

Global Arts Leadership in the Digital Age

Global Arts Leadership in the Digital Age:

*Voices from the World's
Major Art Industries*

Edited by

Alexandra Solea and Giosuè Prezioso

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ACKNOWLEDGMENTS

In this book, we sought to gather some of the world's most iconic voices in the realms of visual and performing arts. It was a challenging operation, as the number of 4.0, hi-tech experiments in such spheres are plural, wide, and literally global. We however intercepted what we thought could somehow represent a segment of these industries and began a conversation – while we were aware it was only a synecdoche of the complex system we sought to include in these pages.

In this section, we would therefore like to thank all the authors, collaborators, and in general the people, who generously decided to embark upon such an adventure with us. This book began before the pandemic and was edited and finalized throughout it. It is therefore dense with changes, experiences, and modifications from a human, social, and professional perspective. To us, it crystallizes an important transition and momentum in our world and history.

Indeed, as it is a book that condenses the spheres of art and technology, it is also, in parallel, the very testament of a period we are somehow still living through. And, despite the zeitgeist of these very last years, the stories gathered through the chapters convey an atmosphere of possibility and new entrepreneurship.

We therefore thank all the contributors for injecting such a sense of new-Positivism into these pages. We hope that the readership may draw from it to participate in the art scene with new ideas, hope, and spirit.

FOREWORD

PRAVALI VANGETI

The world of art has been in a state of constant flux for as long as it has existed - reinventing and redefining itself at each stage of human evolution. Never before, however, have the paradigms of art shifted as drastically as they have in the wake of the digital era. It has fundamentally altered the way we create, view, and experience art, tearing down the assumptions of the bygone art epoch and its unspoken rules of procedure.

Arts and culture were long perceived as the avocation of the elite, beyond the realms and reach of *la vie quotidienne*. In certain geographies of the world, this very much continues to be the case. Although artists across the pages of history have tried to do away with these structures and share their practice with all, it is the digital revolution that truly lent a new meaning to the democratization of art, enabling it to be accessed in even the remotest of geographies, by the unlikeliest of audience. Moreover, the creation of these less-than-traditional forms of art engage engineers and artists, content developers and coders, illustrators and designers alike, creating a collective experience for all involved.

Through the past decade, as global reach for one's art has become an easily attainable aspiration, there has been a frenzied movement among artists and cultural practitioners towards joining the digital bandwagon. Building of digital literacy and expertise is no longer just a prudent investment but an imperative *modus operandi* for visual and performing arts organizations. As the cultural and creative industries (CCIs) continue to explore their capacities amidst the technological transformation, policymakers too have scurried to reflect these digital trends in the policy dialogue, albeit with scattered scope and coverage.

This shift towards a high-tech immersive experience started nearly two decades ago, gradually gaining momentum across different regions. However, there is no denying that it was 2020 that marked a pivotal point in our collective digital history. The Covid-19 pandemic, despite bringing the CCIs to a crippling halt, managed to simultaneously provide a controlled environment for digital technologies to flourish in the creative sectors. Like every other industry and service, the art business moved online once the lockdowns started (but unlike most other industries, it did so in remarkable

style). Despite the initial struggles of adapting to virtual formats, performing arts organizations soon began to leverage the tools and technologies at their disposal, creating multi-sensory experiences for a much larger audience, surpassing the challenges faced due to the lack of physically accessible spaces. The audience, for its part, evolved too. Terminologies that were once reserved for the avant-garde experimentalists have now tumbled into everyday lexicon. Digital concert halls, AR/VR exhibitions, metaverse galleries and NFT marketplaces – these terms are such a commonplace in the art world discourse that those brave, early adopters of museum virtual visits and their interactive apps now seem almost passé.

Building on this perfect confluence of art, design, science, and technology, cultural pioneers globally are creating a whole new playground in the digital dimension - one that is here to stay. This book brings together some of the distinct and daring experiences of digital arts leadership, from both the visual arts and performing arts industries, giving the reader a quick taste of the rapidly evolving art world and its boundless digital future.

Pravali Vangeti,
Independent Consultant, International Cultural Policy and Relations

FOREWORD BY THE EDITOR

CECI N'EST PAS UN NFT: LEGITIMIZING 4.0 ART PRACTICES THROUGH GLOBAL VOICES

GIOSUÈ PREZIOSO

As of 2022, the art world of the last five years has undergone unprecedented changes. In 2017, Christie's set a world's record price for an artwork: 450 million for Leonardo Da Vinci's *Salvator Mundi*.¹ In 2018, the same venue proposed *Edmond Belamy*, the first portrait by artificial intelligence (AI) at auction, which achieved the record price of 432,500 dollars – and therefore sixty-nine times the price of estimation.² In 2021 Sophia, a Saudi-citizen robot, signed her first self-portrait (in collaboration with Italian artist, Andrea Bonaceto), which then sold for 700,000 dollars.³ It was followed by Chris Torres' *Nyan Cat* – which, as an NFT sold for almost 600,000 dollars at Christie's⁴ – and then by Pak's recent sale *Merge* that, overall, sold for 91.8 million – thus becoming the world's most expensive artwork by an alive artist.⁵ The list of first, highest, most

¹ "Salvator Mundi," Christie's, accessed May 8, 2022, <https://www.christies.com/en/lot/lot-6110563>

² "Is Artificial Intelligence Set to Become Art's New Medium?" Christie's, accessed May 8, 2022, <https://www.christies.com/features/a-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx>

³ "A Robot Sells NFTs on Nifty Gateway for \$ 700,000," Art Rights, accessed May 8, 2022,

<https://www.artrights.me/en/sophia-robot-sells-nft-for-700-thousand-dollars/>

⁴ "Why an Animated Flying Cat with a Pop-Tart Body Sold for Almost \$ 600,000?" The New York Times, accessed May 8, 2022, <https://www.nytimes.com/2021/02/22/business/nft-nba-top-shot-crypto.html>

⁵ "Artist Pak Just Sold 266,445 Shares of an NFT for \$ 91.8 Million on Nifty Gateway," Artnet, accessed May 8, 2022 <https://news.artnet.com/market/pak-nft-91-8-million-2044727>

unexpected records could continue further. Despite the different media, narrative, and effect, most of these records share however one, common feature: their hybridization with technology. Whether they present NFT, AI, robotics, or the metaverse, the *fil rouge* remains indeed the same: the application of advanced technologies to an art operation.

For some reason, such a *mélange* (art-technology) produced some sense of schism and divisionism within the art world. Indeed, NFTs and affine technologies are often considered *technological assets* rather than *artworks*.⁶ Accordingly, metaverse, AI, and robotic artists tend to be categorized as *designers* instead of *artists*.⁷ It appears there is a virtual wall between these productions and the art world: technology seems to distinctly belong to a realm, while art, as a result, to another. This is surely a *déjà vu* for our industry. In the past, photography was almost demonized and kept away from the Olympus of the *beaux arts*⁸ – and in some ways it still is, being studied in, exhibited at, and critically contextualized in *ad hoc* circles, institutes, and biennales. The same would apply to those circles of refused media and art expressions, which later became inspirational and leading in the market – such as Impressionism, Fauvism, or Art Naïve. The art world seems to physiologically experience these changes of mind. They occur and re-occur, in a quasi Vichian circle.

As it often happens in our industry, it is the past that sometimes holds interesting precedents and keys for progress. For instance, the word for both *art* and *technology* in ancient and modern (*sic*) Greek is *techné* – thus underlining the inseparable relationship between the two. It was still in the past, and more iconically in the Renaissance culture, that artists were both painters, sculptors, and ceramists, as well as mathematicians, physicists, and philosophers – see the case of Leonardo Da Vinci, among others. In our recent times, instead, this dichotomy does not seem to be contemplated, nor appreciated. Those people, professionals, institutes, and organizations that decided to pursue a career in such a realm shall indeed primarily *defend* and then *propose* their work. Among the controversial happenings that confirm such a *zeitgeist* is the refusal of Wikipedia – which serves as a sort of

⁶ “Will NFTs Transform the Art World? Are They Even Art?” The Washington Post, accessed May 8, 2022,

<https://www.washingtonpost.com/arts-entertainment/2021/12/18/nft-art-faq/>

⁷ “How Wikipedia’s Classification of NFTs as ‘Not Art’ Impacts Equity in the Art World,” Forbes, accessed May 8, 2022,

<https://www.forbes.com/sites/rebekahbastian/2022/01/16/how-wikipedias-classification-of-nfts-as-not-art-impacts-equity-in-the-art-world/>

⁸ “When Photography Wasn’t Art,” JSTOR Daily, accessed May 8, 2022,

<https://daily.jstor.org/when-photography-was-not-art/>

catalyzed, global *vox populi* – to categorize NFTs as forms of art.⁹ In a recent (2022) article on Artsy, Los Angeles based artist Mieke Marple moreover gathered referential voices from the art critique realm to clarify their position on the topic. “NFTs” explains art critic and dealer, Kenny Schachter “are not art in the same way Wikipedia is not an encyclopedia and a pipe is not a pipe;” ““There is a long history of civilians” continues artist Christine Wang “disagreeing with an artist when the artist declares that a piece of art is, in fact, art.”¹⁰ The existence of a *bigoterie* is therefore undeniable and more seriously Janus-faced, as it includes voices from both the inside and outside the art world and its industry.

As technology and art belong to yet another Janus, according to which these realms are instead interconnected, synonymic, and complementary, we felt the urge to gather yet another cohort of referential, global voices that represent some of the world’s most respected art spheres and segments – to thus seek balance, or at least a *par condicio*. More specifically, this section is dedicated to the world of visual arts; in order to build a circular, multi-generational, and crescent conversation with the readership, I invited four authors that differently represented a brick of the art market. Namely - and in a crescendo - the following chapters will be dedicated to an artist (duo), a curator, a museum director, and the president of a world’s leading auction house. The former section will be authored by the duo Hackatao - listed in the world’s top ten most paid Crypto artists (with a current global revenue of more than 42 million dollars).¹¹ Their chapter will narrate their journey *ab ovo*: from their first experimentations in the crypto art realm to recent projects with Christie’s or Leonardo Da Vinci’s artworks – among owners. A hybrid piece of writing that somehow echoes a manual for young and established artists, who are willing to either explore or actively participate in the crypto art revolution – through references, case studies, and personal tips. The following chapter features the participation of Italian-American curator, Luisa Ausenda, among the world’s first crypto and metaverse curators. In her international practice – working for prestigious venues such as the Venice Biennale, the Museum of Crypto Art, and various projects in countries such as Argentina, Brazil, Cuba, Dubai, Italy, and the United States – she focused on themes such as gender, representation, minorities,

⁹ “Opinion: Why Won’t Wikipedia Classify NFTs as Art?” Crypto Briefing, accessed May 8, 2022,

<https://cryptobriefing.com/opinion-why-wont-wikipedia-classify-nfts-art/>

¹⁰ “What’s Really at Stake in the Debate over Whether NFTs are Art?” Artsy, accessed May 9, 2022,

<https://www.artsy.net/article/artsy-editorial-stake-debate-nfts-art>

¹¹ “Artists,” Cryptoart.io, <https://cryptoart.io/artists>

and Feminism, contributing to a global conversation around themes of 4.0 art, technology, and New Humanism. The following chapter is authored by Paolo Giulierini, Director of the Museo Archeologico Nazionale di Napoli (The National Archeological Museum of Naples, Italy). In this chapter, Giulierini describes two pioneering projects he co-authored for his museums: *Father and Son* (a video game) and *Nostoi* (a digital reconstructive process). The former became Italy's – and among the world's – first gamification experiences; a successful production that has already totaled more than 5 million downloads worldwide (as of 2022). The latter consists of the application of advanced, multidisciplinary technologies that seek to fully render ancient, archeological masterpieces that are then 'digitally restituted' to their birthplaces – thus establishing a virtuous and quasi-diplomatic relationship with institutions, cultures, and states. The last author is Dirk Boll, President of Christie's in Europe, Middle East, Russia and India. As representative of the world's leading art business, as well as the most prolific venue in terms of crypto art sales, Dr Boll guides us through the major achievements, strategies, and dynamics that characterize this sphere from a global and prestigious observatory.

As mentioned, this section is designed to provide a gradual and consequential view on the art world *today*. It features the participation of major actors representing our global industry – literally from the artists' workshop to the final and highest re-seller: Christie's, an auction house. Through the authors' human and professional perspectives, this book somehow serves as a manual to approach, consolidate, and refine this multifaceted ecosystem, which, most times, appears as rather pristine, robotic, unreachable, and almost de-humanized. This conversation is therefore (also) meant to extrapolate elements of authorship, presence, and human intention and to re-calibrate a certain (lost?) sense of human reconciliation and exchange. Through their back-stage notes and experiences, the authors provide us with that human quality, roughness, and sense of proceduralism that disappear when our own very inventions are then served to, and disposed by, the final user. This is therefore a book that seeks to facilitate and reconcile with that very human factor and component that lies behind any technological (and artistic) achievement. This attempt bears the hope to facilitate the participation of yet more artists, curators, museum directors, and businesses in this revolution that is *today*. Now.

EVEN THE FUTURE IS BACKWARD?
GENDER, HIERARCHY, AND BIAS IN 4.0 ART PRACTICES
SHORT INSTRUCTIONS FOR THE READER

This section begins with a short and quick experiment that is designed to raise self-awareness in the worlds of visual arts and cultures. To keep it bias-free, we shall stop any further clarifications here. Everything will be clear at the end of this exercise.

Take a piece of paper and a pen, or a phone. Have a writing area.

Take 15 seconds to empty your mind.

Now give yourself 7 seconds.

It is important that you time yourself, or that you ask someone to do it for you.

Get ready.

Start counting.

Think of the first 3 artists that come to your mind and write them on the piece of paper/phone.

3, 2, 1... Stop.

Take 10 seconds. A short break.

What do they have in common? Take less than a minute to answer to this and **do not read further.**

Most likely, they are men, white, western and use painting as their main medium.

In the worst case, at least one of these conditions will be there. Maybe painting?

If you are smiling, you probably understood where we are going with this.

Take another piece of paper or a phone.

15 seconds to clear your mind.

Start counting (7 seconds again).

Think of the first 3 female artists that come to your mind and write them on the piece of paper/phone.

3, 2, 1... Stop.

Take 10 seconds. A short break.

Was it more difficult? Participants usually experience frustration, difficulty, and somehow embarrassment to complete this exercise.

Thinking of female artists turns out to be more challenging and less immediate. Did you experience the same?

If you happen to have children/young people around as either a parent, teacher, instructor, or in general you are surrounded by them, try the experiment with them and reflect on your findings. Most likely, you will experience what you read in the description, which comes from direct and multiple experiments I ran in my international classes, courses, and seminars. Regardless of the age, level of education, and gender, participants tended to provide the answers I indicated above.

For Westerns – being the population and culture I interacted with – art is mainly male, white, western, and painting-related.

Even when you google the word “art” the first and most recurring images are those of paintings, by men, and mainly of Western origins.

Has anything changed with technology – i.e. digital, crypto, AI art? We shall explore this in the following section.

“Why do most virtual assistants that are powered by artificial intelligence — like Apple’s Siri and Amazon’s Alexa system — by default have female names, female voices and often a submissive or even flirtatious

style?”¹² This is the beginning of a broadly-read article by the New York Times that draws from a recent UNESCO study on the topic of gender discrimination in technological contexts and applications.¹³ Indeed, while technology is often and implicitly synonymous with progress and de-humanization, there are, in fact, very human perpetuations that occur through it - such as the ones of the abovementioned *gender* discrimination. Not by chance, the representation of women in A.I. research contexts make up only 12% of the total, while it is only 6% in the segments of software development.¹⁴ Such an under-representation rate shall (also) clarify the reasons behind Siri or Alexa’s phenomenon.

While there is no official data on the matter, it may be argued that the same applies to the world of art and more specifically to the digital. In the global list of crypto artists by revenue only 2 of the 20 names in the ranking is female;¹⁵ this indicates that only 10% of the world’s most paid crypto artists is in fact represented by women, and the same applies to Artificial Intelligence (A.I.). When the developers of *Edmond Belamy* – the first A.I. artwork sold at auction for \$ 432,500 – exposed the machine to the most iconic masterpieces in the history of art, the result – being the actual artwork – was rather relevant. The specific A.I. was in fact engineered so that, after metabolizing the most recurring styles, colors, themes, and subjects it had seen and memorized, it could produce a work that synthesized and summarized all the artworks it had been exposed to. Surprisingly (?), the result consisted of a male, middle-aged, white figure surrounded by an Impressionist-like background. Therefore, even for that A.I. process, art was synonym with maleness, whiteness, Europe-centrism, and painting. It was a machine that said/did it, with all its logics and mathematics. Through this operation, the A.I. machine re-confirmed what is at times a fear, a refusal, and “the past” for the art world. *Edmond Belamy* is instead a present, a testament, an *hic et nunc*. It is a call to an objectivity that at times modernity and progress tend to manipulate and alter – tending to forget that art is, indeed, still a male, Western, white affair.

¹² “Siri and Alexa Reinforce Gender Bias, U.N. Finds,” The New York Times, accessed May 8, 2022, <https://www.nytimes.com/2019/05/22/world/siri-alexa-ai-gender-bias.html>

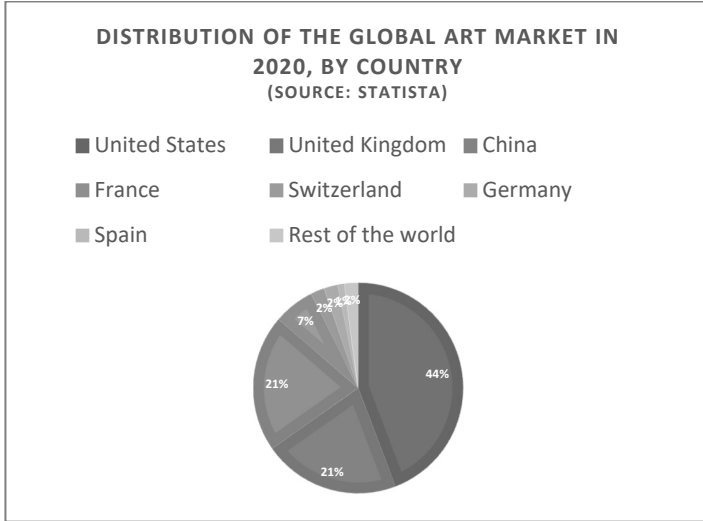
¹³ “Are Robot Sexist,” United Nations, accessed May 8, 2022, <https://news.un.org/en/story/2019/05/1038691>

¹⁴ “First UNESCO Recommendations to Combat Gender Bias in Applications Using Artificial Intelligence,” UNESCO, accessed May 8, 2022, <https://en.unesco.org/news/first-unesco-recommendations-combat-gender-bias-applications-using-artificial-intelligence>

¹⁵ “Artists,” Cryptoart.io, accessed May 8, 2022, <https://cryptoart.io/artists>

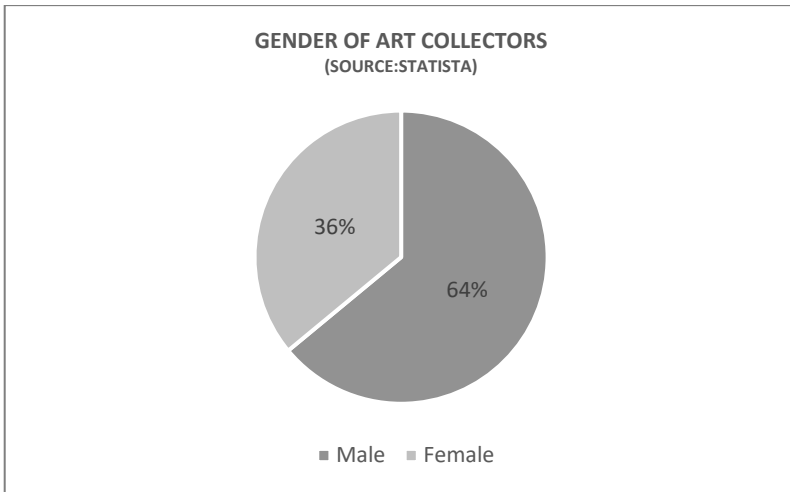
Except for China – that holds 20% of the global share – almost 80% of the art market is in fact purely Western.¹⁶

Such a market is then predominantly male, with a 64% figure represented by male buyers.¹⁷ Furthermore, it is purely painting based.



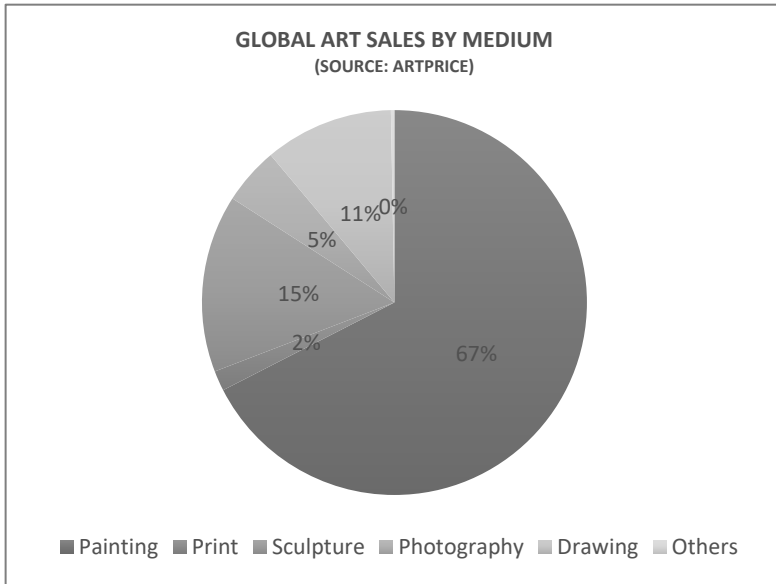
¹⁶ “Global Art Market Share 2021, by Country,” Statista, accessed May 8, 2022, <https://www.statista.com/statistics/885531/global-art-market-share-by-country/>

¹⁷ “Share of Art Collectors,” Statista, accessed May 8, 2022, <https://www.statista.com/statistics/893783/share-of-art-collectors-by-gender-united-states/>



As shown in the graph, almost 70% of the lots sold at global auctions are painting, whereas 15% sculpture. These successful media seem to echo Giorgio Vasari’s predilection for what he defined as “arti maggiori” (lit. major arts).¹⁸ Indeed, according to the theorist, painting, sculpture, and architecture accounted as primary, major, and hierarchically higher art expressions; all the others, by contrast, fell under the general and heterogeneous umbrella of “arti minori” (lit. minor arts).

¹⁸ See Charney, N. and Rowland I. who, in *The Collector of Lives: Giorgio Vasari and the Invention of Art* critically analyze the impact his theories had, and still have, in the art market, society, and art perception.



It is however rather claustrophobic to see that after almost 500 years, his theories, words, and categorizations still bear effects on the market, the art culture, and taste of the Western art tradition. While this assertion may need further evidence, it can be hinted that the art market still seems to perpetuate a Vasarian scheme and reasoning. Other traditions, such as Aboriginal, Muslim, or yet Traditional Chinese are characterized by wood works, manuscripts, and/or ceramics. This impactful obsession with painting is therefore typical of the Western tradition and should not be regarded as the standard, but as *a* standard. The extent of its echo and monopoly is such that, when new media are incorporated into the art realm, painting plays the unavoidable role of gatekeeper and absolute validator. For instance, when photography – and earlier Daguerreotypes – started to emerge as new, experimental art forms, the postures, backgrounds, light and shades, as well as the effects and plastic qualities in it were directly imported from painting. That very resemblance somehow guaranteed validation and permission.

Unsurprisingly, the same happened with digital and then crypto art. Harold Cohen's *Untitled Computer Drawing* (1982), which is formally regarded as the history's first digital artwork, is indeed a pure echo of

Abstract and Surrealist paintings.¹⁹ Despite its will to set a new avant-garde in the field of art and computing, this foundational and pioneering work is in fact intrinsically painterly. The colored, geometrical shapes that fluctuate in the white dimension seem to draw from Kandinsky, Miró, or Baruchello's oeuvres – coincidentally all white, western artists. These resemblances consolidate the idea that, to access the art realm, both art and artists shall acknowledge the primacy of painting and more specifically so of white, western painting tradition. The same happened with Crypto art, whose first experiments held an explicit painterly, visual quality – see Beeple, Christ Torres, or Pak.

This quick journey throughout some recent transitions in the history of art demonstrated that this realm is indeed hierarchically built, gender and geographically biased, as well as painting based. If you or your students/sons/ friends answered as expected in the introductory experiment, this may indicate that this bias is (internationally) well rooted in our minds, and, more seriously so, since a very young age. If that is the case, it may be expected that children – and later adults – will therefore continue to think of art as mere painting – probably by western male artists; they will consequentially mainly invest in it (like today, as per 70% of art transactions); they may not feel, “non-artists” or “non-art appreciators” if they cannot personally draw/paint, or the work they are looking at is not well drawn/painted. Unfortunately, technology does not seem to propose a very different model, as the very inputters of its systems are biased minds themselves. For this reason, phenomena like Siri, Alexa, or Edmond Belamy's can continue to grow and be perpetuated, with the aggravation that technology will make them feel as ‘modern’ and ‘progressive,’ reiterating biases, discriminations, and constructs.

This whole section was therefore meant to raise awareness in the reader and in the art world itself, signaling that even in 4.0 art practices gender, geography, and media (still) play a major, implicit, and maybe unknown role.

¹⁹ “Harold Cohen,” Tate, accessed May 8, 2022, <https://www.tate.org.uk/art/artists/harold-cohen-925>

Biography

Giosuè Prezioso is a Professor, Researcher, and Dean of Academic Affairs at Unicollege, Italy. He holds an MSc in Art, Law and Business from Christie's London, while specializing in arts and education at the University of Reading and at the Harvard Graduate School of Education (PhDc and PGE). He has lectured at prestigious international institutions, such as Universidad Rey Juan Carlos, the University of South Florida, and at the Italian Parliament. His work has been featured, among others, in *Forbes*, *The Financial Times*, and *The Cryptonomist*.

CHAPTER ONE

FROM TRADITIONAL ART MAKING TO EARLY DIGITAL EXPERIMENTS

HACKATAO

Hackatao consists of a duo: N and S. While we initially worked independently, we later started creating art together by working on a primary, commonly developed character called 'Podmork.' Depending on the language, the name 'Podmork' has different meanings. It is a fictional hero that merged both our individual practices as creatives and artists through specific visual patterns. First came the physical painted or sculpted Podmork figures, and it was thanks to them that we first entered the contemporary art world.

Around 2012, everything felt more like a game to us. Back then, S had painting as his major medium; he processed his creations digitally and then transferred them onto a canvas – as part of his very creative process. While he was already familiar with digital art even prior to the Podmork creature project, there was no fitting technology or a mature market to promote or sell digital art at that time.

After creating the figures, we would photograph them and post them on social networks - this was how Hackatao's first works came into being. Early in our career, we tended to employ metal, resin and wood; as for the drawings, we would outline and refine them with pencils and ink on a canvas. All the works held our signature in a quasi-graphite/drawing pattern thus to represent the visual stream of consciousness we had personally gone through. As Hackatao, we now use a digital version of those same patterns.

Through painting and composition, we deal with many of the questions that life poses to us. Finding balance while collaborating helps us enter a contemplative state, through which we can achieve the visualization of the unconscious in vivid, bold imagery. Our artworks are characterized by

multi-layered and complex compositions — we want every viewer to be able to find something close to him/her, a message just for him/her, engraved onto the surface of our digital works.

Creative Path: Encountering Obstacles of the Traditional Contemporary Art Sphere

At the very beginning of our creative journey, we were approached by critics who believed that our works were digital prints, when in fact *each* and *every* picture was drawn by hand. The choice of such deceiving medium however was not accidental.

In the recent past in Italy - where we are based - professionals from the contemporary art world would often underestimate works created with the aid of digital tools - indeed, artworks created with physical materials were esteemed and valued higher. An artist would have to take into consideration what was happening in the art industry and market at that specific moment in time - while working towards developing his/her personal language and research - in order to have a higher probability of approaching the niche scene. If one wished to sell his/her works more successfully, s/he had to follow unwritten laws dictated by the contemporary art market (of the early 2000s). Our career in the world of traditional art therefore seemed to progress very slowly. We started working together in 2007, but despite a distinctive style and a positive reaction from the communities of collectors and artists, we would still come across those obstacles set by the established, institutionalized art sphere and almost inevitably, by the market. To connect our art with the public successfully, we designed a platform to constantly build new contacts in the art world, as well as network, attend impersonal events and dinners, with the aim to gain some exposure. In such communities, we observed that emerging artists always had to please a specific segment and fulfill certain social expectations - and this would clash and contrast with our very nature.

Since our very first artwork tokenization on the blockchain, we have trusted and believed in the endless possibilities of NFTs and this very technology. Indeed, to this day, we keep sharing and providing feedback to some of the world's greatest distribution platform creators. Our goal is to move the NFT and the crypto art worlds forward, in every aspect. With our works, we aspire to show the potential of digital art, celebrate all possible forms of crypto art, and explore and develop innovative mechanisms. The phenomenon of NFTs raised conversations around the integration of new technologies in art. As Hackatao, we celebrate the merging of digital

disciplines, futuristic artistic approaches and modern, generative and experiential technologies.

Clash with NFT and Sales Growth

Prior to the rise of NFTs, there was a rule in the art world that provided that contact between collectors and artists had to take place through an intermediary. Indeed, until 2018 our art was directly bought by collectors through galleries - which thus served as agents and intermediaries. In 2018, we delved deeper into the world of crypto. We were somewhat familiar with Bitcoin by then, but we had much more to learn. We fortuitously came across scientific articles in *Le Scienze* magazine that looked at the use of blockchain technology in art.¹ As we were intrigued and inspired, we personally contacted the author and they spoke to us about the existence of the SuperRare marketplace platform. A few days after the launch of the website, we therefore published our first artwork there. As of today, it appears to have been very stimulating to have been at the very origins of something that is considered forward-thinking, a novelty. At that time, we would also actively share managerial ideas with the SuperRare team, providing feedback as artists in terms of platform development.

After our first encounters with the crypto scene, our audience had grown further. While we were originally present and active on Facebook, we realized that the average user there was conventionally misled by mass-material: indeed, new art forms are not the key feed there. Before the crypto art phenomenon took shape, there were a couple of thousand people actively following our social networks, - which have now reached about 35,000 units on Twitter (as of May 2022). While such a poll had mainly Italian geographical representations at first - as we are based there - we now have a broader and global outreach - thanks to online NFT platforms that allow digitally native artistic communities to remain interconnected. Indeed, the Metaverse knows no physical borders; such a space allows for a more equal distribution of the arts and opportunities for new artists. For this reason, Hackatao's main channel of communication is Twitter – as almost all passionate crypto communities are active there. Despite living in a small village in the mountains, we got the opportunity to share our art with a vast audience. We are constantly intrigued by interesting, new NFT projects, and we make sure to communicate with their authors and support them by

¹ “Oltre il Bitcoin: il futuro,” *Le scienze*, accessed on May 8, 2022, https://www.lescienze.it/edicola/2018/03/01/news/le_sienze_n_595-3882901/

spreading the word, buying art from them, or even providing them with the necessary platforms for them to gain more exposure.

Through NFTs, artists can be authors of both their fate and narrative. Our initial monetary investment towards becoming crypto artists was 50 euros. That is how much we had invested in a crypto wallet to construct the foundations for our journey to begin. After that, we would only use the profit we would generate to produce yet other artworks. The biggest investment for us, however, was time. The time we spent learning about the functions and philosophy of the blockchain, informing ourselves about the history of the crypto community. We dedicated months to researching, reading scientific and tech articles and above all, socializing with the community.

CASE STUDIES: PROJECT I

HACK OF A BEAR

«Christie's London announces a digital companion piece to Leonardo da Vinci's penetrating study *Head of a Bear*, via a collaboration with digital artists Hackatao. In response to *Head of a Bear* by Leonardo da Vinci, to be offered in the Exceptional Sale in London in July 2021, Hackatao has created a work inspired by this Old Master drawing, bringing the bear majestically to life. This specially commissioned digital work will be unveiled at Christie's King Street from 3 July, as part of the Classic Week view, visible via the Aria AR app. The digital work has been donated to The Museum of Crypto Art where it will subsequently appear. Hackatao's response to the masterpiece *Head of a Bear* by da Vinci is based on the concept of the continuum; a continuous sequence in which adjacent elements are not perceptibly different from each other, but the extremes are quite distinct. A never-ending pattern, a curve or geometrical figure, each part of which has the same statistical character as the whole, and which leads to infinite circularity and the eternity of art.»²

The Beginning

The idea of this project came from a collector who owned the original work by Leonardo da Vinci. He reached out to us via a mutual contact. They explained that they wanted to give life to a project that would help the original work to evolve into a new format and to thus become a new, contemporary reading of the Old Master's drawing. Of course, we were

² «The 15th and 21st centuries meet, Leonardo Da Vinci's *Head of a Bear* Reborn in the Metaverse, by Hackatao," Christie's, accessed May 8, 2022, <https://www.christies.com/about-us/press-archive/details?PressReleaseID=10119&lid=1>

aware of the great responsibility such a project implied. The collector who had approached us would be offering the drawing through Christie's during the Exceptional Sale auction.



Hackatao, *Hack of a Bear*, 2020-21, digital artwork
(Courtesy of Hackatao)

We went on to decide that we would revive the bear in the Metaverse dimension - as we wanted to grant it a new-found digital quality through augmented reality. In order to pursue this, we would develop and model our Hackatao version in 3D to then animate it. The *Hack of a Bear* project was curated by Eleonora Brizi and supported by Noah Davis - Post War and Contemporary Art Specialist at Christie's New York, as well as Colborn Bell - Founder of the Museum of Crypto Art and Shivani Mitra, Director and Art Historian at MOCA.

Such a project demanded a great amount of time mostly dedicated to the study of Leonardo da Vinci's history, research and techniques. We spent many months producing our own, digital version of the bear, its 'digital companion'. While making it, we were eager to understand what the Old Master intended to convey when he realized this small drawing, which is so elegantly represented. Indeed, we had no intention to create a mere digital replica of his work. *Hack of a Bear* therefore became an incredibly

fascinating journey across the centuries and an invaluable opportunity to rediscover the art of a great Master. Throughout the project, we almost felt we were constantly hazarding the disclosure of some secrets from the past, as well as assembling puzzles of the future.

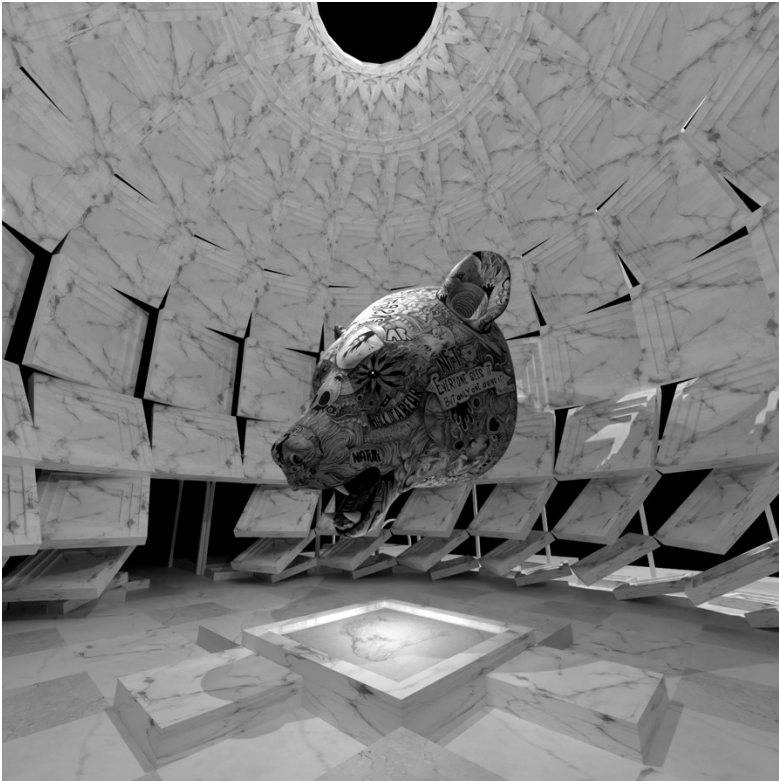
Process

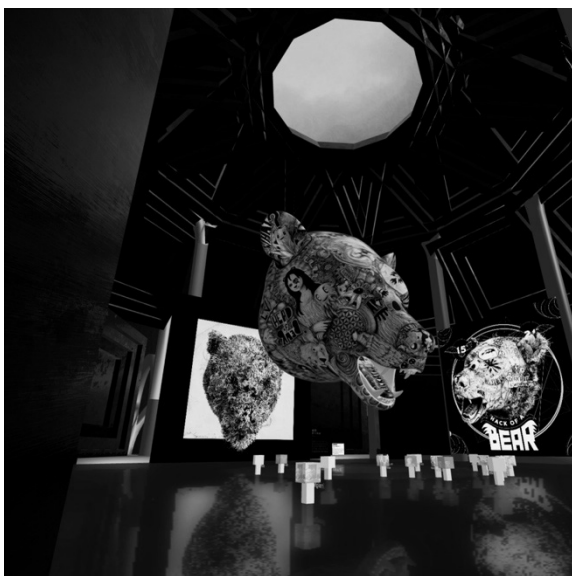
When we firstly approached the work, our interest lied in understanding Leonardo da Vinci's multiple areas of expertise and therefore study him as an artist, an architect and as well as a scientist. Legally, we were free to reinterpret the image from the original drawing and we were also granted permission (by the collector and Christie's) to scan it and produce the augmented reality feature. The two pieces are now forever connected - which can also be considered the most romantic side of this project.

From an executive point of view, we worked on iPad and Adobe Fresco, which greatly helped in optimizing and solving various shortcomings, as we could fluidly move through and around the drawing and make sure that all the references were in place - in a web of graphite compositions. We sought to obtain a realistic graffiti effect and to then transfer the drawings onto a three-dimensional model using mapping. The next stage would be synchronization between Leonardo's physical drawing and our animated digital loop.

When *Hack of a Bear* was exhibited at Christie's London, users could activate the augmented reality function, scan Leonardo Da Vinci's physical artwork and witness the awakening of the roaring bear on their smartphone screens. Through this project, we wished to achieve a new, immaterial dimension to the original drawing. A dimension which also featured realistic texture movements and effects, as well as natural manifestations that echoed the wind that brushed the bear's hair, or the water, which ran through the bear's skin and fur. Via an ad hoc app (Aria), Da Vinci's work could thenceforth come into life with its fur undulating and ruffling in its virtual, now-natural environment. Its head could move, while its mouth could open wide, letting the viewer enter its jaws.

Hack of a Bear therefore became a global and multidisciplinary homage to Leonardo, as we introduced generative elements that celebrated the artist's broad studies in water-movement and dynamics.





Hackatao, *Hack of a Bear*, 2020-21, digital artwork.
(Courtesy of Hackatao)