

## Swarm Exquisite–Corpses Games

The Exquisite Corpse is a game-based art form popularized by the surrealists. The final result is based on an unconscious collaboration of collective artists; each provides his or her part without knowing what the other has selected. For example, each one provides adjective, verb and noun to create poems; head, torso and legs for drawings. Actually, concerning drawings, each one draws his part in a piece of paper and folds it, so the next artist is able to see the border traces in the folded column and normally begins from there.

The exquisite Corpse is a game with several interesting properties: 1. it's an example of collective creation and formation of a collective pattern; 2. we can envision a micro and macro levels, even if there are not so many participants 3. there is no unity, there is author fragmentation and so the outcome is not planned in advance; 4. we are in face of an unpredictable and surprising outcome; 5. there is interaction between the individuals; 6. there is no direct communication between the participants, besides the fact that they are going to draw some predetermined part, they do not communicate at all or they communicate indirectly through the work (traces in the folded zones); 7. nobody has a bird eye view of the work in progress , they are restricted to their own local zone.

Our contribution to this Symposium is an artificial painting tool that has several properties of the Cadavre Exquisite Game but in a much bigger scale in the sense that we can have thousands of very simple micro-painters limited to a very narrow and local area that will try to coordinate and to make emerge a collective pattern. In this tool we can try out differet types of coordination between painters and see the resulting pattern exploring the link between the macro and micro-level, In contrast with the Exquisit Corpse Game which is sequential, in our painting society, artists work in parallel and they can communicate either directly or indirectly through the painting.

We will begin to describe a coordination type based only on a stigmergic form of communication between painters. The artificial canvas has dynamic properties where artificial pheromones can be produced, diffused and evaporated. They are the communication medium and they control the movements of individuals. For example, the non-painted areas will produce chemical that will diffuse and attract painters making strange and unpredictable patterns appear. We will also describe other types of agent coordination based on imitation where some consensual attributes, like color or orientation, or position, will emerge, creating some order on a potential collective chaos. This consensus can die out, randomly or by interaction factors, and new consensual attributes can win resulting in heterogeneous paitings with interesting patterns which would be difficult to achieve if made by human hands.

We think that our main contribution, besides the creative exploration of new artistic spaces with swarm-art, will be in the sense of showing the possibilities of generating unpredictable and surprising patterns from the interaction of simples behaviours controlled by very simple rules. This interaction between the micro and macro levels in the artistic realm can be the source of new artistic patterns and also can foster imagination and creativity.