Records as aleatory generators:
Roulettes, parallel grooves and indistinguishable records.

A) Roulette records

The easiest way to implement an aleatory generator with a record is to take advantage of the turntable's rotation. There are three different ways to turn a record into a roulette.

1) In older games like Gramogames or Fortunadisk the result is indicated by the place on which the needle rests when the rotation stops. These roulettes do not use the sound on the record. In fact, the "record" in Gramogames is not even recorded. It must be remembered that early phonographs' motors were powered by wind-up cranks


2) Games like Phono-Finish or the Magi-Trak series feature a cardboard indicator which is inserted around the turntable spindle. The needle, as it plays the record, pushes this indicator (actually, it prevents it from spinning with the record). When the record eventually stops, the indicator will point to some area in the record label where the result of the game is inscribed. This implementation of the roulette in the record can be (and is often) combined with parallel grooves (see below).

3) Games like the Sound Off and Record/Games series use another strategy, which consists in the manipulation of the volume knob. The game starts with the volume of the record player turned down, and when the game rules need it, the volume is turned up and the firs indication heard is used. The volume must be turned down again immediately after this indication and, in case the players do not agree with what they have heard, it is impossible to reproduce it.

B) Records with parallel grooves

Paralel grooves are a much sofisticated tool to make a record which is an aleatory generator. Records with parallel grooves have many independent grooves on each side, and the operator is not able to choose which one is played. Generally all these grooves start with the same narration (for instance, in a horse race, this would be the presentation of the horses and the beginning of the race) but the end of the recording is different in every case (the winner of the race).

The grooves in these records are interlaced spirals. If you are familiar with a vinyl record you may know that, in general, each side has only one spiral groove, which starts in the outer part of the record (see left diagram). The records with parallel grooves have more than one groove. For the sake of clarity, we show records with 2, 3 and 4 grooves, but we can find record with 8 or more parallel grooves.
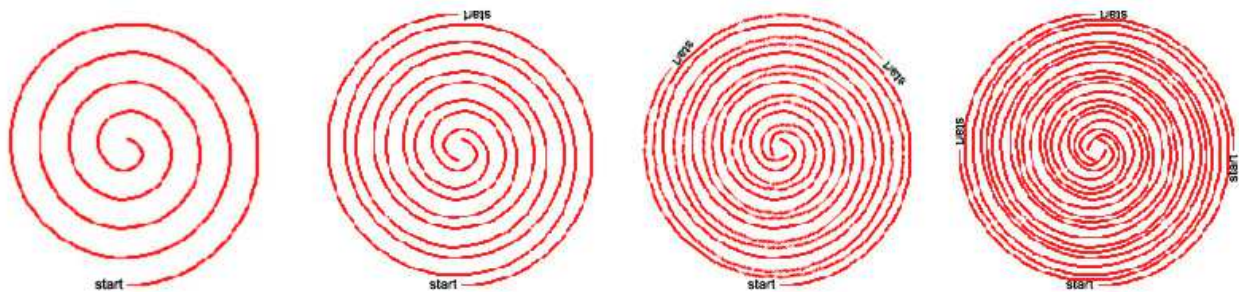
Counterintuitive as they may seem, parallel grooves are found almost from day one in record history. There are examples of such records as far back as the XIXth century. One problem of games with these records is that if the needle jumps ,or if the players do not hear the result clearly,, the record cannot be played again (it can, but the result will probably be different).

Another problem is that not all record pressing plants manufactured these records. That is why there are not many games (or records in general, for that matter) with parallel grooves.

This is a feature exclusive of records. It cannot be implemented with other formats (think of cassettes). Of course, digital media as CDs or DVDs often feature a "random reproduction" option which can be (and has been) used in games, but it is a whole different technology.

C) Indistinguishable records

A last method to get aleatory results when you play a record is to choose between records which are aparently identical (but which, of course, sound different).

Anki Toner, MMXII