

Social Music Machine: Crowdsourcing for Composition & Creativity

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Abstract— This poster describes a compositional technique that used crowd-sourced midi clips in order to develop a piece of music, which was later performed. This work in progress highlighted some of the issues facing the designers of systems that enable the ‘crowd’ to compose.

I. INTRODUCTION

Can the crowd get creative? And what sort of tools might be used to support this? These are the sorts of questions that we thought about when we initially started to think about these problems. Using software originally developed as part of an Experimental Digital Humanities [1] project, we started to wonder about how such software - “*Numbers into Notes*” [2] might work in the real world if multiple people used it in creative way, and what lessons might we learn from carrying out such an intervention.

II. CROWDS MAKE MUSIC - TOOLS AND EXPERIMENTS

People were asked to use the “*Numbers into Notes*” software and make a sequence (of notes). They then gifted the sequence to the ‘composer’ who used the sequence as part of a larger piece of music. Overall five sequences were gifted and used in the performance. The reasoning behind the intervention was to see if this was a viable compositional technique, how a performer / composer might use the sequences, and in order to explicate and unpack the issues and practices that might emerge from engaging in such an ‘experiment’.

III. THE COMPOSITION AND PERFORMANCE

Each algorithm that was generated was a simple sequence of notes. 5 of these were *gifted* by people and these were used in the piece. – *The performance* [3] – used Ableton Live as a platform to play the loops (sequences) and to bring the loops ‘in’ and ‘out’ of the mix. The interface was laid out in a way that enabled the performer to follow the performance workflow/order. A *Monome* (Walnut 64) was used with a *Max for Live* patch, which was set to semi-random, this controlled a Grand Piano sound and vocal samples (created by the performer) simultaneously. The performer was able to control this in order to avoid blandness and too much repetition. The gifted algorithms

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where brought in and out of the mix throughout the piece (the sounds and effects were developed prior to the performance), and the piece was brought to an end with fading in of some field recordings of church bells and a vocal recording of some related readings. Beats were used in the piece towards the movement into the field recording. This was purposefully done for the live performance to keep the audience interested. As the performer *Alan* felt it was important to understand the structure of the piece and its constituent parts, but practicing the piece would have led to an uninteresting performance, so parts of the performance are purposefully random, but controllable. It may appear fairly obvious, but a key part of performing and composing the work related to putting the pieces together in a way that worked, wasn’t bland, overly repetitive and kept the audience interested. This is a key issue for systems that have autonomous elements [4] and can inform the design of Human-Like Computing systems for creative applications such as creating music.

IV. CONCLUSION

Crowdsourcing musical composition appears simple in many respects, but to really understand compositional practice and performance, one really has to ‘do it’, and become part of the social machine. Using autoethnographic methods [5] would be a way to further ‘unpack’ such systems and inform design. This initial experiment has helped us to understand and think about a whole range of issues that can impact upon designing creative crowdsourcing systems.

REFERENCES

- [1] David De Roure, et al. (2016) Experimental Digital Humanities: Creative interventions in algorithmic composition on a hypothetical mechanical computer. In: DMRN+11: Digital Music Research Network, December 2016
- [2] Alan Chamberlain, et al. (2017) “Audio Technology and Mobile Human Computer Interaction: From Space and Place, to Social Media, Music, Composition and Creation”, In the *International Journal of Mobile Human Computer Interaction (IJMHCI)* V9/4, pp. 25 – 40
- [3] Alan Chamberlain, and David De Roure, (2017) The gift of the algorithm: beyond autonomy and control. Performed at Oxford House, London 25th.
- [4] Alan Chamberlain (2017) “Are the Robots Coming? Designing for Autonomy & Control in Musical Creativity & Performance.” Audio Mostly 2017, QMUL, London. ACM.
- [5] A. Chamberlain, M. Bødker & K. Papangelis (2017) “Mapping Media and Meaning: Autoethnography as an approach to designing personal heritage soundscapes” Audio Mostly 2017, QMUL, London. ACM.