

From Artificial Ecosystems to Critical Reflection

An introduction to the analysis of the work of Christa Sommerer and Laurent Mignonneau

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The work of Christa Sommerer and Laurent Mignonneau is among the most interesting phenomena in the field of new media art. It possesses a complex, multifaceted dimension, both on the plane of the structure of the works created and the planned strategy for interaction, as well as on the level of the issues it deals with. It is, above all distinguished by its unusually dynamic development. Already with their first joint work, the spectacular installation *Interactive Plant Growing* from 1992, Mignonneau and Sommerer occupied a prominent place in the world of modern digital media art. Successive pieces established their position, propelling this French-Austrian pair of artists to that narrow group of artists who initiate the most important tendencies in the development of new media arts, and, above all, interactive art. The second most important feature of their work, alongside its exploration of interactivity and extraordinary innovation in designing interfaces, is the way the artists deal with and develop a set of issues that are extraordinarily important, especially nowadays, concerning the relationship between art and science, and in this specific case – issues about artificial, digital life. Out of a dialogue between two fundamental tendencies – interactivity and cyberbiology – emerges the nature of Sommerer and Mignonneau's work thus far, the dynamic of its development and the spread of issues it covers. At the same time, though, within the area outlined by those two main attributes, many other themes appear, supporting or developing the main themes and giving particular works a desirable variety ultimately, in recent years, steering the work of the two artists in a new direction. Analysing the spectrum of this diversity as well as the ongoing transformation of their work is the subject of the following deliberations.

The already mentioned first multimedia installation *Interactive Plant Growing*, as the artists themselves point out, utilises an observation by D'Arcy Thompson that from the mathematical point of view organic forms are functions of time and that, as a result, they can be treated as events in space-time. In this installation, when the viewer-interactor moves their hand towards the real plants which constitute part of the work, it initiates a series of digital events leading to the creation of virtual plants. The process of forming their shapes and qualitative parameters is set in motion by the influence of the electric field generated by the human body on the plants' electrical fields. That data is then processed as an event in the associated computer program, enabling deliberate, conscious actions by the viewer-interactors. In this way, the viewer and plant, and above all, the communication between them, become important players in the interface and interaction strategy. This fundamentally involuntary communication, developing on a physiological level between people and plants, at the same time represents the unimaginable plurality of relations which humans can engage in beyond their conscious control, resulting from their biological, technological and biotechnological surroundings. Sommerer and Mignonneau's installation in this manner is not only an expression of the desire to reach out to the basic tenets of life through artistic activity, which is always defined by morphogenesis and transformation, but is also a project engaging a philosophical problem – or more precisely an ethical one – arousing a feeling of responsibility for the fates of other living forms that remain outside the realm of human influence, as well as those that exist in human surroundings, including those whose lives we define as artificial, digitally programmed. This theme will recur later on in many other works by Mignonneau and Sommerer, as, for example, in *A-Volve* (1994-95), *Phototropy* (1995), or in *Life Species* (1997). At the same time, it should be observed that there is, in this context, one further important consequence of the issues raised by *Interactive Plant Growing*. Seeing how such a wide range of human influences on the fates of other entities take place on an unconscious level, then a particularly important role must be played by the knowledge traditionally known as science in shaping an ethics capable of meeting the challenges presented by the modern world.

It is worth drawing attention to two other issues when looking at the debut work by Sommerer and Mignonneau. The first is related to the characteristic feature, strongly accented in this work, of interactive multimedia art, which takes on particular significance in terms of its involvement in the matter of relations between material and virtual physicality. This feature is tactilism. Interactivity located in physical space by artistic works leads more often than not to

their initial reception taking a tactile form. We touch material elements of the interface, or reach towards remote virtual forms (teletactility). In these cases, touch always has a communicative nature – numerous works enrich this feature. In *Interactive Plant Growing*, alongside tactile communication, we are dealing with a tactile form-creating process. This is the case in many of the subsequent works of this pair of artists, which indicates the importance of this theme across the whole of their work. Touch in their works assumes a cognitive, as well as emotional, dimension, reaching the sphere of private, intimate experiences. This last aspect is expressed particularly strongly in their later work *Mobile Feelings* (2002-03).

A second important issue that needs to be looked at in relation to *Interactive Plant Growing* concerns something I raised in my initial comments, namely – artificial life. Mignonneau and Sommerer's first installation initiated a whole series of works by them involving artificial ecosystems. Building environments whose digital components function according to the rules governing the world of living organisms, the artists offer viewers an opportunity to interact with these forms, and through this to immerse themselves in a living virtual environment and confront the issues and challenges emerging from the new living spaces generated by digital technologies. For a dozen years or more, the concept of an interactive, artificial ecosystem set the framework created by these works. Appearing within them in various forms, strategies and re-workings, it introduced a range of ever newer strategies into their creativity without, at the same time, changing their fundamental direction.

And thus, the second work by Mignonneau and Sommerer, *Anthroposcope* (1993), introduced the theme of archaeology of the media, juxtaposing, in the viewers experience of it, the latest digital technologies with the traditional tool of discovery – the microscope. In this, as in a range of other works, above all those created in recent years, such as *Life Writer* (2006), *Escape* (2012) or *Excavate* (2012), the use of old media such as a typewriter or *camera obscura*, contrasted with the latest digital technologies, arouses thoughts about the technological revolution and its meaning for how we learn about the world and, above all, reflections on the range of experiences offered by media technologies and their significance in shaping new perspectives on reality and the processes of constructing individual identities. All these also explore the issue of interactivity, always presenting it in new forms. In *Anthroposcope*, the historical interface used first of all allows a glimpse of a virtual world

inhabited by artificial organisms. This aspect of the work opened up a new theme in the work of the two artists, connected with the issue of hybrid environments and virtual worlds.

The interactive confrontation of viewers immersed in the reality of the material world with a virtual reality that either opposes or merges with it is a characteristic form in the work of Sommerer and Mignonneau through which they realise the above-mentioned tendencies. Alongside *Anthroposcope*, we also find this theme, among others, in *A-Volve* and *Trans Plant* (1995) as well as *HAZE Express* (1999), *Riding the Net* (2000), *The Living Room* (2001) and *The Living Web* (2002). In each of these works, we are dealing with a different construction of the interface, a different form of interaction and differing forms of experiences of the virtual worlds and their connections with the actual, material world. In *Anthroposcope*, *A-Volve* and *Trans Plant* these varied elements and experiences are accompanied by a constant element – forms of artificial life and the problems associated with it. In *HAZE Express*, however, similar to *Riding the Net* (2000) and the other installations mentioned above, the main focus is on experiencing a journey, travelling between worlds, along with a discourse that creates a tension between traditional methods of getting around in a homogeneous space with the latest *sui generis* instruments of teleportation between ontologically different worlds. *The Living Room* introduces an additional theme, present in the background in many of Mignonneau and Sommerer's works, concerning surveillance systems, inspection and supervision regimes. All of them, though, on account of the clear aspirations of the confronted, ontologically different worlds to merge with one another, build a hybrid experience immersed in an augmented reality. Experiences related to those above, based on the confrontation of two kinds of order – albeit different from them on account of the character of the worlds collided – are created by works like *Verbarium* (1999) or the already mentioned *Life Species* and *Life Writer*, in which there is an interactive collision and merging of text with visual forms – generated, artificial creatures for whom the text plays the role of genetic code.

All the above-mentioned works consistently, and in a lasting manner, involve interactivity. Throughout the fluidity and variety of the forms chosen, this is a constant in the art of Sommerer and Mignonneau, a basic signifier in experiencing their works and constituting the most important aesthetic feature in these artists' work.

A particularly interesting, highly complex and internally varied character is achieved in the structure of the interaction in the previously-mentioned installation *A-Volve*, which can be

seen as an excellent, even model example of inventiveness and innovation in the field of designing interactions and constructing interfaces. Interaction there has a multilayered, multifaceted construction, open to a variety of behaviours by the viewer-interactors, giving them the opportunity to creatively develop the work. In the initial phase of interactive experience of the work, the viewer encounters a computer touch screen with a prepared graphic user interface through which he or she is expected to design, and in so doing, call to life artificial creatures. The interaction itself, being a series of actions in a digital environment, actions carried out using the proposed interface, possesses both a conceptual and manual character. Touch here plays an important role. At the end of this stage of interaction, the viewer shows their finished design to the installation's central computer, and that, in turn, sends the designed creature to a pool of water. This environment, which takes over the interactive functions previously operated via the touch screen, becomes the interface through which (or within whose confines) viewers-interactors can engage interactively with the digital creatures in the pool (on a technological level, not an experiential one, we are dealing here with an interactive projection design steered by viewer behaviour).

The interaction in the second stage of experiencing the installation takes on a clearly different quality to that of the previous phase. Instead of operating the cold, visual abstraction of the graphic interface, the interactive viewer now steers the installation by touch and in contact with the materiality of the water. At the same time, though, the viewer is confronted with the somehow autonomous behaviour of the artificial, digital creatures in the pool, where the interaction takes place. The touch through which this interaction develops is not, though, of the same order as the experience of water. So, in effect, the interactive touch in the second stage gains a complex character, proposing at the same time the materiality of the water and the digitality of the created creatures. The contact with the latter loses its pure, abstract nature from the first stage, gaining a dimension of physicality in return.

It is also worth noticing one more significant difference between the forms of interaction appearing in the first two phases of encountering the work. The first, alongside its straightforward interactive experience, has another property – it constitutes a form of meta-interaction to the second phase. It is within it the viewers-interactors prepare the digital forms – the artificial creatures – with which the second phase of interaction takes place. The consequences of this difference reach further. Designing the shapes of the artificial creatures in the first phase, the viewer-interactors define the characteristic features of these creatures'

behaviour, giving them a genetic code that determines their future abilities and tendencies. This has serious consequences for the third phase of development within the installation.

At this stage the interactions take place between the creatures themselves, which, as I mentioned earlier, have a kind of autonomy. In their digital life, they perceive the other inhabitants of the pool either as food or as partners for procreation. The form that each of them acquired as a result of the creative gestures of the viewers determines their abilities and success in interacting with other creatures. The length and quality of their existence, as well as their ability to create digital offspring is thus conditioned by the genetic codes they possess – unconsciously created by the design whims of the viewer-creators.

The second and third phases of interaction within the *A-Volve* installation, which I have described above as if they occurred consecutively, in fact take place simultaneously. The viewers, through their interactions with the digital creatures (phase two) can influence the course of events developing between the creatures, in their world – in the digital ecosystem (phase three), lengthening the life of a chosen creature, improving its qualities, protecting it from death. However, these are interventions of a momentary significance only. Left to themselves, these creatures sooner or later meet the fate which was designed into them.

In *A-Volve* I can distinguish another, fourth form of interaction, this time taking place between viewers of the installation. After designing their artificial creatures, along with their tactile involvement in their fates, the viewers can also (and frequently do), for what I think are fairly obvious reasons, interact with one another. This dimension of interactivity, totally different from the earlier described forms, completes the installation's interactive structure, giving it, as I have already mentioned, a rich and internally varied character.

I would also like here to emphasize the significance and function of the *quasi*-autonomy of the virtual creatures that interact together, creating in this manner a kind of 'life', influencing its character and course. Thanks to this, the viewers are able to engage in a kind of telematic contact with the virtual bodies of these artificial beings, an opportunity to experience, within an artistic context, a virtual physicality. Some of Sommerer and Mignonneau's other works are similar, such as *Anthroposcope* or *Phototropy*. They all give viewers an experience of contact with creatures that react autonomously to their behaviour, an experience sometimes accompanied with the feeling of identifying with these independently existing physical worlds.

I have already mentioned here some of the newest works by Mignonneau and Sommerer. I would like now, at the end, to draw attention to a new tendency taking shape in them, reflecting an interesting twist in the creativity of these artists. What seems especially interesting in these latest works is the development of critical themes. This criticism on the one hand concerns modern systems of communication, media institutions, communication practices and social imaginings about their capabilities and their actual functioning. On the other hand, though, it refers to the organisation of the world of art and its institutions. This first critical theme can be seen in the installation *Magic Eye-Dissolving Borders* (2010). Meanwhile, criticism of art institutions appears in an unusually intelligent manner in the installation *The Value of Art*, also from 2010, referring to the economy of attention and deconstructing the system of attaching value to works of art. In this work, a painting connected to a small printer and fitted with sensors measuring the time dedicated to it by viewers thereby defines its own value and prints out its price.

The *Wonderful Life* exhibition accompanying this publication appears at a moment when the key concepts for it, and almost all previous works by Laurent Mignonneau and Christy Sommerer, as a living system, and its accompanying discourse about artificial life, are slowly being replaced in their work by new tendencies developing within it. In this manner, both the exhibition itself and this volume become one of the first attempts at summing up the concluding period and identifying the newly developing character.

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