ANASTATICA SENSIBILE – GROUNDING INTERACTIVITY ON A NATURAL PROCESS

Daniela Di Maro¹, Andrea Bene², Diego Bernini¹, Simone Bonetti³, Giorgio De Michelis², Francesco Tisato⁰ and Gianluca Colombo¹

¹Visual artist, via California 7, Milan, Italy.
²D.I.S.Co., University of Milano-Bicocca, viale Sarca 336, Milan, Italy. Email: bernini@disco.unimib.it.
³C2T (Technological Transfer Consortium), Via dell’Arcivescovado 1, Milan, Italy.

See <www.mitpressjournals.org/toc/leon/47/5> for supplemental files associated with this issue.

Abstract

Interactive artistic installations represent avant-garde forms of Contemporary Art. They are artistic works able to change their behavior in response to the behavior of the viewers, turning them into (more or less) active participants. This paper discusses an interactive installation the authors developed during the beginning of 2012 for the St. Elmo Castle in Naples, Italy. In this installation the audience determines the evolution of the life cycle of specific plants, in terms of an opening/closing process. The paper proposes some reflections on this case study, especially about the engagement dimension promoted by the work.

The Natural Process

Daniela Di Maro conceived the installation Anastatica Sensibile (Fig. 1) around a specific natural process characterizing the Selaginella lepidophylla plant species, a species of desert plant noted for its ability to survive in almost complete desiccation.

During dry weather in its native habitat, its stems curl into a tight ball. However, it can be revived with only a little water: after wetting, in fact, the plant turns green in about one day; hence the name of “resurrection plant”.

The closing/opening process may also be obtained in our common environments. If the plants are not irrigated for a few days (one or two days according to the environmental conditions), they curl as in Fig. 2 (top). Then irrigating them with a small glass of water re-activates the plants: they turn green and re-open themselves in one/two days, as shown in Fig. 2 (bottom).

The Installation

The installation Anastatica Sensibile consists of a wooden platform with 45 Selaginella lepidophylla plants held up by transparent PVC pipes that are connected to a common water tank (see Fig. 1). Every pipe is also equipped with a LED on the top. Every plant is provided with a small base able to accommodate the water as shown in Figure 2.

A digital system monitors the number of people around the installation. When the number significantly increases, the LED of a randomly selected plant blinks for 10 seconds. When a plant has been selected a certain number of times, the digital system irrigates the plant and its LED is turned on. Once irrigated, the plant starts regenerating itself: It will be completely opened within about one day. An irrigated plant is excluded by the selection process for about four days, a time sufficient for the plant to regenerate and then to return in the “closed” state when water is fully consumed. After this period, the plant becomes re-selectable and its LED is turned off.

This discontinuous mode of irrigation will do so that, at any given moment, only few plants blossom, and their number is in close correspondence with the number of visitors. The plants that have not been watered remain closed until the number of viewers grows. Thus, the influx of people determines how fast the garden comes to life and becomes lush.

Artistic Intention

Daniela Di Maro’s research is strongly focused on the relation among humans and Nature. Digital technologies give her the possibility to work at this boundary making interactive artworks that may stress the (apparent?) dichotomy between natural versus artificial artefacts.

In Anastatica Sensibile the audience determines how and when the garden comes to life. In this relationship water acts as an intermediary, in a fundamental exchange that triggers a loop of reciprocal nourishment. It’s only through people’s actions, measured thanks to technology, that the revival of the work will be guaranteed, in both artistic and aesthetic senses.

In addition the artist wants visitors, through their attendance, to take care of and preserve the work over time. There is a particular ecological nuance that emphasizes the critical interaction between human knowledge and the preservation of Mother Nature, or rather between progress and sustainability.

Audience Impact

Our reflections compare the artist’s intentions and the feedback we obtained from the visitors during the first exhibition in May 2012. We got some good feedback about the installation itself, starting from the viewers’ appreciation of the suspended plants and of the physical context where they were placed.

The artist created Anastatica Sensibile as a way to put viewers in the middle of a complex situation involving different factors: a recurrent natural process that, due to its speed, can be observed in its beginning; a covered, partially indeterministic, algorithm relating the number of visitors with new plants beginning to blossom; the movement of the viewers in the installation space and the way they look at what the plants do as well as at each other. This should create emotions and thoughts in the viewer, generated by the mutual interferences among the natural, the artificial and the social.
With respect to the interaction between the visitors and the plants, the former were able to understand it, without reading the description of the work placed at the entrance. But people guessed that their presence contributed to the LEDs activation and that this was in relation with the irrigation, without understanding how the actual relation was realized. Only by reading the description of the work, could they know the algorithm, and so the installation was able to keep its mysterious dimension.

The above-mentioned mysterious dimension appearing to the viewers activated interesting social mechanisms among them: when visitors entering the installation space understood that their arrival contributed to the installation, they would start to watch the arrival of other visitors to see if the phenomenon was repeating. The discovery of the persistence of the correlation encouraged visitors to prolong their stay in the exhibition to see other plants starting to blossom. Moreover, the determination of the exact algorithm regulating the installation generated conversations among visitors, and created a social way of viewing.

The fact that visitors were, all together, involved in a social discovery process transformed them into an important component of the installation, promoting two forms of interaction. First, an introspective modality, where each single visitor explores the relationship between her-sel-f and the plants. Second, a social modality of interactions, where all visitors feel and behave like a corpus modifying the external state (blinking LED) and the internal state (blooming process of the Selaginella lepidophylla) of the installation.

In other words, Anastatica Sensible provides a form of creative engagement [1] between people and the installation and between people themselves.

Related Work
Artistic installations [2] are artworks consisting of several elements distributed along a physical space. Interactive installations [3] are artistic installations conceived to be fully interactive with regard to the audience, who interacts with its elements while viewing it. As highlighted by Muller and Edmonds [4] the experience of art is in a fundamental sense interactive, however in interactive installations there are explicit exchanges between people and artefacts.

Artists are now able to create interactive installations involving digital devices, like sensors (e.g. touch sensors, motion sensors) and actuators (e.g. lights, mechanical parts) and their mutual relations, providing rich and seamless forms of interaction. Lights, sounds and videos [3] are elements that have been widely exploited in interactive installations when looking to the forms of interaction. There are other researchers who have been exploiting plants and vegetal forms. For example, Interactive Plant Growing by Christa Sommerer and Laurent Mignonneau [5] uses living plants as the interface that affects a 3-D animated plant environment whenever humans touched or approached the plants.

Finally, Anastatica Sensible could be considered an example of the Roy Ascott’s “Moistmedia” approach [6], where Nature is amplified and transformed by digital technologies.

Conclusion
We believe that Anastatica Sensible is an interesting piece of art, because, thanks to its combination of simplicity (the rule connecting the entrance of visitors to the blossoming of plants is easy to detect) and complexity (understanding how it works, in detail, is difficult since it involves some indeterminacy) it is able to intrigue its viewers and to move them to mutual interactions. Its originality lies in the fact that it uses IT as an internal, hidden factor, capable to open viewers to a deeper observation of natural and social phenomena and to their mutual relationships.

References and Notes
* This article is based on a paper presented at the 3rd Balance-Unbalance International Conference, 31 May–2 June 2013, Noosa, Queensland, Australia.