

SOBRE CÓMO EMBORRACHAR UN ORDENADOR

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From a certain perspective, the computer is the musical instrument and compositional tool par excellence. Finally, composers have the absolute control over the execution of their work they have dreamt about for centuries. Any imaginable sound can be created and controlled with the most minuscule details. Through Fourier's theories of harmonic analysis and synthesis, a sonic object can be designed with such detail in timbre that it would perfectly satisfy the imagination of Bacon and Varèse, leaving acoustic instrument makers in envy. Furthermore, due to the fast computing cycles of the central processing unit, musical events can be scheduled on the time scale of microseconds. Perfect timing is guaranteed, whether the tempo is 1000 beats per minute or 1 beat per week.

So, ideal sounds in impeccable timing? What more is needed? It turns out, after some initial fascination with the machinic rhythms of our beloved ordenadors, that we miss the human touch – this inexplicable qualia of musical performance that cannot be formalized. The stuff that gives music its “soul.” This is obviously a fascinating area for researchers in Artificial Intelligence, who have had some victories, as there is already quite a lot of soul inspiring computer music. The computer is learning how to “swing,” and clever algorithms can be applied to teach it, for example, the magic of Brazilian rhythms (Wright and Berdahl 2006).

Computer music originates in the brain, not the body. The “body” of computer music exists in the form of computational algorithms, executing the music. We are yet to design interfaces that allow for embodiment and “muscular composition” of music, the music of the moment – improvisation. Or rather: this is proving so difficult that a whole research field, NIME (New Interfaces for Musical Expression), has established around the problem. In my work with the *ixiQuarks* I have tried to attack machinic timing, for example with an Artificial Life sequencer called *Predators*. There, predators eat from preys that emit sounds when they are bitten. The structure of the music is defined by energy levels of individual agents, not by a top down temporal order. The *ixiQuark* emphasis on the use of samples also detemporalizes the feel of the music. The focus is on textures and timbre, not musical events as scheduled in time by a machine.

But recently I became interested in machinic timing and I made the *ixi lang* in order to explore the slicing of time into blocks, to represent rhythms graphically, and render the creation of polyrhythmic structures easy and intuitive (www.vimeo.com/ixi). The *ixi lang* is a pattern machine and its musical timing is solid. I have now performed with *ixi lang* over a dozen times in important international musical events. And everybody seems to like it ... except me. I therefore

added a “musique concrete” function into *ixi lang*, making sample playback possible, and thus providing conditions for the focus of sound as sonic textures that are not segregated as events in temporal boxes. This is a huge relief. And the next thing to implement is to teach *ixi lang* to swing, to groove, indeed to become intoxicated with the diverse available substances. Inspired by pictures of a spider on LSD, alcohol, cannabis and coffee, perhaps I can design an algorithm for each? But I'm probably mistaken: that's not what gives music its human characteristic. Nevertheless, I think I will try.

Bibliography

Wright, Matthew and Edgar Berdahl 2006. 'Towards Machine Learning of Expressive Microtiming in Brazilian Drumming', pp. 572-575, in: *Proceedings of the 2006 International Computer Music Conference*, New Orleans, LA.