, near Fort Worth, where John Dunn lives. I placed the two instruments into this environment, the conceptual combination of gambling, a church, and Texas seeming very sweet to me, and nicely full of contradictions. Naturally, I decided to overdo it on the reverb.

***Sprott Attractor Blues*** - For many years, my inability to do differential equations has hampered me in my explorations of fractals and chaos. Finally, I asked Mark Havryliv, a friend who knows mathematics, to help me. He taught me how to solve these equations, and together we implemented them in ArtWonk, producing a family of 13 fractal generators using differential equations described in a paper by Julien Sprott. When applied to a blues scale, and the right set of durations, the output of these equations produced a sort-of whacked-out laid-back blues sound that not only sounded interesting, it *felt* right. Piano, bass and drums are controlled. I think of this as a little homage to the composers of the AACM, especially Muhal Richard Abrams.

***Rosler Canon***. Again, this piece resulted from my work implementing various chaos and fractal equations in ArtWonk, which equations were eventually incorporated into the new version 4.0. Here, the output of the Rossler equation is mapped into a major scale playing a 2 voice canon. The results were so surprisingly musical, I kept it. Each new setting of the fractal parameters produces a different opening melody and harmonic world. This piece is the result of only one setting. The Pianoteq virtual piano is here reverberated by the same Plano church reverb used in the Plano pieces, but here done tastefully, and with restraint.

***Playing the Lottery in Plano, part 2***. The same data and mapping as in the previous Plano piece, but here a trumpet is added, and the whole thing is mapped into a very tense sounding 12-note microtonal scale developed by the Dutch theorist Adriaan Fokker, which, despite its tension, is based on chains of pure 3rds and 5ths. Again, the reverb is intentionally overdone. Anything for a laugh.

***93 Tone Road, Wangaratta, Vic***. If you enter the small rural city of Wangaratta from the south, you'll

be driving on Tone Road. Wangaratta is about 2 hours drive north of Melbourne, and is home to the internationally famous Wangratta Jazz Festival. As we entered Wangaratta on Tone Road, in June 2009, I noticed a house with a very large sign on it: "93 Tone Road." Naturally, this piqued my interest, and I began wondering, what *would* a 93 Tone Row sound like? It was a simple matter to tune a software synthesizer into 93 tone equal temperament, and to generate a random ordering of the 93 tones, and hear it. Some music psychologists claim that even 12 different pitches in a row (the feared "12-tone row"?) is too many for the human mind to grasp, and that segmentation of the melody into sub-groups must inevitably occur. If that's the case, my 93-tone row ought to be completely incomprehensible, and meat for psychoacoustic parsing. That would be a good start, I thought. Then, very recently, John Dunn developed a "shuffle" module for ArtWonk - a random generator that makes a non-repeating random ordering of numbers 1 to N, and at the end of each sequence, generates a new random ordering of them. Now I could have continually different randomly ordered 93-tone rows. Complete chaos! Well, maybe. In any case, one minute of a little electronic ensemble playing the rows has a certain charm.

***Webern By The Lake.*** In my morning walks by Lake Illawarra, I sometimes pause on a bench, idly looking over the lake and its very rich bird life. One day, I brought my notebook with me, and noticed that, for some reason I now forget, I'd written the 12 tone theme of Webern's String Trio in it. I wondered what would happen if I made a series of 3 note chords from this row, and then multiplied all the intervals by 2, 3, 4, and 5. A series of lovely chords resulted, which I then randomly ordered using a patch in ArtWonk. Anjali, harmonically doubled, is speaking/singing an algorithmically generated text which was generated by Babble, an ancient DOS based text cut-up program - the text is a first output of the process that generated the text I read live during "Reading My Email in Public," a live interactive voice and computer work I performed in Melbourne and Wollongong in September 2009. The addition of Anjali's text made a small, wistful song which seemed the perfect ending for this suite.

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