

Agile seed funding 2021 recipient report

Project title: Sounds of onomatopoeias

Project participants: Jean Rouat, Olivier Robin, Patrick O'Donoughue, Louis Dermagne (Université de Sherbrooke)

Abstract: Complex relationships exist between sounds, colors and shapes. Onomatopoeias, sometimes called 'sound words' phonetically imitate or imply the sound that they describe, but their fundamental underlying mechanisms have been scarcely studied. This project aims to study the effect of letter spacing in simple onomatopoeias on the sound they suggest. A protocol including a web interface has been setup, in which participants must vocalize various onomatopoeias (AAAAAH!, A A A H!), these vocalizations being recorded and later analyzed in terms of emitted frequency versus letter spacing. The project aims to initiate online testing, including gathering and analysis of results.

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As a preamble, the COVID-19 pandemic has largely modified the planned sequence of this project. The Ethics Board application took time to be setup, and was finally completed in end of Summer 2021.

The funds were used to pay a stipend for two CIRMMT members (equally distributed):

- Patrick O'Donoughue -> setup and validation of the website to be used for collecting voiced onomatopoeias (<https://soundincomics.espaceweb.usherbrooke.ca/>)
- Louis Dermagne -> setup of codes to analyze and post process data (that is to prepare data, verify their consistency, calculate and store fundamental frequency F0 and formants frequencies F1 and F2, and this for each onomatopoeias - 16 per tests – and each participant – planned : 100).

At the time of writing, tools are ready and tested. Online data collection is planned to begin in June, 2022, and data analyzed during Summer 2022.

The main outcomes of the project are:

- The training of two CIRMMT members (Louis Dermagne and Patrick O'Donoughue),
- A pilot study exploring the relationships between simple onomatopoeias and the sounds they represent, that will initiate new interdisciplinary collaborations (including CIRMMT, BRAMS, and possibly later the comics art community).