

***Fabrique*: shaping experiential landscape**

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Introduction

Do we perceive landscape through visual abstraction or participate in its manifestation as a living system? Do we experience it as detached spectators or through affective charge? Does landscape represent a crystallised form or one of many states within a system of interaction? Unfolding the processes of inhabiting landscape constituted the initial conceptual frame of *Fabrique*. The intention was to create a living landscape, an organism in the place of the picturesque, visual landscape. To reinvent landscape as an experience, involves engaging people as both actors and spectators in a bi-directional relationship. Also, finally, to explore systems' potential to allow for emergent relationships rather than imposed ones. Through the development of the project these quests became more pragmatic, addressing issues of affect and participation, the formation of spatial and algorithmic systems, and, the use of physical objects to create hybrid interfaces.

Initial idea and design

Fabrique is conceived both as a system and a spatial formation. An open, yet deterministic system is designed combining; an algorithm embedded in the software, sensors registering the visitors' bodily engagement with the environment and actuators producing changes in the spatial relationships. People's response is then fed back into the system and propagates further events. The core function is the positive feedback loop. The system tries to sustain itself by favouring actions that ensure its survival. And it presupposes collaboration between the visitors in order to complete its cycle of events - a key aspect of the system (as will be discussed later). In space, *Fabrique* takes the form of a kinetic installation consisting of three expanded bike chains hanging from the ceiling in a three by three-metre grid, each of the chains are connected to three motors. The chains serve as the responsive organisms of this environment or as the mechanical plants of the garden. The

interface devices are three watering cans symbolising the acts of watering and gardening. On the floor there are nine small pots on a three by three-metre grid, filled with soil to indicate areas for watering. By virtually watering over one of them the corresponding motor starts to move, activating part of the one organism. By watering over three consecutive pots, the rest of the organism starts to move, according to a programmed movement. However, only when all of the watering cans are used are the three organisms synchronised in their movement - choreographically. The continuous act of watering also results in activating lights on the other watering cans, implying the continuation of the interaction, but does not spread the movement in the rest of the organisms, unless all watering cans are being used.

More specifically, a microcontroller is embedded inside each can, together with an RFID tagging system and a tilt sensor, while another microcontroller on the ceiling is responsible for moving the three plants. Three systems work in conjunction. First, the RFID reader reads tags placed inside the pots identifying which pot corresponds to the motor. Second, the tilt sensor (a type of switch that turns on or off according to the tilting of an object) activates the recognised motor - only when the can is used for watering (and therefore tilted) and not when it remains still on the floor. When both systems are on, i.e. the can is tilted and the tag is recognised, the motor system on the ceiling is activated. The microcontroller on the ceiling receives a signal to move the respective motor in a pre-programmed way, and activates an LED light on the other watering cans. When all the cans are being used this microcontroller receives a signal to synchronise the motors in a certain motion pattern. The third system, which sends and receives data between the microcontrollers in the cans and on the ceiling, is based on a wireless network using Xbee radio antennas.

Development process

Moving from designing the system of interaction, to implementing different types of technology and visualising the environment - has created a cycle of processes, shaping the work in different ways. Switching between those processes has become a feedback process in itself, requiring adapting to different perspectives via different fields of knowledge.

Participation and the affect

In terms of the interaction design, engagement through participation has been one of the main concerns. Participation is seen as a bi-directional relationship between the visitor and the environment. Engagement occurs through affect, which is then fed back into the system through emotive reaction.

Brian Massumi refers to the present as a state where the affect manifests:

The present's boundary condition, to borrow a phrase from science, is never a closed door. It is an open threshold - a threshold of potential. You are only in the present in passing. () Affect is the passing of that threshold, seen from the point of view of the change in capacity. The affect and the feeling of the transition are not two different things. () The experience of a change, an affect-being affected, is doubled by an experience of the experience. This gives the body's movements a kind of depth that stays with it across all its transitions - accumulating in memory, in habit, in reflex, in desire, in tendency. Emotion is the way the depth of that on-going experience registers personally in a given moment. (Massumi, 2002: 3)

Massumi refers to the present as an expanded moment created by affect, a transitional state where the potential of the next step manifests. In this moment, engagement with space occurs intensely, as we enable ourselves to open up to potential shifts in our bodily capacity: opening up is followed by sensing and observing the affect. To observe the affect means to double our experience with emotion, according to Massumi. Our experience is fed back into our system leaving a print in the form of a knowledgeable sensation. And with small transitions we move to the next step, and our consequent understanding of it.

In *Fabrique* there is an attempt to enact affective relationships between visitors and space, in order for visual landscapes to manifest as emotive states within the overall experience. When people walk inside the space they feel inclined to discover the causal relations between the watering cans, the hanging sculptures and themselves. By exploring different choices, i.e. watering over different pots they observe recurring patterns in the sculpture movements and associate those with their own actions. This process also involves challenging the system as a game, by trying out all possible ways of interaction. After learning how the interaction works, visitors engage, on the one hand by orchestrating their actions and allowing the system's feedback to guide them to the next step, and on the other, through emotional response to the notion of

a garden. Eventually they immerse into the playful garden narrative and its virtual character.

The role of other visitors becomes significant as it intensifies engagement with the narrative and the completion of feedback relationships. The interpretation of the garden as a stage for human interaction is explained through the shifts between the visitors from performers to viewers and *vice versa*. While someone waters the pots, he/she performs while people watch and observe the system. The garden becomes a living visual landscape for those who watch, and an experiential space for those who participate. Moreover, the participation of three people in the installation allows for the garden to manifest as whole, engaging people in a co-dependent relationship and producing a collective immersive experience.

Mediums and symbolism

The hardware and software of the system are equally interesting in the way it has been devised and implemented, but also in terms of the connotations and symbolisms it brings to the piece.

The algorithm was designed to provide functionality, through predicting, simulating and structuring actions in a modular way. Passing on to the sensors of the system, there was a particular interest in using locative media, such as the RFID system in combination with the tilt sensor to ensure spatial specificity. Spatial specificity is quite significant in that it allows recognition of the causal relationships between the installation parts and people. Also, in my personal view, dealing with physical presence in a specific place holds interest in that it enables the exploration of seemingly immediate relationships through mediated processes.

That being said, embedding an RFID system and wireless technology into the watering cans served to deliberately subvert the real objects into icons, by adding digital properties to the physical object. It doesn't contain water, but it sounds like it does. It doesn't change weight after watering, nor does it need to be refilled, but it nurtures a plant. The idea was to denote that physicality forms a construct in itself: our relationship to physical processes is already mediated through symbols, which can still hold their meaning after being injected with virtual functions. In this respect, watering cans play the role of a hybrid interface, but also hold the garden symbolism.

Apart from the cans, bike parts are also used in a symbolic way, representing the mechanical; the technical, rather than the natural. However, they also serve as plants if seen through the prism of the interaction with pots and watering cans. The suggestion was that non-organic, mechanical forms *can* become the garden, without visual references to nature e.g. using organic forms, or plants growing from the ground up.

Fabriques

With references to mechanical landscapes, hybrid interfaces, and the staging of affective relationships, the project turned towards paradigms in the history of landscape design.

According to John Dixon Hunt (Hunt, 2004), *Fabrique* is the French term for 'landscape architecture' first appearing in landscape painting in the Renaissance to describe small buildings added in the scenery - as seen in paintings by Claude Lorrain and Nicolas Poussin among others. In this iconographic context *Fabrique* signified the manmade, the fabricated within the natural - necessary in the painting to mark the anthropocentric aspect of landscape and its stylistic approach e.g. classical, baroque, romanticist, etc.

Moving from landscape painting to landscape design, narrative acquired a spatial dimension. A scenario was required in order to engage the visitor in acting out potential narratives. Narrative was staged in the gardens through the manipulation of movements and views, the selection of plants and topographical elements, and especially in the *Fabriques* where human interaction was intensified. From iconographic symbols in landscape painting, *Fabriques* turned into structures for staging human interaction (ranging from ruinous temples to obelisk sculptures, pergolas, objects trouvés and fountains). According to Hunt:

() the role of these buildings – whether genuine ruins or fabrications – was to suggest a train of thought or some 'action' appropriate to the visitors who were involving themselves in these sites. (Hunt 2004: 84)

Conclusion

Through the Renaissance, gardens have been conceived as participatory environments based on narrative and the affect. On the one hand landscape painting has taught us about systematic organisation of vision and conceptual abstraction to stage the picturesque, but on the other hand, gardens have always formed dynamical systems based on narrative and cognitive engagement. *Fabrique* attempts to generate this train of thought mentioned by Hunt, as a loose narrative. This will allow people to compose their own by participating in the garden's processes. Whether a machine, a team game, a performance directed by the visitors, or a garden which needs attendance, *Fabrique* constitutes the realisation of a system. Thus, narrative and engagement within this system become more important than visual representation. The question is whether *Fabrique*, as a devised construct is able to engender a sense of collectivity and stewardship to the visitors through its procedural, systemic approach.

References

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Massumi, Brian. "Navigating movements." (2002)

[www.brianmassumi.com/interviews/NAVIGATING MOVEMENTS.pdf](http://www.brianmassumi.com/interviews/NAVIGATING_MOVEMENTS.pdf) (19 June 2002).