

## Preface

Sound is a kind of energy that spreads in waves. For these waves to propagate, there must be molecules or atoms to form a medium in which sound can travel. For this reason, sound waves can be emitted in material environments such as solids, liquids, and gases. In our daily life, our relationship with sound is made almost entirely of airwaves. Submergé (underwater, sunken) is a work that has emerged to reposition our relationship with sound. The name of the work, which consists entirely of water sounds, comes from the process of the music. Music starts on the water, slowly sinks, then disappears into the depths of the oceans. The gravity pulls the sound downwards, and at some point, the sound enters the water medium from the air environment and gradually becomes heavier and deformed. This is in some sense a kind of alienation, a process of transformation and disappearance. In this dark journey towards the unknown, the ear always looks for light.

## Compositional Process

I limited myself to compose a piece with sounds of water droplets and flowing water. I used SoundHack, Max, and IRCAM tools to manipulate the sound. First, I recorded many different water droplet sounds (dropping to metal, plastic and wooden surfaces) and categorized them by their pitch and character. I then made a sampler with Kontakt, which I connected to Max, and made an algorithm that helped me to play the sounds of water droplets in different rhythms according to a curve. With that, I could produce natural-sounding rain and slow it down until the sounds of individual droplets could be heard. I also recorded different rhythmic patterns with the max patch. Through the music, I wanted to linearly change the shape of the sound to reach a different sonic world.

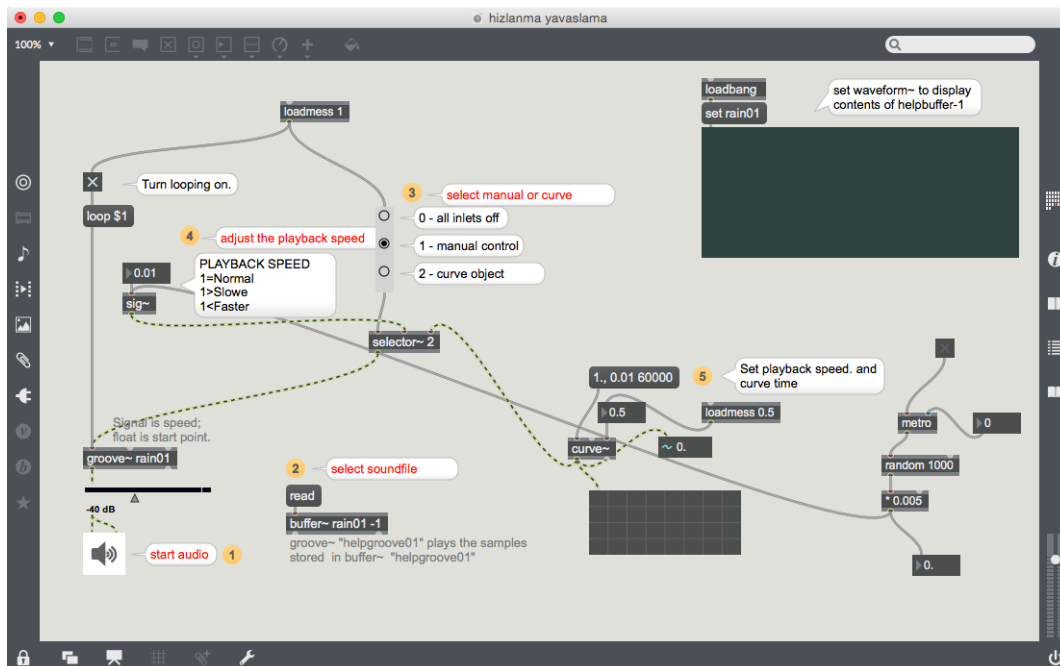


Figure 1: Algorithm

granularized

Play one grain (turn grains off to hear).

Turn on grains.

Granular synthesis is a form of sampling in which the sample is played often but with very short durations (ca. 100ms). This provides one way of doing time stretching and transposition without pitch change. It's also useful for exploring a sound's tonal content without its rhythmic content. This abstraction takes one argument, the name of the sound file: `rgrano.maxpat drumLoop.aif`

For normal operation, turn grains ON.

For linear playback, turn grains ON, set the speed, and click the "play" button.

To play a single grain, turn grains OFF, and send a bang into the left inlet (useful for rhythmic playback).

Turn on audio.

load sound file name: **anton.aif**

Defaults Help

AIFF 16 Bits

Open Record

Manual S... Stop

Output

patrstorage helper

preset disk view

0 0 read storagewindow

recall store write clientwindow

patrstorage Untitled @savemode 0

You can use this patrstorage system to store useful settings, (independent of the sample), or just put the "rgrano.maxpat" in your patch to have the pattr parameters automatically available.

Figure 2: Controlled Granular Synthesis