1. *You've been working in VR and AR since the late 1990s, exploring architecture and spatial interfaces. How has your practice evolved with the rapid advancement of digital tools?*

The approach to new technologies and to the computer as an artistic tool for creating art, began around 1996, when I bought my first PC that I immediately used as a medium of my artistic production - inside and outside the internet - fascinated by the diverse possibilities that it continues offering to me also nowadays.

My artistic research is part of the revival concerning the immersivity in art that began around the mid-Nineties and deals with the theme of software, from the creation of apps in augmented reality, to the immersive and interactive works and installations I make in virtual reality.

From the mid-nineties to now, I have built an artistic language through the immersive technologies, which currently constitute the main tools of my artistic expression.

I'm moved by a deep interest I have always had in space and how it can be transformed and shaped by the language of informatics. I use augmented reality to stretch the space beyond its limit and virtual reality to penetrate it until its most recondite place of origin. Also, my digital sculptures become transformed into abstract subspaces.

My body of work explores digital dimensions in virtual spaces through a variety of techniques, technologies, and devices for exploring architecture and sculpture as a dynamic edge. Inspired by the nineties' writings of Marcos Novak: Liquid Architectures in Cyberspace, I immediately started using the term "Super-Place" to characterize the dynamic and self-performative places and sculptures in my virtual artworks, which appear animated by intrinsic metaphysics, transforming in front of the viewer into something always different and unexpected.

After my early explorations in VRML (programming language) and immersive media in the late nineties – I would define this phase: "From space to dreamscape", including *The CAVE* art-projects, a crucial shift emerged with the advent of object-oriented programming (OOP). While OOP allowed me to build systems of interactivity and generativity in code, OOO (Object Oriented Ontology) provided a conceptual framework to think of the sculptures not as tools or representations, but as entities with their own functionality – I would name this phase: "from perception to participation". I still remember in 2007, when alongside the installation disk of the Tiger OS for my MacBook Pro, I discovered another disk titled Apple Developer Tools. Inside, there were three software programs and various frameworks for object-oriented programming, enabling the creation of apps and

widgets. By 2008, I published my first web-app: The Widget Art Gallery. And the following year, I launched The Virtual Prigione, my first native iOS App for the Apple Store.

This shift - from physical and virtual installations to interactive apps and software - expanded my practice, allowing me to explore code as an artistic medium. Eleven years ago, with the advent of the 3D viewers, oculus, started the phase I would name: "From interaction to immersion".

While I continued my research into VR and AR, seven years ago I also began integrating AI as a creative tool, when it arrived commercially to us. Over time, AI became my co-pilot, assisting me in writing code and automating complex processes. Before adopting a certain technology, I would like to study its intrinsic language and how it can operate in the context of my work of art. This is the reason why sometimes I wait for mature technology.

2. *Object Oriented Stones DUO reimagines stones as generative, fluid forms that respond to audience interaction. How do you approach designing these transformations, and what does this fluidity represent?*

I've always believed that a sculpture can have an animated side capable of transforming and expanding into something else, according to speculative realism and OOO that thinks of objects as living entities. I am absolutely fascinated by the sculpture medium itself, because it is three-dimensional, like the 3D modeling, which I have always used to create my digital works. As I many times said: "In the liquid dimension of cyberspace, a fluid sculpture can be as artistically significant as a tangible sculpture". It's about translating matter into a new state of existence - one that is both real and unreal, static and perpetually evolving.

I designed the whole *Object Oriented Stones* series by coding it in JavaScript and html5. Each stone is conceived to become a gateway into colorful, abstract post natural worlds that shift and evolve based on how the audience interacts. The piece is set against a vibrant gradient background filled with soft, moving curves and glowing colors. Viewers can interact with the 3D stones using different visual effects:

- Vortex Spirals twist the stone's shape

- Shockwave Pulse sends ripples through it

- Tornado Funnel adds spinning motion

- Powder Disintegration breaks the stone into digital particles

- Kaleidoscope Field fills the space with moving patterns and flashes of light

Moreover, the audience can use some other AI-generated effects I coded, that let the stones break-apart and transform into new shapes like DNA strands, crystals, nebula clouds, flowers, supernovas, or spirals, each with its own unique texture and color.

Object Oriented Stones reminds us how it has become easy nowadays to manipulate nature over its functionality.

For me, the fluidity represents our super-fast digital space-time condition – is the breaking of boundaries between physical and digital, solid and intangible.

Stones, which are traditionally seen as static, ancient, and immovable, are reimagined as dynamic, evolving entities that transcend their material limitations. Their transformation symbolizes a departure from permanence, embracing the idea of constant metamorphosis and reinvention and revelations of extra-dimensions. It's also a metaphor on how digital technologies are reshaping our perception of the natural world. Moreover, the fluidity of *Object Oriented Stones DUO* is about challenging conventions, creating immersive experiences where the audience becomes an integral part of the artwork's evolution.

3. *The work invites participants to co-create these evolving stones. How important is the viewer's role in shaping these post-natural objects, and does this interactivity suggest new relationships between humans and materials?*

By making the stones responsive and interactive, I invite viewers to reconsider their relationship with the environment - not just as something to observe, but as something to participate in and co-modify.

The 3D sculpture invites the viewers to reconsider their understanding of "natural" versus "artificial." These stones are not just simulations; they are post-natural objects, existing within a conceptual and technological framework that alters their very nature. The work raises questions about how we perceive, interact-with, and shape the environments we inhabit, whether physical, digital, or somewhere in between.

By engaging with these stones, participants are essentially interacting with the algorithm, contributing to an ongoing, unpredictable process - a new, symbiotic relationship between humans and materials, where interaction becomes a form of production and transformation is endless.

A sort of distributed agency between human, code, and digital matter – also, a radical departure from traditional sculptural practice where the artist alone shapes resistant materials. In this post-natural paradigm, the binary between creation and destruction collapses into a continuous cycle of metamorphosis.

Object Oriented Stones DUO, is a chameleon, designing itself to new environments and interactions. It drops its weight, its density, its ancestral inertia, to exist as something liquid and generative. Greek sculptors fought against time's erosion, while my digital stones incorporate change as a fundamental feature. This embraces rather than resists temporal effects, making the artwork's relationship with time an active artistic choice rather than a certain deterioration.

In a sense, I'm performing alchemy through code, bending ancient materials to the logic of algorithms. I'm not just representing stone but reimagining its essential properties. In these post-natural landscapes, I see my work as an invitation to reimagine materiality itself. It's a new kind of geology, written not by the slow march of time, but by immediacy, interaction, and imagination.

The sculptures exist within a self-evolving digital ecosystem, where every interaction from viewers, whether in AR, VR, or mixed reality, accelerates or alters the process of destroy and rebirth.

There is a strong connection to the creation and destruction cycle that is fundamental to object-oriented programming. In OOP, objects are instantiated (created) and eventually destroyed or transformed when no longer needed - a lifecycle that mirrors my *Object Oriented Stones*. The sculptures are instantiated with certain properties, modified through interaction, or transformed into new instances. And also "Liquid and generative" are qualities that look like a mutable state in programming languages.

The plus valorem of my digital stones lies in this shift from monologic permanence to dialogic transformation - from artwork as finished statement to artwork as ongoing transformation.

And the blockchain preserves the history of these transformations, creating unchangeable records of something that is defined by its ability to change. Sounds like a paradox but, this tension between permanence and impermanence becomes part of the conceptual framework of my digital stone.

I mean, the record is permanent, but what it records is the artwork's refusal to remain permanent.

Chiara Passa, April 2025.