This LEA publication has a simple goal: surveying the current trends in augmented reality artistic interventions. There is no other substantive academic collection currently available, and it is with a certain pride that LEA presents this volume which provides a snapshot of current trends as well as a moment of reflection on the future of AR interventions.
The Leonardo Electronic Almanac acknowledges the kind support for this issue of

Not Here, Not There: An Analysis Of An International Collaboration To Survey Augmented Reality Art

Every published volume has a reason, a history, a conceptual underpinning as well as an aim that ultimately the editor or editors wish to achieve. There is also something else in the creation of a volume; that is the larger goal shared by the community of authors, artists and critics that take part in it.

This volume of LEA titled Not Here, Not There had a simple goal: surveying the current trends in augmented reality artistic interventions. There is no other substantive academic collection currently available, and it is with a certain pride that both, Richard Rinehart and myself, look at this endeavor. Collecting papers and images, answers to interviews as well as images and artists’ statements and putting it all together is perhaps a small milestone; nevertheless I believe that this will be a seminal collection which will showcase the trends and dangers that augmented reality as an art form faces in the second decade of the XXIst century.

As editor, I did not want to shy away from more critical essays and opinion pieces, in order to create a documentation that reflects the status of the current thinking. That these different tendencies may or may not be proved right in the future is not the reason for the collection, instead what I believe is important and relevant is to create a historical snapshot by focusing on the artists and authors developing artistic practices and writing on augmented reality. For this reason, Richard and I posed to the contributors a series of questions that in the variegated responses of the artists and authors will evidence and stress similarities and differences, contradictions and behavioral approaches. The interviews add a further layer of documentation which, linked to the artists’ statements, provides an overall understanding of the hopes for this new artistic playground or new media extension. What I personally wanted to give relevance to in this volume is the artistic creative process. I also wanted to evidence the challenges faced by the artists in creating artworks and attempting to develop new thinking and innovative aesthetic approaches.

The whole volume started from a conversation that I had with Tamiko Thiel – that was recorded in Istanbul at Kasa Gallery and that lead to a curatorial collaboration with Richard. The first exhibition Not Here at the Samek Art Gallery, curated by Richard Reinhart, was juxtaposed to a response from Kasa Gallery with the exhibition Not There, in Istanbul. The conversations between Richard and myself produced this final volume – Not Here, Not There – which we both envisaged as a collection of authored papers, artists’ statements, artworks, documentation and answers to some of the questions that we had as curators. This is the reason why we kept the same questions for all of the interviews – in order to create the basis for a comparative analysis of different aesthetics, approaches and processes of the artists that work in augmented reality.

When creating the conceptual structures for this collection my main personal goal was to develop a link – or better to create the basis for a link – between ear-
in order to gather audiences to make the artworks come alive is perhaps a shortsighted approach that does not take into consideration the audience’s necessity of knowing that interaction is possible in order for that interaction to take place.

What perhaps should be analyzed in different terms is the evolution of art in the second part of the XXth century, as an activity that is no longer and can no longer be resindied from publicity, since audience engagement requires audience attendance and attendance can be obtained only through communication / publicity. The existence of the artwork – in particular of the successful air artwork – is strictly measured in numbers: numbers of visitors, numbers of interviews, numbers of news items, numbers of talks, numbers of interactions, numbers of clicks, and, perhaps in a not too distant future, numbers of coins gained. The issue of being a ‘publicity hound’ is not a problem that applies to artists alone, from Andy Warhol to Damien Hirst from Banksy to Maurizio Cattelan, it is also a method of evaluation that affects art institutions and museums alike. The accusation moved to AR artists of being media whores – is perhaps contradictory when arriving from institutional art forms, as well as galleries and museums that have celebrated publicity as an element of the performative character of both artists and artworks and an essential element instrumental to the institutions’ very survival.

The publicity stunts of the augmented reality interventions today are nothing more than an acquired methodology borrowed from the second part of the XXth century. This is a stable methodology that has already been widely implemented by public and private art institutions in order to promote themselves and their artists.

Publicity and community building have become an artistic methodology that AR artists are playing with by making use of their better knowledge of the AR media. Nevertheless, this is knowledge born out of necessity and scarcity of means, and at times appears to be more effective than the institutional messages arriving from well-established art organizations. I should also add that publicity is functional in AR interventions to the construction of a community – a community of aficionados, similar to the community of ‘nudists’ that follows Spencer Tunick for his art events / human instalation.

I think what is important to remember in the analysis of the effectiveness both in aesthetic and participatory terms of augmented reality artworks – is not their publicity element, not even their sheer numbers (which, by the way, are what has made these artworks successful) but their quality of disruption.

The ability to use – in Marshall McLuhan’s terms – the medium as a message in order to impose content by-passing institutional control is the most exciting element of these artworks. It is certainly a victory that a group of artists – by using alternative methodological approaches to what are the structures of the capitalistic system, is able to enter into that very capitalistic system in order to become institutionalized and perhaps – in the near future – be able to make money in order to make art.

Much could be said about the artist’s need of fitting within a capitalist system or the artist’s moral obligation to reject the basic necessities to ensure an operational professional existence within contemporary capitalistic structures. This becomes, in my opinion, a question of personal ethics, artistic choices and existential social dramas. Let’s not forget that the vast majority of artists – and AR artists in particular – do not have large sums and do not impinge upon national budgets as much as banks, financial institutions, militaries and corrupt politicians. They work for years.
with small salaries, holding multiple jobs and making personal sacrifices; and the vast majority of them does not end up with golden parachutes or golden handshakes upon retirement nor causes billions of damage to society.

The current success of augmented reality interventions is due in small part to the nature of the medium. Museums and galleries are always on the lookout for ‘cheap’ and efficient systems that deliver art engage audiences and allow them to move beyond the fractures and barriers of institutional critique. museums have long since moved beyond the boundaries of the gallery – the gallery has no longer a need to maintain the physical environment. Using AR apps on smart phones, iPads, and other devices, viewers look at the real world around them through their phone’s camera lens, while the app inserts additional images or objects into the scene. For instance, in the work Signs over Semi-conductors by Will Pappenheimer, a blue sky above a Silicon Valley company that is “in reality” empty contains messages from viewers in skyswimming smoke when viewed through an AR-enabled Smartphone.

Augmented reality artworks bypass these financial challenges, like daguerreotypes did by delivering a cheaper form of portraiture than oil painting in the 19th century and like digital screens and projectors have done in the 1990s until now, offering cheaper systems requiring large production budgets. Forgetting that art is also about business, that curating is also about managing money, it means to gloss over an important element – if not the major element – that an artist has to face in order to deliver a vision.

Augmented reality artworks play a pivotal role in order to understand its evolution. Forgetting that art is also about business, that curating is also an important one. Unfortunately, unless the relationship between collectors and the ‘object’ collected changes in favor of immaterial objects, the problem to overcome for artists that use augmented reality intervention is how and in what modalities to link the AR installations with the process of production of an object to be sold.

Personally I believe that there are enough precedents that AR artists could refer to, from Christo to Marina Abramovich, in order develop methods and frame-works to present AR artworks as collectable and sellable material objects. The artists’ ability to do so, to move beyond the fractures and barriers of institutional vs. revolutionary, retaining the edge of their aesthetics and artworks, is what will determine their future success.

These are the reasons why I believe that this collection of essays will prove to be a piece, perhaps a small piece, of future art history, and why in the end it was worth the effort.

**Site, Non-site, and Website**

In the 1960’s, artist Robert Smithson articulated the strategy of representation summarized by “site vs. non-site” whereby certain artworks were simultaneously abstract and representational and could be site-specific without being sited. A pile of rocks in a gallery is an “abstract” representation of its site of origin. In the 1990’s net.art re-de-materialized the art object and found new ways to suspend the artwork online between website and non-site. In the 21st century, new technologies suggest a reconsideration of the relationship between the virtual and the real. “Hardlinks” such as QR codes attempt to bind a virtual link to our physical environment.

Throughout the 1970’s, institutional critique brought political awareness and social intervention to the site of the museum. In the 1980’s and 90’s, street artist such as Banksy went in the opposite direction, critiquing the museum by situing their art beyond its walls. Sited art and intervention art meet in the art of the public realm. That geography has been relocated to a novel terrain, one that encourages physical reality. Using QR codes to represent the site of origin.

Problems though remain for the continued success of augmented reality interventions. Future challenges are in the materialization of the artworks for sale, to name an important one. Unfortunately, unless the relationship between collectors and the ‘object’ collected changes in favor of immaterial objects, the problem to overcome for artists that use augmented reality intervention is how and in what modalities to link the AR installations with the process of production of an object to be sold.

**ManifestAR** develops projects using Augmented Reality (AR), a new technology that – like photography before it – allows artists to consider questions like those above in new ways. Unlike Virtual Reality, Augmented Reality is the art of overlaying virtual content on top of physical reality. Using AR apps on smart phones, iPads, and other devices, viewers look at the real world around them through their phone’s camera lens, while the app inserts additional images or objects into the scene. For instance, in the work Signs over Semi-conductors by Will Pappenheimer, a blue sky above a Silicon Valley company that is “in reality” empty contains messages from viewers in skyswimming smoke when viewed through an AR-enabled Smartphone.

Site art and intervention art meet in the art of the trespass. What is our current relationship to the sites we live in? What is our current relationship to the sites we live in? What are contemporary strategies to engage sites? How are sites politically activated? And how are new media framing our consideration of these questions? The contemporary art collective ManifestAR offers one answer.

“Whereas the public square was once the quintessential place to air grievances, display solidarity, express difference, celebrate similarity, remember, mourn, and reinforce shared values of right and wrong, it is no longer the only anchor for interactions in the public realm. That geography has been relocated to a novel terrain, one that encourages exploration of mobile location based monuments, and virtual memorials. Moreover, public space is now truly open, as artworks can be placed anywhere in the world, without prior permission from government or private authorities – with profound implications for art in the public sphere and the discourse that surrounds it.”

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Leonardo Electronic Almanac
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LEAF++
Transformative Landscapes

by

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ABSTRACT

Landscapes mark a certain terrain, delineating here from there and beyond: places and spaces of reference for our memories, our actions, helping us to place our being in specific moments. From private gardens to rolling hillsides in the country, landscapes represent overlapping visions of what is universal and at the same time personal. A multi-sensory experience we build and engage in anywhere, at any time. LEAF++ is a presentation and research project, an attempt at combining what we experience as individuals and, through the use of open source augmented reality (AR), adding on to the layers of what can be experienced by the wider community of users of a given site. The AR system combines computer vision techniques and allows for interactive experiences, educational contents and other information to be attached to leaves and other parts of plants: users contribute their own images, video, audio or other multi-media information to existing data available such as information about the plant’s habitat and biophysical characteristics. The LEAF++ project has been applied to not only identify Gilles Clément’s Third Landscape but also create a transformative view on urban space and foster experiential, analytical and aesthetic links between a diverse audience’s visions, perceptions and behaviors.

It seems that we have distanced ourselves from the earlier life worlds of these objects – the seasonality of the produce we eat, the habitats in which they were grown, the geographies they have crossed to be placed on our shelves and in our kitchens. Previous studies have been concerned with analyses on exploring and enhancing this lost connectivity. Encouraging farmers abroad to plant export-oriented varieties of fruits and vegetables all year round in order to satisfy the consumers who have been led to expect off-season produce any time of year.

Beyond our world view and supermarket aisles, we fail to see the surrounding plant life which fills the areas just outside of the urban landscape. Plants and produce are relegated to the periphery, taken for their aesthetic or nutritive and not biological contribution to our co-inhabited space, hidden from view of the majority of people. Their beneficial characteristics and contribution to enhancing the biosphere as well as the inequities of their production are masked in our quotidian existence. Thus, the point of departure for this research has been the recognition of these hidden dynamics, the mediation of our knowledge and desire for the co-inhabitants of the shared landscape which has motivated the development of the LEAF++ project.

We embarked upon this process by firstly developing a strategy for a framework which could help in transforming the Third Landscape into an interstitial,
A natural way of critically and creatively engaging the politics and experience of landscapes. The focus was on increasing our awareness and knowledge and expanding our frames of reference of the (un)natural environments which surround our urban daily lives. We decided to create an augmented reality application which would utilize a digital platform to allow users to develop their own alternative, participatory strategies for re-engaging with various plant forms typically found in a limited number of specified regions. By combining a digital field guide and the already existing libraries of scientific information on various species with the unlimited potential for user-built contents, linked through the use of smartphone technology, LEAF++ finds room for oppositional spaces to be situated alongside a mainstream experience of nature. LEAF++ is connected to a Content Management System (CMS), which is supplied with contributions from people who can upload multimedia contents—such as images, texts or videos—and link them to the physical components of plants and trees. The user-generated content is linked, via the CMS, to specific leaves which have been pre-identified and included within the database for visual recognition. LEAF++ not only functions as a digital field guide for the identification of local flora but also allows for a connective, interactive environment to be created and established among people of all ages and dispersed across many different settings. The CMS works as a wiki, collaborative and connective environmental education platform in order to catalyze and enhance an appreciation, expression and interaction with nature.

THEORETICAL FRAMEWORK

Augmented reality is a way of attaching electronic objects to physical ones. Throughout history, the human production of space and objects and continual augmentation has been taking shape, firstly through the imposition of cultural features to our immediate reality and more recently through the use of digital technologies which expand beyond the computer and become merged with the physical environment. This research has built on the wealth of literature already carried out on AR for its potential in enhancing learning contexts, practices and processes. As argued by Chris Dede and Sasha Barab, immersive learning environments, as in digital environments, have at least three elements or ways of enhancing education: multiple perspectives, situated learning, and transfer; furthermore contending that, “the more a virtual immersive experience is based on design strategies that combine actional, symbolic, and sensory factors, the greater the participant’s suspension of disbelief that she or he is ‘inside’ a digitally enhanced setting.”

Eric Klopfer regards AR applications as having the potential to “place learners in real-world contexts that promote transfer of learning from one context to another.” Other studies have highlighted the difference between AR-learning environments and traditional processes by showing that AR has been particularly effective in engaging and fostering social learning situations in which the participants are actively exploring and developing multiple pathways to deal with open-ended issues, especially through the mixing of various realities and a real-world setting.

LEAF++ ENGAGING COLLABORATIVE LEARNING ENVIRONMENTS

LEAF++ functions as a ubiquitous, interactive system of information which can be employed according to various usage scenarios to produce a new view which, through the use of augmented reality, allows for an additional layer to be added to our visual landscape. This new “eye” on the world links natural landscapes to an experience of the user’s determination. By taking a picture of a leaf with the camera of a smartphone, a pre-set 30 feature recognition system is able to scan the form of the leaf and identify specific physical characteristics of the leaf. Once these are recognized, the system retrieves the associated information and content (taken from pre-selected sources and providing information on characteristics such as species, habitat, endangered status), as well as multimedia content ranging from interviews with local wildlife experts to recipes and herbal properties for medicinal uses. The CMS, built using a WordPress engine which has been modified to enable collaborative and multi-user functions, is used to organize and publish contents directly onto the physical leaves by linking the user-generated and pre-determined information. This allows the users themselves to design, create and collaboratively build the multimedia contents associated with the leaves and establishes a complex matrix of dialogic notes in the process.

The objective of LEAF++ was to enable a disseminated, ubiquitous and easily-accessible tool that enables an interactive, natural environment to be created utilizing and catalyzing an innovative, suggestive and user-generated physical contact with the physical components of our surroundings. The individual knowledge, wisdom and interest held by each one of us as regards our own personal interpretations is generally codified within our individual minds, but through the LEAF++ application we are able to open the floodgates to fill the collective experience of human-nature interaction.

METHODOLOGY AND TECHNICAL DESCRIPTION

The LEAF++ project has been designed and implemented through the following methodological steps:

- initial briefing, which produced the definition of the concept;
- the choice and experimentation of several technologies which could be used to realize the concept;
- the design and implementation of several prototypes, which were used in an iterative, participatory process;
- the generalization of the best prototypical solutions into an open platform;
- the use of the resulting platform to create two use cases, for education and artistic performance.

Thus, LEAF++ is the means to create and define new cognitive landscapes. A cognitive landscape can be thought of as resulting from the mental elaboration by every organism of the perceived surroundings.

Within the framework of this process we continued in describing and laying out a set of objectives for the operational functions of LEAF++. These were later used in forming the conceptualization of LEAF++:

- to create a tool for vision or, even more desirably, a new or mediated vision;
- to create an accessible and natural interaction metaphor, as close as possible to the practices to which we are accustomed to; one which is easily executable by a wide range of persons across cultures, age groups, skills;
- to create an open platform, distributed as documented Open Source software, so that it will, in and of itself, create an active ecosystem of practitioners wishing to use and modify it to enable more practices and possibilities for vision, awareness, understanding, expression and ubiquitous knowledge sharing;
- to create a usable information and interaction layer that is easily hooked onto the elements of the natural environment and that is accessible through mobile devices;
to create a process which harmoniously conforms with the processes of our vision; just as we interpret what we see geometrically, symbolically, culturally or through our memories, experiences and relationships, LEAF++ should progressively populate our mediated field of vision with aesthetics, information, knowledge, possibilities for relation, understanding and interaction, just as details progressively emerge while we look at things;

to design a platform that fosters collaborative educational processes and practices;

to create an aesthetic, sensorially stimulating, cognitively suggestive experience, one which is able to trigger wonder and emotion, to inspire action and participation, to activate cultures and open dialogues.

Continuing this line of thought, the research group next began developing the specific processes which were to be carried out in order to implement these objectives. One of the most crucial factors in this process was the recognition of LEAF++ for its capabilities in characterizing a new ‘vision’: The current status and use of already existing AR systems was dissatisfactory in terms of their interaction metaphors, or in the ways their interfaces were set up for physical interaction. Many of these utilize a movie-inspired framework in which the interface for the augmented reality vision resembles a set of equipment dials, radar or sonar machines with floating icons and other elements, which are similar to a video-game aesthetic. While this may be aesthetically pleasing and user-friendly in terms of design, this was incongruent to the feel of a learning environment and for its ease of use – to satisfy the requirements in terms of accessibility and usability – and due to the availability of multiple international development groups dealing with computer vision issues such as the ones involved in the project, thus allowing us to establish an effective mutual collaboration which proved to be both effective and rewarding.

The platform which was created for LEAF++ is composed by the following elements:

- a trainable computer vision module
- a CMS (Content Management System)
- a service infrastructure

A computer vision (CV) module is used to provide image recognition features to the system. The CV module uses SURF (Speeded Up Robust Features) algorithms and techniques to identify the various types of leaves. The SURF image detection techniques and descriptors are used in the system together with a customized version of the optimizations.

Specifically, the CV component is integrated in a system enacting the following process: image acquisition, generation of feature descriptors, classification and initial configuration of the CMS.

A guided procedure allows the user to capture all the images that are required to correctly identify the relevant visual features of the leaves that are to be added to the system. In the next phase of the process an interface is used to navigate the groups of images of each feature and to use them in generating the SURF descriptors that will be used in the end system. Each descriptor uses information captured by the images as described above to create the data that is needed for the real-time image recognition process. An initial version of the descriptor is generated automatically and the user is guided through a series of iterations whose objective is to refine this initial information, thus producing a better, more efficient, descriptor: by iteratively modifying selected parameters, and using the leaves in front of the camera, the expected results are compared to the effective ones, thus identifying the needed modifications to the descriptors.

The expected results are conformed to the beliefs in pursuing a project which fundamentally suggests experience; one which is able to trigger wondering and emotion, to inspire action and participation, to activate cultures and open dialogues.

At the end of the process each one of them is associated to a series of keywords establishing a taxonomy whose nodes are associated to the visual elements of the various types of leaves.

This taxonomy is used in the CMS. The CMS is implemented using a customized version of the WordPress content management platform. The taxonomy produced in the previous phase is reproduced inside WordPress under the form of a ‘customized taxonomy’. Using the standard features of the CMS it is, thus, possible to associate multimedia content – videos, sounds, texts, documents and interactive experiences – to each part of the taxonomy and, therefore, to the visual elements of the types of leaves that have been added to the system.

All the parts of the system for the usage experience are brought together by the service infrastructure. The iPhone applications can be modified and integrated with a set of software components which connect to the device’s webcam and enable the real-time functions of the recognition process. The leaf recognition takes place and once identified is translated into a series of terms in the custom taxonomy, thereby fetching the associated and relevant contents from the network by interrogating the modified WordPress CMS. Finally, the multimedia assets become progressively visible on the viewfinder of the smartphone and are coherently placed with the real-time, on-screen positioning of the leaf.

RESULTS

The LEAF++ project has shown real promise in terms of enhancing traditional educational practices in the natural and environmental sciences despite its current preliminary status. The use and development of an open platform has served two specific purposes:

- as a connective education processes
- as an art performance.
The driving force behind LEAF++ has been a goal to allow any and all interested subjects to create their own ubiquitous education, knowledge sharing and information dissemination processes. FakePress Publishing is in the process of further developing this platform and is currently applying it in several multi-author publications on themes such as ecology, environmental sustainability, and food and nutrition studies. We are also using the LEAF++ platform in generating mobile information facilities on the seasonality of fresh produce, food miles traveled and the terms of production under which they have been grown that are accessible anywhere and are helping to create engaging, entertaining and suggestive ways of establishing a re-connection with the knowledge and traditional wisdom on food and ecosystem.

LEAF++ is also being used for the execution of an art performance in which the system is not connected to a set of databases containing information but, rather, to a generative audio and video engine. In this ‘concert for augmented leaves’ the performers use the leaves in front of cameras to generate suggestive audio and video visuals. The performance is currently being developed into a fully participatory experience in which the audience takes the role of the performers and is free to move around urban space and generating the audio and video collectively, by augmented-looking at the leaves they come across.

Several authors have recently identified the new technological, managerial and cognitive challenges to teaching and learning posed by AR-based learning tools. Alongside this up-and-coming research agenda, LEAF++ contributes an applied investigation of some of these challenges in creating AR-enhanced, connective ecosystems and making a case for their free distribution among the international community of educators and researchers. However, recognition of the limitations of this rather limited applied study require further testing in a wider variety of topical areas and in other research projects.

REFERENCES AND NOTES

Is there an ‘outside’ of the Art World from which to launch critiques and interventions? If so, what is the border that defines outside from inside? If it is not possible to define a border, then what constitutes an intervention and is it possible to be and act as an outsider of the art world? Or are there only different positions within the Art World and a series of positions to take that fulfill ideological parameters and promotional marketing and branding techniques to access the fine art world from an oppositional, and at times confrontational, standpoint?

We think that FakePress lives and operates across borders. On several occasions, we spoke with very different audiences when we presented the same community were more blurred, such as in the Planetary Collegium Conferences or at scientific conferences or at art exhibitions. In other cases, we exhibited in venues where the boundaries between the Art World and the scientific community were more blurred, such as in the Planetary Collegium Conferences or at iseA. Yet, also in those venues, the feedback and the reactions we usually gather from different people coming from different disciplinary background are very diverse.

FakePress itself is composed of researchers with very different backgrounds: cultural anthropologists, engineers specialized in robotics, environmental scientists, communication specialists, and marketing people.

The continuous exposition of these radically different grammars, languages, and points of view forces us to navigate across heterogeneity with a strong conversational method. A continuous dialogue allows us to connect and disconnect disciplinary and cultural components and elements and to articulate some sort of precarious patchwork.

In his On the Edges of Anthropology, James Clifford gives a beautiful description of the idea of articulation: “Articulation is the political connecting and disconnecting, the hooking and unhooking of elements – the sense that any socio-cultural ensemble that presents itself to us as a whole is actually a set of historical connections and disconnections. A set of elements have been combined to make a cultural body, which is also a process of disconnection, through actively sustained antagonisms. Articulations and disarticulations are constant processes in the making and remaking of cultures” (Clifford 2003, p.45).

Coming back to your question: our interventions are usually the results of those connections and disconnections across disciplinary borders. To continue on Clifford’s work, when we end up with a fully branded and packaged marketing strategy for our work and start disseminating it towards different audiences we act as import-export specialists across socio-political and socio-material cultural borders.

We also find Clifford’s definition useful because it highlights the spatial and temporal conditions of this connecting and disconnecting, suggesting that it is a process that can change over time and according to specific contexts.

“In The Truth in Painting, Derrida describes the parergon (par-; around; ergon, the work), the boundaries or limits of a work of art. Philosophers from Plato to Hegel, Kant, Husserl, and Heidegger debated the limits of the intrinsic and extrinsic, the inside and outside of the art object.” (Anne Friedberg, The Virtual Window: From Alberti to Microsoft (Cambridge, MA: MIT Press, 2009), 13.) Where then is the inside and outside of the virtual artwork? Is the artist’s ‘hand’ still inside the artistic process in the production of virtual art or has it become an irrelevant concept abandoned outside the creative process of virtual artworks?

We tend to see our work very much in terms of infra-structuring.

Most of our projects live though the active engagement of the final users who, in most cases, use the platforms or the framework we created in order to perform their own design or artistic activities.

We release most of our projects with open source licenses and interested people can use both the platforms or the framework we created in order to shape a specific process in which we collaborate in a more stable way over time.

Virtual interventions appear to be the contemporary inheritance of Fluxus’ artistic practices. Artists like Peter Weibel, Yayoi Kusama and Valie Export subverted traditional concepts of space and media through artistic interventions. What are the sources of inspiration and who are the artistic predecessors you think about when you draw from the conceptual and aesthetic frameworks of contemporary augmented reality interventions?

Our inspiration comes from many different directions and domains. In fact, each project we embrace requires a specific process in which we collaborate in the creation of a complete perspective of those researches, practices, products, artworks, and services that have addressed in some way the issues and themes we are about to face.

In this, we draw on multiple types of sources, which provide not only inspirational insights, but also a scenario of the relevancy and impacts of the themes we address in relation to different cultures and societies.

Over time, new technologies and communication strategies have allowed human beings to transform the ways in which they work, learn, relate, com-
municate and interact with their cities, objects and practices of their daily lives. This has happened with consumer products, widely adopted technologies, and with the emergence and transformation of new cultures which have opened up entire new spaces for human expression.

In our projects we try to gain a deep understanding of these processes on a global scale. Starting from an ethno graphic point of view – and, thus, investigating on the practices of communities, groups, cities – and expanding into the observation of the visions suggested by emerging technologies and practices.

In this perspective, our inspiration can come from consumer products (just like in the case of the Sony Walkman, which produced the first widely adopted form of augmented reality, in the form of customizable sound environments through which we can shape the perception of our surroundings), or from the pioneering experiments of researchers such as Ivan Sutherland or Douglas Engelbart (who have conceived forms of interaction which have completely transformed the ways in which we perceive our current possibility to relate to data and information), or from the research of people such as Edward Tufte (who have contributed to the formalization of the strategies according to which we are now able to understand and represent information). All the time looking back to the radical interventions in arts and culture of individuals and groups such as the Surrealist, Dada, Conceptual, Performativ and, more recently, technology based arts, and all the urban practices which have provided insights about the possibilities to reinvent the spaces and processes of cities (such as rave cultures which have opened up entire new spaces for communication, product, service or other form of interaction.

Aesthetics is part of the wider scenario of the experience that is produced in people when dealing with a certain artwork, product, service or other form of interaction.

In the representation and presentation of your artworks as being ‘outside of’ and ‘extrinsic to’ contemporary aesthetics why is it important that your projects are identified as Art?

We experience the domain of aesthetics as being instrumental to the goals which we set forth in each project, and, in general, we refer more to the concept of experience.

Aesthetics can be chosen according to multiple strategies, referring to, amongst others, the definition of the intended targets of fruition, or in support of the look and feel of the experience, or to refer to the specifics of selected cultural contexts. Even more, aesthetics can (and should) be chosen to promote the positive, constructive encounter and interrelation of multiple cultural contexts, referring to the archetypal contextual, symbolic, semiotic and ontological dimensions of each one of them; and understanding how to combine them to obtain significative, insightful, satisfactory, empowering and inspiring experiences for all actors involved.

On top of that, aesthetics – in the more general terms of the framework of sensorial experience – can be used to suggest the active participation of individuals and communities to the proposed processes and experiences, describing the cognitive approaches according to which users perceive the possibility and opportunity to become active agents, defining affordances for objects, spaces and social contexts. In this scenario, Art can play a significative role.

Art has had a strategic role throughout human history. It is both a sensor and an actuator of the emerging issues of societies, and has always allowed approaches which are able, on one side, to address fundamental issues and, on the other side, to generate visions and insights on the scenarios of possibility.

For this reason, collaboration between arts and research, design, architecture and other human practices represents enormous value.

What has most surprised you about your recent artworks? What has occurred in your work that was outside of your intent, yet has since become an intrinsic part of the work?

One of the main foci of our projects is the idea of enabling novel forms of expressions for multiple cultures, allowing different voices and points of view to participate in the process. Many resources are dedicated in this direction and the technological systems used in projects commonly support dozens of different languages and experiences which can be customized according to the different cultural contexts in which they will be used.

One surprising thing that has started to happen in our projects is the (previously unexpected) responses from parts of the world which classically have been very hard to get involved. In projects such as LEAF++, or The Electronic Man produced by FakePress, users have started to appear in places characterized by high degrees of digital divide and (as of yet) limited strategies dedicated to digital inclusion, such as multiple locations in Africa, South and Central America, and Asia.

This occurrence has proven to be truly insightful for our team, as we have realized the possibility to use our projects as both a tool to promote digital inclusion and as an indicator of the current state of digital citizenship in these locations.

Since the first occurrence of interactions coming from these locations, we have started to purposefully address these issues, in a series of different ways. The practices of radical openness have proven to be quite successful: each project is released together with the technologies used to create it and their documentation, under open licenses such as Creative Commons and GPL; tutorials and how-to’s have been commonly produced; workshops have been designed and performed, to use constructivist strategies to the adoption of these technologies and to support communities into understanding the new opportunities and to devise their own innovative practices in participatory ways.

In this process, access to the domains of arts and creativity has proven to be strategic, allowing us to enact initiatives which are able to inspire and to suggest visions, and to create access for children and disadvantaged communities.

BIBLIOGRAPHY

Technology enables a vision of the world in which people, spaces, architecture and objects are interconnected, allowing for distributed flows of knowledge, information, experience, relation, emotion.

Layering the world with information, interactive content, and possibilities for expression and communication through augmented realities, spimes, location-based media and gestural/natural interfaces are all realistic scenarios. The tools are available, allowing us to transform the world into a hybrid reality that is explicitly, expressively and emotionally composed through a multitude of voices, sounds, visions, gestures, and shapes.

These scenarios offer incredible opportunities from various points of view: ethnographic, psychological, philosophical, economic, relational, and educational. Augmented realities, spimes, ubiquitous, wearable and location-based technologies define the possibility of reconsidering the ways in which we communicate, interact, relate, behave; including the ways in which we exchange, distribute, share, disseminate knowledge and information. In this scenario the ideas of learning, teaching and communicating have been reinterpreted by extending the spaces and tools that can be used in these practices.

The definition of new grammars, new uses and new strategies hybridizes processes and practices.

Under this perspective, design, learning, education, and narratives change, turning into hybrid disciplines that tend to adopt open, natively peer-to-peer strategies capable of transforming theorists and practitioners into publishers and communicators.
In our research, we explored these new spaces by investigating new forms that such innovative practices can assume.

We designed a next-step publishing house producing cross-medial, multi-author, open-ended narratives that are built on constructions of networked, pluralistic, non-deterministic, interpretative layers of reality through location-based, augmented reality, spime and natural/gestural interfaces.

In this scenario, what is a Publisher? What processes does it enact? What are the media, spaces and tools it can use?

FakePress, the name of the publishing house, aims at a potential redefinition-through-disarticulation of practices that refer to narratives, education, knowledge sharing and distribution, communication, interaction, emotion and relation.

In this reinterpretation of the editorial process, design starts off with imagining and formalizing experiences, starting from a set of behavioural observations and a series of axioms:

» multi-authoriality, meaning that content is to be natively hosted in an environment that assumes and allows for the presence of multiple voices, points of view and layers for interpretation, at any time and place;

» interactivity, so that content can be updated, extracted, remixed, re-contextualized, distributed, and reviewed;

» open-endedness, and focus on continuous – or continuable – ongoing streams, more than on complete narratives;

» sensoriality, also allowing for the new tactile experiences enabled by digital interactive technologies, by natural and gestural interfaces, by interactive environments, and by the availability of digital infoscapes superimposed to the physical domain;

» ubiquity, and accessibility, leveraging mobile, wearable, and location based technologies;

» sustainability and social significance, by enacting a critical evaluation process.

Axioms and behaviours are used to shape the publication, which can assume multiple manifestations: mobile, location-based applications, devices, technological wearable garments, websites, electronics, architecture or physical designs are all possible media used in this process.

Leaf++, the installation, 2011, FakePress Publishing. Leaves, Augmented Reality, mobile devices and info-aesthetic visualizations. Image courtesy of the authors.

Leaf++, the performance, 2011, FakePress Publishing. Leaves, Augmented Reality, generative sound and visualizations and mobile devices. Image courtesy of authors.


Deadly Cuts To The Arts

A New International Initiative of the Museum of Contemporary Cuts in collaboration with Operational and Curatorial Research

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