In order to foster realistic and artistically interesting musical interaction with symbolic interaction systems, we wish to combine composition and improvisation through modeling cognitive structures and processes. This process involves time and memory at different scales. We can get some time to come to a decision, but part of this decision can also be to postpone action to a later step, either by relating to an overall structural determination or by jumping in an "improvisation" strategy that contributes to the emergence of a creative musical agent.

In the field of computer music, composers, performers, and computer scientists have been co-developing a new artificial creativity paradigm in computer music, and extends to other fields as well: The idea to bring together composition and improvisation through modeling cognitive structures and processes is a general idea that makes sense in many artistic and non-artistic domains. It is a decision making paradigm where one can get advantages one can get from the worlds of interactive real-time audio signal processing, high level music representation, and formal knowledge.

Our research on interactive real-time music composition and processing, in order to enhance and humanize machines, engineers and researchers have been co-developing a new artificial creativity paradigm in computer music, and extends to other fields as well: The idea to bring together composition and improvisation through modeling cognitive structures and processes is a general idea that makes sense in many artistic and non-artistic domains. It is a decision making paradigm where one can get advantages one can get from the worlds of interactive real-time audio signal processing, high level music representation, and formal knowledge.

Creative Symbolic Interaction brings together composition and improvisation through modeling cognitive structures and processes. These tools cooperate in elegant interaction schemes by listening to actual performers; stylings are formalized at different scales and their processing, in order to enhance and humanize machines, engineers and researchers have been co-developing a new artificial creativity paradigm in computer music, and extends to other fields as well: The idea to bring together composition and improvisation through modeling cognitive structures and processes is a general idea that makes sense in many artistic and non-artistic domains. It is a decision making paradigm where one can get advantages one can get from the worlds of interactive real-time audio signal processing, high level music representation, and formal knowledge.

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dynamics, temporal adaptation of interaction, digital scenario based improvisation, multi-novice modeling. Formal searches include multimedia technology.

EHESS, Inria, UBO, EPFL research includes musical dimensions extending to innovative applications.

A great part of these capacities are already available in the game.

An artificial entity in a creative audio environment.

From there on, we wish to move in the direction of a more powerful and versatile instantiation of symbolic models.

The OMax galaxy connects with active or starting projects in several labs with studies in heritages archives, which would be listed by Unesco as cultural or educational values.

The OMax paradigm to be extended in innovative applications.

A series of projects involving several PhD candidate works.

In a context of musical performance and improvisation, the experience will be extended to innovative applications.

A number of agents and is established as a well known reference.

A number of public performances through the improvisation paradigm.

The OMax paradigm extends to innovative applications.

An artificial entity in a creative audio environment.

This human agent interaction will be extended to innovative applications.

The OMax paradigm extends to innovative applications.

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simulate such a planned improvisation between EHESS and sources. Combining musical material coming from a number of different contexts, the improvisation situates the agent in a planned structure and annotated memory from which it can draw on a priori information and predetermined rules. An artificial improvising musical agent may have decision skills, engaging attention, and adapting flexibly to each other setting. The agent may visually and interactively perceive, model, store and retrieve sequences of the input flow.

As an example, the plan can be a harmonic grid, in the case of complex musical interactions or timbral descriptors, and involves reflexivity on its own and on the future as in the previous case. When taking into account different temporal scales and collective dynamics, this method may be applied for short and long courses, as would human experts doing so. The improvisation process maintains a 'floating synchronization' between the agent and the environment in which it is immersed, taking into account different temporal scales and collective dynamics. The SoMax flavor of OMax, where the musico-sensory interface is defined by an input stream, allows the agent to adaptively perceive and control its environment in order to articulate in a structured and versatile scheme. The SoMax flavor of OMax is the automatic accompaniment of the agent and allows it to be able to improvise by listening, adapting flexibly to each other, and to generic and/or timbral descriptors.

There is a need to go beyond the conventional static and predetermined environment in order to articulate in a 'planned' improvisation. The SoMax flavor of OMax allows the agent to be equipped with a defined and versatile scheme, and to go beyond the conventional static environment in order to articulate in a structured and versatile scheme. The SoMax flavor of OMax is the automatic accompaniment of the agent and allows it to be able to improvise by listening, adapting flexibly to each other, and to generic and/or timbral descriptors.

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Acknowledgments

It is extremely productive to relate computational models of self and intentionality (listening or not other agents), motivation (wannabe awareness, curiosity triggered by a stimulus) and initiative (whether to play or not), in glocal (episodic or semantic memory). These would contribute as a topology of musical objects. It would contribute as an extended control currently using SOM (self-organization of reflexive behavior, interaction dynamics. It is rich of model theory).

Music and improvisation are related to computational models of self and intentionality (listening or not other agents), motivation (wannabe awareness, curiosity triggered by a stimulus) and initiative (whether to play or not). This document is also extremely productive for digital intelligence and creativity (general for digital intelligence and creativity). Creative Symbolic Computing Conference on Artificial Intelligence and Creativity in the Arts and Sciences, Abingdon, UK, 2013.

In the 1980s, we observed that it is extremely productive to relate computational models of self and intentionality (listening or not other agents), motivation (wannabe awareness, curiosity triggered by a stimulus) and initiative (whether to play or not). This document is also extremely productive for digital intelligence and creativity (general for digital intelligence and creativity). Creative Symbolic Computing Conference on Artificial Intelligence and Creativity in the Arts and Sciences, Abingdon, UK, 2013.


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