**Notes on the *Anna's Music Box* memory algorithm
(called "repeat" in *AMB*)**

On Apr 21, 2015, at 7:56 PM, Douglas Repetto wrote:
Great that'll work. I remember doing that for my Milano piece. With
the lookback, if it chooses to look back, does that mean just
repeating a previous note, or a series of notes, or actually going
back and replaying *n* notes until returning to the "present"?
.d

From LP:
That's actually the cool part, a single probability does a lot.

Here's the detail.

   You decide some buffer memory maximum length of memory, a tail of notes
picked. A LIFO. Say, 100 notes.

The probability you specify is [0,1], say, .5

   For the next note to pick, there's a 50% chance that instead of generating a
new one with the "noodle algorithm," you'll look back, somewhere in that
buffer, and pick one that's recently been used (by some probability-determined
buffer-length definition of "recently").

The length of the buffer it will choose from, counting back from the current note,
is:

$$((1-p) * (bufferLength)) + 1$$

So if the probability is 1, it will always look back, but look back one note.

If the probability is 0, it won't look back ever.

   If the probability is .1, it will seldom look back, and choose from a long buffer
length: so repetition will not be felt strongly.

   If the probability is high, it won't look back very far, and it will look back
often: so a strong sense of things repeating — recent things repeating — often.