Babil-on V2

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Abstract. Babil-on V2 is a performance of augmented musical theatre, which describes the imaginary destiny of the Speech. Starting with pure vowels, some more complex elements like the consonants or further, the semantic meaning, appear as disruptive elements. Babil-on V2 surgically dissects speech to extract its emotional charge. The performer is equipped with a motion capture system enabling him to literally handle his voice in real time. In the context of a close-up, facing to the public, he cuts his voice, plays with it, spreads it in the surrounding space, catches it back, modulates it, multiplies it... The performance seems to stick to a technical demonstration, while an insidious truth appears. Babil-on V2 is a metaphor of Human destiny that can not cease to grow, to accumulate, to complicate His situation to the point of not being able to enjoy it without causing His own ruin.

Keywords: Speech, Voice processing, Gesture recognition, Sound Space, Interaction, Performance.

Introduction

From the imaginary destiny of the Speech …

Babil-on V2 draws an original portrait of the Speech, as if it was an individual. Mixing various scientific approaches to speech, inherited from various domains: phonetics, phonology, bio-philological evolution, language acquisition, speech processing, G. Beller composed a structure depicting the imaginary life of this particular individual.

Of a birth marked by the enjoyment of the phonation and by the purity of the vowel, the babbling gets excited in hiccup, then in crisis to laugh. An accident occurs then: the irruption of a consonant. By contagion, the voice complicates little by little in the sketch of a pre-language. Then, the semantic sense bursts as a new disruptive phenomenon. It drives the speech in a continuous stream of linguistic actions, which will eventually impoverish the vocal material by exhaustion. It is the fall of Babylon. The wor(l)d is exhausted, only a pure singing will allow us a return in the original breath.

These three disruptions (the consonant, the sense, the noise) articulate four parts, the evolutions of which are more or less systematic. Simple situations start from these anchors, where new rules are given. The performer starts by discovering what he can make in this new world with his new "power". From a simple game, he slightly goes into some more complex situations, until he looses completely the control of the situation. The accumulation takes over and leads him to ruin.

Subtly, this process of comparing the Speech to an individual, bring us back to our self-condition of human beings. The constant growth underneath the structure of the piece is a direct translation of the evolution of the civilizations. Starting from simple and idealistic situations (Eden’s garden, for instance), we enrich a game we think we understand, to a point of no return, until the next disruption.

… to the real fate of the Human

Genesis

Babil-on V2 started from research & developments made during the production of Luna Park, of Georges Aperghis, premiered in 2011. G. Beller, the computer music designer of the piece, invented SpokHands, a system to capture the gestures of R. Dubelski, who triggers pre-recorded voice sounds, by playing aerial percussions, during the show.

To play himself with the full range of the system he created, G. Beller then composed a first version of Babil-on, for R. Dubelski. This 15 minutes version has been premiered the 15th of October 2013, at Théâtre des Bernardines, Marseille, France, during CMMR'13, the 10th International Symposium on Computer Music Multidisciplinary Research on Sound, Music and Motion. In this pre-version, R. Dubelsky triggers again some pre-recorded voice sounds, but a step further has been done: The quality of the gesture modulates the quality of the vocal synthetic sounds.

G. Beller wants to go further. He wants to allow the performer for manipulating his own voice in real-time. Consequently, he started the Synekine project in 2014. This project brings together performance and scientific research to create new ways to express ourselves. By analogy in "synaesthesia", the phenomenon in which two or more senses of perception are associated, the "synekinesia" would reflect our capacity to associate two or several motor senses.

One of the goals of this innovative project is to create new instruments that define new paths for vocal improvisation. Several Augmented Reality Sound Tools (no glasses, no video) allow the performer for manipulating in real time the sound of his voice. The names are evocative: Sound Space, Hand Sampling, Body Choir, Hyper Ball… For instance, with the Sound Space, the performer literary spreads his voice around him, creating an entire sound scene made of his voice, while interacting with it by the gesture.

Some of these new instruments have then been back propagated into the structure of Babil-on to produce an extended version called: Babil-on V2. G. Beller himself has premiered this 25 minutes version, the 17th of August 2015, at ISEA2015, AV Disruption, Vancouver BC, Canada. To sum up, Babil-on V2 is a testimony of a 5 years research process that G. Beller constantly conducted through different projects. It is also the first performance of a beginning series. Other chapters are to be written by the growing Synekine Dance Company.

Additional Information

The Synekine Project brings together performance and scientific researches, with social aspects. The neologism "synekinesia", is built from the Greek terms "syn", (union) and "kinesis" (movement). By analogy in "synaesthesia", the phenomenon in which two or more senses of perception are associated, the "synekinesia" would reflect our capacity to associate two or several motor senses. In the Synekine project, the performers develop a fusional language involving voice, hand gestures and physical movement. An interactive environment made of sensors and other Human-Computer Interfaces augments this language. Through collective exploration, we wish to see emerge a more faithful language to the expression of our emotions.

Biography

Greg Beller works as an artist, a researcher, a teacher and a computer designer for contemporary arts. He defended a PhD thesis in Computer Science on generative models for expressivity and their applications for speech and music, especially through performance. While developing new ideas for signal analysis, processing, synthesis and control, he takes part in a range of artistic projects. He is currently the director of the department for Research/Creativity Interfaces of IRCAM, where he coordinates the works of the researchers, the developers, the computer music designers and the artists in the creation, the design and the performance of artistic moments. More information: www.gregbeller.com

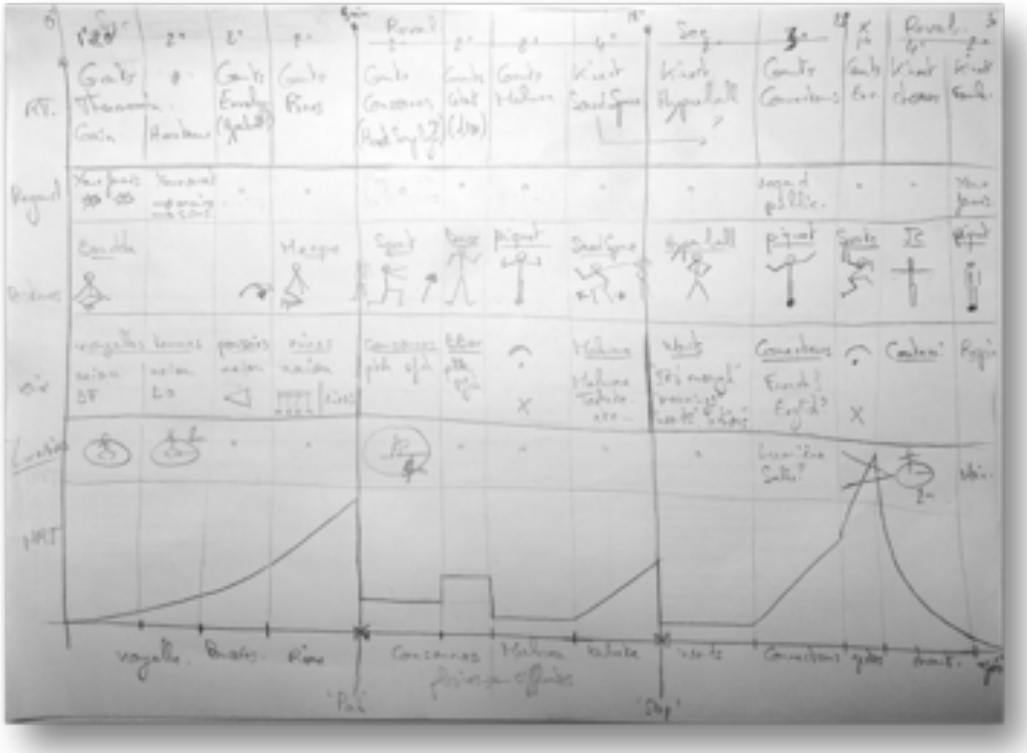

Figure 1. General sketch (score reduction) of Babil-on V2

Figure 2. Illustration of the SYNEKINE Company by Nicolas Patrix

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