Introduction to MetaGarden Sphere

Tanja Vujinović, 2018

In “MetaGarden”, we actively engage in the post-digital panorama and our expanded nature, contemplating and recreating various technological amalgams of ourselves and our worlds. Vilém Flusser wrote about how futile the attempts are to artificially construct a dichotomy between nature and culture. His stance towards the nature, which we always comprehend through the lens of culture, contradicts the ideas of returning to the long forgotten, primordial “nature” or “source”, and undermines the prospects of objectively analysing the amalgams of nature-culture that we continually create.

Simulations are important for our understanding of the world in philosophical, scientific, and everyday sense, for they describe how models and maps stretch out over the layers of reality and explain the workings of the world. Without them, we would have a hard time understanding how mathematical formulas, laws of physics, anatomies of living organism or engineering structures function. In science, philosophy, and religion, there have always been different world ontologies and simulation paradigms that try to chart and explain how systems and networks of the world work.

According to the Božidar Kante, what we now loosely call “nature” has long ago become an “organic machine”, but it still does not mean the complete transference of nature into “artifact”. Our physical environment is increasingly shaped by the capital, technology, and geopolitics, and these processes are being reflected in the so-called nature that we ingest or reproduce as lawns, gardens, and land or theme parks. The majority of domesticated animals, fruits, vegetables, and herbs grown in agriculturally advanced areas of the world are the fruit of planned manipulations of human resources, even if we exclude the work on genetically engineered species. Such cultivation highlights “non-reproduced nature”, which becomes a more important expression of value, representing something yet nonaffected by pollution or climate change. This process is part of the dramatisation of violence and excesses of technical reshaping that highlights the importance of nonhuman world for the maintenance of life. Different cultures give advantage to environments that, according to their opinion, contain important “natural” elements, not only for being aesthetically pleasing, but also for having a therapeutic role because they contribute to our healing faster than artificial environments do.

The MetaGarden addresses the questions of recreation and recycling. It deals with the construction of technological “Other” by employing various anthropomorphic and abstract agents. The conceptual Objects a and B appearing in the project are inspired by the history of anthropomorphization and are, as Sherry Turkle would say, “objects-to-think-with”. Object a represents our striving towards the creation of a synthetic being, while Object B stands for the human being in transition – a robomorphic being, a cyborg-becoming-a-thing.

Water, as another important agent in this project, was used as a multipurpose medium: as the carrier of the medicament in the Elixir Machine, as the “water of life” together
with Ethanol in the Spiritus Agens, and as the mineral (philosophical) water in the process of becoming in the Garden of the Elixir Pill. In Station, various objects called the Collectors were used as vehicles for collecting atmospheric waters, rainwater, and other airborne particles.

Garden of the Elixir Pill
The Garden of the Elixir Pill installation is presented in the form of cognitive map for understanding the state of things, for understanding our lifeworld of “ecotechnics”, to use Jean-Luc Nancy’s term. The emergence of elements, whether in systems theory, science or natural world, is a phenomenon in which large entities or complex systems arise from the process of interaction and self-organisation of smaller, simpler elements. Examples of such structures are the living systems of ant colonies or bird flocks, but they also include technological structures of individual elements having a certain amount of freedom of action, such as city traffic or the organisational phenomena in computer simulations and cellular automata that apply the concept of Boids, Swarm Intelligence (SI) and Cellular robotic systems. The Bots is a mix of Zen garden, sandbox, robot combat, and social involvement of non-human and human agents. The installation employs artificial units in cosmogonic maps in order to create an outlook of the past, present, and future constructions of the world.

The installation Garden of the Elixir Pill entails corresponding elements that make up a small universe inspired by Chinese “scholar’s gardens” and Zen gardens. Animism, widely present in eastern mythologies and popular cultures, offers an alternative understanding of artificial intelligence agents as autonomous beings and potential carriers of assigned consciousness.

Inspired by the notion of frequencies that affect the elements in cosmos, three instances of bots generate frequencies that slowly fluctuate from two predetermined frequency points using pseudo-random algorithm and, by doing so, they gently affect the silica sand placed beneath them. The smaller bots, whose electronic circuits are partially made from the material they crawl on, the silica sand, move by the means of vibration and leave trail marks in the sand. The three bigger ones, which generate frequency vibrations, rearrange the sand underneath by gently emitting their own vibrations. The third level of the installation, the projected stage where virtual instances of bots exist, is the stage of simulation. Here, they act or appear in a remediating role. They try to explain the workings of the universe to themselves and to us, the audience, as well as to decipher the philosophical book Tao Te Ching, which has had numerous interpretations and contextualisations throughout history. Bots are regenerating Tao Te Ching using Markov Chain algorithm, continuously displaying different, reformed statements. The algorithm calculates probabilities of appearances of particular words from the original text or, more precisely, the appearance of words after the N word (the number for N chosen in this work is 2). It then generates new text by starting from random words from the original text and ending when it calculates that it has reached the end of a sentence.

This action opens many questions regarding the construction of meaning in general, and especially regarding the efforts to create artificial agents capable of processing
and displaying meaningful content that goes beyond mere calculations and statistical outcomes.

The setup of Garden of the Elixir Pill installation for the exhibition in MMC KIBLA, KIBELA in September 2018 was similar to its setup for the exhibition in Kapelica Gallery in October 2018. In Kibla, the installation additionally had glass capsules with packed substances (quicksilver, active charcoal, epsom salt, minerals) and the moving mountain-like element.

**Elixir Machine**

Elixir Machine is inspired by machines in the Avant-garde art of Surrealism and Dada, in which different elements of reality are mixed with transcendental twists, thus commenting the complex state of increasing industrialisation and mechanisation of the time. Elixir Machine resembles a laboratory, indicating a connection to my other installations that are always related to the idea of an apparatus for understanding the reality and contemporary societies. The premise for all MetaGarden installations I made in 2018 was the usage of two conceptual objects, the agents a and B, where a always represents the unattainable, the fleeting other, while B is the representation of us inside the contemporary world of “ecotechnics”. Object a, as a research tool that continually appears in my works in different shapes and roles, emerges in this installation in the shape of many substances, including water.

The initial idea was to make a machine that will, on a conceptual level, cover the complex relationship we nowadays have with nature and especially with its role in our health and wellbeing.

Over the course of months, I worked on the generative segment of the installation that should transpose the exhibition visitors into the virtual world of seemingly untouched or primordial nature. Simultaneously, I worked on collecting numerous substances that have a loose or direct reference to being “natural”, ranging from everyday herbal teas, minerals, and vitamins, to even more extreme examples such as homeopathic remedies. Most of the substances were recommended to me by different people I interviewed, while I discovered other substances in online testimonials. Some substances were directly recommended to me in pharmacies, homeopathic remedy being one of them. The core question I asked was whether they themselves use the remedies in order to improve their wellbeing. What struck me the most while I was working on this research was that poetics and misconceptualisation surround some of these substances. While reading about historical examples of amalgam medications, I was inspired by Theriak and Mithridatium, which are both examples of cumulative and random mixtures of what was believed to be highly successful medicaments in the past. Similarly to these historical examples, a lot of people nowadays admit that they take big amounts of supplements without actually knowing what they do, how they interact with each other, and whether they are truly beneficial or merely a placebo. On top of that, they also take pleasure in the ritual and the idea of gaining control over their health and bodies. While some of these preparations, herbal supplements, and teas definitely have scientifically proven active properties, others have no definite proof of effect other than that of placebo. Besides placebo, which is a scientifically approved agent for feeling better, there is also a strong ideology of “Do It Yourself”, counter-
government, and anti-corporation, creating a general atmosphere instilled with such narratives that some companies try to abuse in order to sell their products. Nowadays, we are being sold the idea of nature in the form of a product, as a detached, remote, imaginative concept, and the only way for these products to potentially have any positive effect might be within the line of a placebo or a “nocebo” (no medication applied and body left to naturally recover) effect.

During the first presentation of the installation, Elixir Machine had a multi-sensor camera for transporting the visitors into the virtual segment of the installation resembling an untouched meadow. Besides the camera, pieces of objects A and B were attached to the construction. The objects together purified the previously prepared liquid substance, which was dispersed into the air of the exhibition space. Application for this installation was developed in Unity 3D software, a game engine for building three-dimensional environments. The moment the camera recognises a human shape, it mirrors it within the application. At first, the shape is recognisable by the visitor standing in front of the camera mirroring the visitor’s movements within the projection. At that point, the avatar looks like a loose outline of human shape, defined by the particles resembling herbs. Gradually, the human shape transforms into a mixture of geometric shapes that change form and finally stabilise into a unique shape that is stored in the work’s database.

Geometric shapes are generated from the group of ten objects consisting of random number of cubes, lines, and plates. Positions and rotations are also randomly generated but with some restrictions in terms of the lines being parallel to one another. The order of geometric elements is determined by Bridson’s algorithm, which is an approximation of Poisson-disc distribution. Animations of floating elements are based on Perlin noise, a technique developed by Ken Perlin.

Previously prepared substance used here is an alcohol extraction of more than 60 ingredients (a complete list is in Appendix 2 below). Few drops of this substance are added to the distilled water, purified through active charcoal within objects A and B, and dispersed into the gallery space. The first presentation in KID KIBLA entailed the projection of the virtual world on top of the base construction, while the second, in Kapelica Gallery, presented the work in three segments: the shelf with samples of all ingredients used for making the initial liquid substance, the physical construction of the installation, and the projection.

**Garden of the Elixir Pill (Tree)**

As all the other installations from this cycle, the tree (a part of the Garden of the Elixir Pill) relates to nature, recreation, wellbeing, and our striving to make sense of the world.

During the first presentation in 2018, the artificial tree had a vertical stream for the creation of medicament. It passed drops of rainwater from one vessel to a pre-made mixture of clay and Ganoderma Lucidum powder, and to a sea sponge placed at the bottom. During the second installment of this work, in addition to vertical process that this time included berries from European Black Nightshade plant, the installation had the vertical line of glass vessels hanging from branches attached to the tree. The vessels included rainwater and minerals Cinnabarit and Realgar, Boswellia Sacra
essential oil, and Lead. These elements refer to historical examples of medicaments, like Spongia Somnifera as the sponge used to deliver analgesic and anesthetic medication in the past, while others were widely used in cultures all over the world for disinfection (Boswelia), protection and eventually minor health benefits (Cinnabarit), and purification rituals. The obvious potential of some of these elements to become poison relates to many properties of natural elements and medication, but it is the dose itself that determines the effectiveness of a substance. All of the elements used in this specific setting are employed to help us think about our complex entanglement with nature.

**Station**

As a supporting element to other installations, the Station is meant to bring forth the elements used in the field while collecting particular substances. It contains the objects called Collectors, and it also expands on particular elements of other installation in the exhibition. Placed inside, the Collectors and other related objects serve to explain the details of the overall project. The Collectors as “objects-to-think-with” help us negotiate our relationship with nature, its many streams and fluxes, and enable us to think about measuring and tracking ourselves and our environment, as well as getting into homeostatic balances with our environment.

The first instalment of Station in KID KIBLA showed many elements used in the making of MetaGarden:Machine installation: supplements, herbal extracts, vials and vessels for extractions, and other smaller equipment. The second Station presentation included two examples of the Collectors objects – the glass vials inserted in the ground of a field and the glass bowls hanging from the branches of trees, both collecting rainwater for the installations. Prior to the second presentation, three actions were executed involving the attachment of glass collectors to kites in order to collect aerosol particles and waters. In Kapelica Gallery, the glass vials with steel frames, inspired by the shape of Typha plant, were placed in the gallery inside the two containers containing three types of plants (Arundo Donax, Typha, and Miscanthus sinensis). Arundo Donax and Typha were harvested from one of the locations where Collectors were placed to gather water samples. Inside the vials, I tried to make an open process of creating a (philosophical) medicament by inserting rods for measuring conductivity of electricity into the mixture of Ethanol, distilled water, and a piece of Arundo Donax reed together with a seed of Cannabis Sativa acquired in a regular health food store. The process was sonified, and the future versions of such instalments will be developed in the direction of higher level sensitivity to better reflect changes.

**Spiritus Agens**

Spiritus Agens is about our close connections with Ethanol and its numerous versions. Contemporary world, hygiene, and our wellbeing are unimaginable without it. There are many scientific findings proving that a minimal daily consumption of alcohol wards off some of the age related detriments to health.

The circuit made within the installation continually processes diluted alcohol through active charcoal. In Spiritus Agens, diluted alcohol runs through Object a, which contains charcoal particles, and then drops into the container that preserves the Object B, which
is immersed in the processed alcoholic “quintessence”. Using Morse code, Object B emits “a signal of life”, in the form of the statement “I am still alive”, borrowed from famous conceptual artist On Kawara, who used this maxim as part of his art practice. Aqua vita, or the water of life, an archaic and generic name for all types of alcohol distillates, originated in the Middle Ages when it was used as treatment for the bubonic plague. Nowadays, alcohol is synthesised in various forms and used in the food industry, medicine, and various fields of research.

So far, “MetaGarden” raised the questions of recreation and of different immaterial and transitory objects of both low and high technology. The future of wellbeing lies in the development of contemporary science and technology, as well as in our readiness to understand them and debate their many elements and implications. We often deal with the Pharmakon, fluctuating between poison and remedy, but also between the notions of clean and dirty, having in mind that the substances in our environment are the pointers of our homeostatic balances. The key questions regarding cleanliness and sterility are closely related to ecology and health and, as Mary Douglas states, they are transitory and culturally dependent questions.

Conclusions arising from the project so far are that various activities such as daily routines, usage of substances, and meditation were and still are used as methods of affecting and transforming one’s perception of the world and wellbeing. We are inspired by historical and contemporary examples of DIY biohacking and immersions into the rhythms of nature. By interacting with and incorporating various abstract and anthropomorphic agents, we try to recreate ourselves and intervene in our daily lives in order to find meaning and security.

After two public presentations of the installations (exhibitions “Elixir Agens”, MMC KIBLA, KIBELA, Maribor, September 2018, and “Elixir Distillers”, Kapelica Gallery, October 2018), and due to the nature of their development, I have decided to include them into a new, larger series of works entitled “MetaGarden”, which will be expanded in the future. The ‘Garden’ is a metaphor for the transitory outlined areas where installations envelope, while prefix ‘meta’ denotes the modular nature of the general concept and its ability to connect and include minor installations into the network.

Bibliography

Appendix 1: Credits of the project MetaGarden Sphere1

MetaGarden Sphere1
Elixir Machine, Installation (objects, generative software application, electronics, e-book)
Garden of the Elixir Pill, Installation (objects, generative software application, electronics)
Spiritus Agens, Installation (objects, electronics)

Project by Tanja Vujinović
Production: Ultramono, 2018
Executive producers: Tanja Vujinović, Jan Kušej (Ultramono)
Production and PR assistance: Urška Comino
Software, electronics, objects: Tanja Vujinović, Milos Roglič, Borut Savski, Stefan Doepner, Pero Kolobarić, Roman Bevc, Bevec d.o.o.
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Project consultants: Jan Kušej, Lenart Krajnc, Derek Snyder, Urška Dremelj, Stefan Doepner, Borut Savski, Jelena Guga, Milos Roglič, Maja Kodre, Aleksander Rečnik, Aleš Rode, Maja Berločnik, KAP Jasa (Saša Iskrič, Janez Vizjak)

Appendix 2: Substances for the installation Elixir Machine

Substances used in making the mixture for the installation MetaGarden:Machine are:
Boswellia Serata, Quince Leaf, Birch Leaf, Activated Charcoal, Wild lettuce, Couch Grass, Rose Hip, Magnesium Citrate, Barley Grass, Common Yarrow, Dandelion Flower and Leaf, Liquorice, root, Rose, Lotus seed, Lingzhi mushroom, White Clay, Giant Cane, Cattail, Linden, Cherry plum, European Black Nightshade, Goji berries, Peppermint Leaves, Acorn, Jasmine Green Tea, Ethanol.

Appendix 3: Research References for the project MetaGarden Sphere1

Appendix 4: Illustrations - Circuit Designs of Custom Electronic Components, and Screenshots of Code within Unity 3D Environment

Circuit design for the Garden of the Elixir Pill installation (bots on the platform)

Circuit design for the Garden of the Elixir Pill installation (support station)
private void feed(string line) {
    List<string> tokens = tokenize(line);
    // Discard this line if it's too short
    if (tokens.Count < ordered) {
        return;
    }
    // Store the first ngram of this line
    string beginning = string.Join(“ “, tokens.GetRange(0, ordered).ToArray());
    beginnings.Add(beginning);
    // Now let's go through everything and create the dictionary
    for (int i = 0; i < tokens.Count - ordered; i++) {
        // Using GetRange to pull out N elements from the array
        string gram = string.Join(“ “, tokens.GetRange(i, ordered).ToArray());
        // What's the next element in the array?
        string next = tokens[i + ordered];
        // Is this a new one?
        if (!ngrams.ContainsKey(gram)) {
            ngrams[gram] = new List<string>();
        }
        // Add to the list
        ngrams[gram].Add(next);
    }
}

Screenshot of the programming script from Unity3D for the installation Garden of the Elixir Pill

Screenshot of the programming script from Unity3D for the installation Elixir machine
Circuit design for the Spiritus Agens installation