

Relationship between AI and creativity

CECIA (Collaborative Electroacoustic Composition with Intelligent Agents) is an experimental music project that integrates the creative agency of 5 composers and Machine Learning algorithms, leading to the creation of a unique composition of electroacoustic music. The implemented framework makes possible a systematic decentralized workflow and is based on synchronous activity between the agents which interact remotely in long time-scales.

The collaborative process is divided into four phases, a conception, a preparation, a development and a revision phase. The conception phase facilitates discussion between the composers and concludes to a formulated concept that guides them in exploring a sonic territory. During the preparation phase, the composers import recordings relevant to the selected concept into a shared database, which serves as the material pool for the subsequent phases. In the development phase, a first draft of the composition is put together by an iterative process. In each iteration, each composer proposes a new composed phrase and through democratic procedures, a single phrase is selected and incorporated into the draft composition. In parallel, the ML algorithms learn some features from the aesthetic preferences of the composers and generate new phrases, which are offered to the composers as suggestive material for the composition of the new phrases. In the revision phase, each composer successively proposes changes throughout the draft composition while the rest of the composers review them. A majority voting is conducted which determines if a proposed change is adopted or rejected.

The Intelligent Agents in this projects are considered as an integral subset of the greater collaborative framework. They exhibit minimal compositional creativity as such but the framework enables a synergistic effect in combination with the human agency. Some composers in the project, systematically borrowed material from the generated phrases, appropriating and recomposing it for their contributing phrases. The majority of the composed phrases which had utilized generated material were selected by the group for incorporation into the final composition. This hybrid model can serve as a prototype with which further composition algorithms of generative music can be assimilated in order to assess and compare their relevance and applicability in creating new music.