

“At Vegetal Velocities, or Coded Coexistence”

Curatorial Statement by Katherine Behar

The New Media Artspace is proud to present *Silvia Ruzanka: Botanical Computing*, a solo exhibition of digital animations from an ongoing cycle of interdisciplinary new media artworks. At the New Media Artspace, Ruzanka’s science fictional animations are accompanied by digital ephemera and analog research materials, which shed light on how she simultaneously conceives, creates, and theorizes her *Botanical Computing* world. The collected works imagine environments where organic and human-made beings coexist in mutual-ity and even hybridity. In Ruzanka’s speculative world, biological and computational processes might gener-ate life, and Jewish principles of caring for the natural environment as stewardship might manifest. *Botani-cal Computing* pays tribute to such potentialities in circuits of plants, air, breath, word, language, code, and care.

Botanical Computing coalesces layered accretions of three different scales of time—technological time, botanical time, and human time—within the time of creation, which in turn includes the creation of mean-ing, the creation of life, and the creation of art. The online exhibition uses shifting colors and Sunderings of the interface to destabilize human time, melding time periods and temporality. The design of the web-site contrasts contemporary 3D rendering with pixelated references to 1990s World Wide Web culture and early 2000s net.art. As human viewers peer into *Botanical Computing*’s worlds, they may encounter “easter eggs”—hidden elements of the interface that reveal failed remnants of abandoned past projects predating the artist’s present iterations. Further incorporating artistic process across time, the in-person exhibition includes *Process in Bloom*, four evolving research collages—created with the New Media Artspace Docent Team—that unearth continuities between botanical and technological patterns as form, structure, and content. Mixing in yet another timestamped reference to 1970s scientific illustration, these elements draw a connection between the processes of technological and biological growth, and the creative process artists engage daily, through which a creative world buds, morphs, withers, and blooms.

In *Botanical Computing*, Ruzanka positions the special potentialities of care and cultivation against the trope of depressive overdetermination that is frequently attributed to technological futures. To break through the truncated imagination of overdetermination, *Botanical Computing* reaches what we might call a “vegetal velocity,” as though breaking the sound barrier or in the language of *Star Wars* science fiction ac-celerating into “hyperdrive” to achieve lightspeed. At this velocity, *Botanical Computing* summons audacious hope for coding new forms of coexistence.

In *Botanical Computing*, four tableaux each represents a stage—or in the artist’s term “dream”—excerpted from an ongoing body of work of the same title. Ruzanka’s animations stage glimpses into a world devoid of human life where technological and botanical beings grow in lush harmony, cultivating care for each other across species lines. Each view onto the *Botanical Computing* world stretches time, its denouement reflect-ing ongoing cycles. Scenes employ static shots, perhaps in reference to conventions of landscape painting. Yet belying the unmoving camera, minutia mount into vicissitudinous evolutions, perceived slowly at first, then with mounting velocity and expansion.

In the first dream, *Plant Growth Dreams*, we look through an aperture surrounded by darkness, reminiscent of a microscope lens or ship porthole. In the glowing center of the screen, we witness microcosmic growth and evolution in fast-forward, like cells dividing. *Plant Growth Studies* questions how something—any-thing—evolves toward complexity. How does anything come to be? At times the rapid pace of the animation recalls the rhythms of timelapse, reminiscent of educational films in a science classroom. Coupled with a

green-hued color palette, the timelapse style summons 1970s nostalgia. In other moments, the too-loose over-averaged rendering quality reads like Google’s hallucinatory Deep Dream, an image-generating artificial neural net, evoking the creepiness of AI meme culture in the here and now. Across the entire animation, the aperture is interlaced with green diffusion patterns. The green color could be interpreted as being vegetal like leaves or as being digital like a blinking command line cursor. Yet the diffusion pattern oddly conjures hand-crafts like the patterns of cross-stitch, reintroducing the human sense of touch like a ghost in the machine.

The second dream, *Still Running*, is an homage to the 1972 science fiction film *Silent Running*, which Ruzanka cites as a major source of inspiration. In the film, Earth has become so polluted that the only remaining forests are in artificial biospheres aboard spaceships. Abandoned in space in the last forest, a botanist teaches his only companions, robots called “Drones,” how to care. The robots learn to care for the forest, cultivate plants, and tend the botanical world as its only surviving stewards. Ruzanka’s *Still Running* imagines the how the relationship between a tree and its robot drone caretaker would evolve years after the movie’s end. We see one of the unmistakable drones from *Silent Running* watering the biosphere forest with a silly watering can just like in the movie. Beside it grows a giant tree, but this tree is unlike the forest trees in *Silent Running* which exactly resemble trees on Earth. Unlike Earthly trees, this tree’s branches support twigs that look like LEDs, leaves that look like microchips, and fruit that looks like resistors. What the tree’s branches have come to bear isn’t botanical; they bear nothing short of a *resemblance* to the tree’s closest companion, the drone. Through caring, coexistence becomes coded and cross-coded, and the botanical and technological grow so close as to intermix.

Remarkably, this closeness comes to animated life in *Still Running* when the tree takes steps toward and eventually bows over the drone. This bending over and leaning toward literalizes a form of recognition that in her theoretical work Ruzanka sees as essential to both caring and thinking as acts that contain potential. Citing the German philosopher Martin Heidegger who wrote, “we truly incline toward something only when it, in turn, inclines toward us,” Ruzanka recommends that we “think of this inclination as a force of possibility that needs an engagement with other forces in order to be enacted.”¹ And so, by inclining toward a drone, a tree becomes something beyond its tree self and what it would otherwise ever have been.

The third dream, *Memories of Care*, represents the introduction of language into the world of *Botanical Computing*. Emphasizing the centrality of text, *Memories of Care* portrays a biological world created through computational processes. That is, created through lines of code—which are precisely language. The animation depicts hands tenderly planting seeds, but as Ruzanka explains, the hands also expose “the errors that generative AI makes when trying to render hands.”² In order for a generative AI system to create images, images must first be “understood” through and as language. Specifically, generative AI creates images based on previous training data that must be labeled (that is, objects in training images must be identified using words) and AI images are produced in response to text-based prompts.

Botanical Computing as a whole, and *Memories of Care* in particular, draw inspiration from the theory of language developed by Walter Benjamin, among the most significant philosophers of modernity in the 20th century. While Benjamin’s influence on the field of new media arts is typically attributed to his canonical essay “The Work of Art in the Age of its Mechanical Reproducibility,” Ruzanka turns to his lesser-known *On Language as Such, and on the Language of Man*, drawing out a crucial moment in which he discusses language and breath. Benjamin understands the biblical passage “God breathes his breath into man” as uniting “life and mind and language.” This unification mirrors what Ruzanka seeks as “a botanical form of computation [namely] one that arises before logic, before naming.”³ Even if human language circles in imitation of the divine creative word, human language, conveyed by breath, is nevertheless what humans (and, we might add, computers) must use to generate art. Plants are the companion species that provide the air humans breathe. They provide the material conditions of possibility for human and technological creative language—hence “botanical computing.”

1 Unpaginated, unpublished manuscript, 2nd page of PDF.

2 Correspondence with the author. February 16, 2024.

3 Unpaginated, unpublished manuscript, 25th page of PDF.

From a new media arts curatorial perspective, this aspect of *Botanical Computing* illuminates another media theory in Benjamin that applies not to replicative or simulative media (as Benjamin's media theory is usually understood), but rather to generative media, which is increasingly the media of today. Further, the main thrust of "The Work of Art" is that reproduction renders art too knowable, too available, at the expense of its aura. By turning to *On Language* Ruzanka's work seems to suggest a Benjaminian media theory of generation that re-infuses art with an element of the unknown. Thus, this exhibition offers an important contribution to scholarship on a canonical Jewish thinker.

In the fourth dream, *Growth Study*, we witness what Ruzanka refers to as the "completed world"⁴ of *Botanical Computing*. This world is rife with saturated contrasts—blood red skies invert the color of the lush computational green in the landscape—yet nevertheless in balance. The wide landscape cycles in and out of focus with sophisticated forms—sometimes vegetal, sometimes technological—fading in like established forests and new growth. Flickering like apparitions hovering above the scene, we catch glimpses of forms like potted chips and wires, or sprouting transistors, that harken to the timelapse of *Plant Growth Dreams*. Whereas in that dream, the hybrid cellular forms seemed to be growing in the isolation of a microscope slide, here we see them zoomed out, having found their "natural" habitat. The close aperture of the first dream opens into a full vista. Newly unbounded in the wide expanse of landscape, these forms appear less nascent and more juvenile: playful, toy-like, inventive. Their emergent potentiality dances on screen in an unmistakable figure ground relationship, while the background landscape slowly shifts, fading in and fading out, and lapsing into smooth red fields.

When Ruzanka writes that "The internet is an invasive species,"⁵ she is decrying the monocultural overgrowth of technological determinism. In contrast, the vast variety of forms flickering through *Growth Study* show the speculative velocities we may yet reach. While the three temporal registers of human, technological, and botanical time are harmonious, *Botanical Computing* leaves open the question of interpretation. This exhibition presents a speculative world where the coded coexistence of the technological, the botanical, and the human mean that *human interpretation* is certain not to have the final word, and the world is richer for other inclusions.

This exhibition is generously sponsored by the Sandra Kahn Wasserman Jewish Studies Center under the directorship of Dean Jessica Lang.

Silvia Ruzanka: Botanical Computing is curated by Katherine Behar, Professor in the Fine and Performing Arts Department in the Weissman School of Arts and Sciences, Baruch College, CUNY and is produced by the New Media Artspace Student Docent Team. The exhibition is made possible by further support from the Baruch Computing and Technology Center (BCTC), the Weissman School of Arts and Sciences, and the Newman Library. All images appear courtesy of the artist.

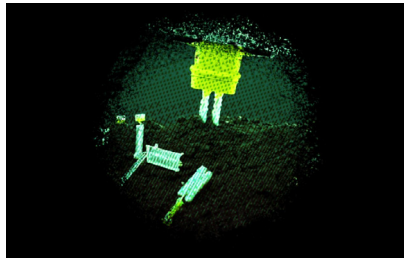
Artist Bio

Silvia Ruzanka is an artist-philosopher whose projects include virtual reality, interactive installation, video, and performance. Her work is concerned with the archaeology and memory of technology and media, and their intersections with everyday life. Her work has been presented at galleries, museums, and festivals internationally including the Museum of Contemporary Art, Chicago; SIGGRAPH; ISEA; the New Forms Festival (Vancouver); and the Bi-City Biennale of Urbanism/Architecture (Shenzhen, China), among others. She holds an MFA in Art and Technology Studies from The School of the Art Institute of Chicago and a B.A. in Physics from Smith College. She is an Assistant Professor in the Department of Arts at Rensselaer Polytechnic Institute, and is a Ph.D. candidate in Visual Arts: Philosophy, Aesthetics, and Art Theory at the Institute for Doctoral Studies in the Visual Arts in Portland, Maine. Her current research is in the philosophy of computation and care.

4 Conversation with the author. February 5, 2024.

5 Unpaginated, unpublished manuscript, 24th page of PDF.

Plant Growth Dreams — Digital animation, 2024



Plant-being is about a state of being in perpetual growth, of reaching downwards and outwards, across thresholds. Speculative computing based in plant-thinking would naturally be in some way grounded in growth, extension, mixture, existing not in terms of hard boundaries between thresholds, like logic gates, but as continuous being at and across thresholds. In this series of animations, I use a combination of digital techniques with time-lapse photography and custom-trained diffusion networks trained on combinations of plants and electronics, combined together in a speculative dream of vegetal-electronic hybrids growing.

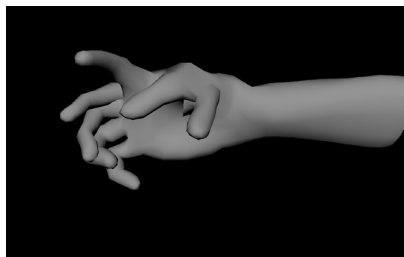
Still Running — Digital animation, 2024



I'm interested in blurring the boundaries and modes of thinking between the machinic and the vegetal, in procedural and self-organizing systems, in softening the hard edges of 3D geometry, and in breathing life into objects by using data in unexpected ways.

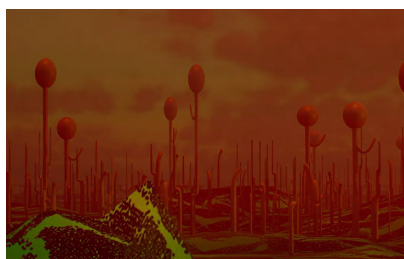
In Douglas Trumbull's film *Silent Running* (1972), the last remnants of the Earth's forests (and all plant life) are launched into space in biospheres, in an attempt at preservation from the complete pollution and ecosystem collapse of the planet. *Still Running* is an experimental virtual reality game and series of animations that imagines a future in which machines and plants evolve into a new relationship of care.

Memories of Care — Digital animation, 2024



Hands gently planting a seed. Scooping out dirt, placing the seed, patting the earth back in place. How will AI hands remember care? What memories does computation carry with it?

Growth Study — Digital animation, 2023-24



The regime of computation in which we live is structured through bits, electrons, silicon, and an underlying logic, a system of thought. What would computation based instead in plants be like? What form would it take, in rhizomatic networks, chemical memory, a computation not based on rational thinking but instead grown from plant-thinking? *Growth Study* is an immersive video projection of a speculative landscape in which hybrid forms of computational and vegetal nature begin to emerge.