

THE EMERGENCE AND DEVELOPMENT OF DIGITAL ART IN TURKEY



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## **ABSTRACT**

### **THE EMERGENCE AND DEVELOPMENT OF DIGITAL ART IN TURKEY**

Digital art involves the types of art where the output is digital, the process of producing the artwork or project requires technological tools, or the subject itself is digital. This dissertation, titled "The Emergence and Development of Digital Art in Turkey", examines digital art as an artistic genre in a chronological manner, first approaching the history of Digital Art in a broad perspective and then focusing on Turkey in particular. The art forms of the increasingly more digital world first emerged in Turkey at the beginning of the 20th century. Its influence first spread in mediums such as digital painting or photography and later expanded into others. In this context, the dissertation examines the trends that influenced digital art, the changes in viewpoints on art after the invention of the camera, and reviews the current day state of digital art, before identifying digital artists in Turkey and their works.

Another subject that the dissertation takes into consideration is NFTs, a new branch of digital art, aiming to compile information and to determine the current state of NFTs in Turkey. The study examines the roots of digital art, after which it leans into the subjects of digitalization and digital art. A brief history of Modern Art in Turkey precedes the main section focusing on the evolution of digital art in Turkey, its artists and their productions.

*Keywords: Art History, Digital Art, New Media*

## ÖZET

### TÜRKİYE’DE DİJİTAL SANATIN OLUŞUMU VE GELİŞİMİ

Dijital sanat, üretimlerin dijital olduğu, eser ya da projenin üretilmesi sürecinin teknolojik araçlar gerektirdiği veya sanatın konusunun dijital olduğu sanat türlerini içermektedir. Sanatın bir formu olan dijital sanatı kronolojik bir şekilde ele alan “Türkiye’de Dijital Sanatın Oluşumu ve Gelişimi” başlıklı bu tez, Dijital Sanatın tarihini geniş bir perspektifte ele alarak, sonra Türkiye’ye odaklanmaktadır. Dijitalleşen dünyanın sanat formları, 20. yüzyılın başlarında Türkiye’yi etkisi altına almıştır. Bu etki, dijital resim veya fotoğraf gibi alanlarda başlayarak diğer alanlara doğru genişlemiştir. Bu bağlamda tez, dijital sanatın etki altında kaldığı akımları, fotoğraf makinesinin bulunmasıyla sanata olan bakış açısının değişmesini, günümüzde geldiği noktayı ele aldıktan sonra özelde Türkiye’deki sanatçıları ve üretimlerini tespit etmeyi amaçlamaktadır.

Tezin dikkate aldığı bir diğer nokta da dijital sanatın yeni bir alanı olan NFT hakkındaki bilgileri derlemek ve Türkiye’de durumu tespit etmektir. Çalışma dijital sanatın köklerini ele almakta, ardından da dijitalleşme ve dijital sanat konusuna eğilmektedir. Türkiye’de Modern Sanat’ın kısa bir tarihçesi verildikten sonra Türkiye’de dijital sanatın evrimine, sanatçılara ve üretimlerine odaklanılmaktadır.

*Anahtar Sözcükler: Sanat Tarihi, Dijital Sanat, Yeni Medya*

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## 1. INTRODUCTION

1839, the year when the camera was invented, became an important shifting point in the history of art. Digital Art is also identified as an important theoretical and practical revolution that fundamentally transformed the forms of artistic production. The term Digital Art is generally used to describe works that use digital technology in the production or exhibition of artworks. The origin of the Digital Age<sup>1</sup> is usually dated back to a period approximating between the 1950s and 1970s (Digital Art, n.d.). This period would see some artists use new technologies to produce progressive works of art. In many periods in the history of art, television, the personal computer<sup>2</sup>, visual and audio software technologies, and the internet have been technological advances that artists have used and still use to produce their works. Thus, some artists have started to utilize modern tools to create new means of self-expression. Although Digital Art cannot yet be defined as a separate art movement or form of art production on its own, as new technologies continue to rapidly develop, it transforms not only society but, with it, art itself. Today, Digital Art continues to be an important alternative means of production.

Initially, Digital Art described an interdisciplinary method of production between artists, engineers and scientists who explored the links between art and technology (Orrghen, 2010, p.127 & Klein, 1990). As artists discovered new technologies, they used this new means of production and demanded the viewers to reflect on the digital age and its impact on society.

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<sup>1</sup> Also defined as the Information Age (Borkovich&Noah, 2014, s.17).

<sup>2</sup> PC (personal computer).

Digital art has created a field that opens up the use of new and progressive technological tools as opposed to traditional art production tools. Some artists paint with pixels instead of paint, and digitally produce images and collages on computers and tablets instead of using paper. Instead of working on a two-dimensional surface, some even create three-dimensional drawings using screens, projections and VR technology.

Ultimately, digital art has caused and continues to cause major shifts in the production, distribution and presentation of art. Some digital art productions may require a conventional gallery or museum space as they require complex and powerful hardware, but generally, digital artworks can be viewed on television screens, monitors, tablets and mobile phones that have computer functionality. Easy accessibility over the internet through tools like social media has created the opportunity for some artists to utilize mass resources to produce their works and more easily reach a massive audience. This phenomenon has built careers for some artists, while also creating opportunities for them to become independent from commercial institutions such as galleries. A more complete understanding of digital art will only be possible for us so long as we continue to examine its relationship to technology and contemporary art, how these works of art are created, and the inner workings of digital artist (Wands, 2006, p.11).

Written in line with all this emerging information, this thesis, titled “The Emergence and Development of Digital Art in Turkey” aims to examine digital art, which is a form of art, in its historical perspective. In this context, the dissertation examines the trends that influenced digital art, the changes in viewpoints on art after the invention of the camera, and reviews the current day state of digital art, before identifying digital artists in Turkey and their works.

Another aim of the dissertation is to provide some information regarding NFTs, a new branch of digital art. In this respect, both the presence of NFTs in the virtual world and the contribution of the audience and the artist are briefly mentioned.

A product of the modern age, digital art is still a developing field. With the onset of the Information Age, which began with the 21st century, the consciousness of the individual has turned into a universal consciousness. The emerging new information system is a virtual structure, and the concept of a "digital reality" created via computer technology points to a design (Baranyi, et al., 2021, p.226). Images are real, yet at the same time virtual.

The merging of technology and art is not new. What is new is the creation of art using technology and the emergence of new styles as the roles change. The digital age has increased the artist's possibilities, changed their materials, their understanding of art. This multidisciplinary structure has also changed the habits of the audience. The audience is now more active and has started to find a place for itself in virtual reality, becoming compatible with the new world. Digital art has become a part of daily life. The first chapter of the thesis aims to examine these issues. The second part, the origins of digital art in the context of the periods between 1950-1970 and 1970-2000 are examined, touching upon artists who have been present in every step of the history of art and brought us closer to the digital world, and their works.

The third chapter makes a distinction between digitalization and digital art. The effects of social media, of the pandemic, of technological developments in the computer world are examined in terms of digitalization. Digital Art, a sub-heading of the third chapter, follows and documents these effects within the period of 2000-2015, as well as 2015 to the present day. These effects are examined through a look at different groups. After this point, the study examines the changing art world, the artists'

compatibility with technology, and the changing and transforming cultural and artistic approaches.

The fourth chapter exhibits the modernization process of art in Turkey through its historical, economic, and cultural conditions. The fifth chapter evaluates the emergence of the digital age in Turkey through information from various sources. By looking at digital art through the lens of other fields, the study looks at thoughts about the emerging virtual reality and virtual world. This includes opinions from professionals from Turkey with expertise in this field.

The methods used for the thesis besides literature review include information collection through art tours, online communication, digitized events, virtual biennials, virtual auctions, virtual museum tours, and as well as interviews with professionals. The thesis utilizes artists who focus on digital art production primarily for their careers as examples. In other words, the thesis examines Turkish artists who see the digital medium as an end rather than a tool.

## 2. THE HISTORY OF DIGITAL ART

Digital art refers, in essence, to a type of art that involves any graphic image or digital image formats produced through a computer or similar hardware (Şenül, 2006, p.77). This broad definition also includes conventional disciplines such as kinetic sculpture, computer-based design, and architecture that utilize computers or similar hardware. Digital art can be said to be the final art form of post-modernism. In the context of the evolution of “Digital Art”, we must also consider 20th century avant garde types and movements in art such as animation, which involves names like Walt Disney, collage, which is a medium suggested by Pablo Picasso and Georges Braque, the ready-made, which was invented by Marcel Duchamp, assemblage, which was also created by the Cubists and later developed by Jean Dubuffet, and Conceptual Art, which involved names such as Edward Kienholz and Yves Klein. Additionally, the installation art of figures like Joseph Beuys, Performance Art, which is exemplified by Allan Kaprow, and Video Art creations of artists such as Andy Warhol, Peter Campus, Bill Viola and Nam June Paik all have an important place in the development of digital art. “Digital Art” has a highly revolutionary potential today, and the applications of artificial intelligence which are increasing day by day are slowly taking us towards complete artistic independence. Yetişkin makes this distinction regarding the subject: “One of the most fundamental factors that allow for a distinction between contemporary art and new media art is not the technologies used in art production and management, but the techniques.” (Yetişkin, 2022, p. 31).

### 2.1. The Influence of Printmaking and Photography

As seen in the artwork “Young Nude”, there are two important production tools that form the foundation of digital art: printmaking and photography. It is useful to

briefly mention these two production tools, as they have an important place in the history of Digital Art. Printmaking is thought to exist since the 1st century A.D. and has influenced – in terms of reproducing images that exist in nature or creating new images – not only designers or publishers but artists as well. Artists have carried out many experiments as part of the production process wherein the ink is carried from one surface and onto another.

Engraving has an important place in the history of art, both as a production technique and as a facilitating tool for people to access works of art and literature. In the 15th century, engraving was used to create prints of certain texts (Biblical or Buddhist texts) and pictures, and later gradually turned into an artistic medium in itself. Wood printing uses the same process as engravings, cutting out the negative spaces on a surface, leaving the lines and shapes desired to appear on the print. Japanese artists in particular used wooden blocks to create “ukiyo-e” (floating world) prints in the mid 17th century (Figures 1 and 2)



**Figure 1.** Jacques Villon, Maternite, 1952, engraving, 50 x 32.5 cm.  
[https://www.plazzart.com/en\\_US/buy/post-war-modern-art/jacques-villon-maternite-gravure-originale-signee-470513](https://www.plazzart.com/en_US/buy/post-war-modern-art/jacques-villon-maternite-gravure-originale-signee-470513)



**Figure 2.** Hokusai Katsushika, "Kanagawa Okinami Ura" (The Great Wave off Kanagawa), Ukiyo-e from the series "Fugaku Sanjūrokkei (Mount Fuji)", 1826-1833. [https://tr.wikipedia.org/wiki/Otuz\\_Alt%C4%B1\\_Fuji\\_Da%C4%9F%C4%B1\\_Manzar as%C4%B1\\_\(Hokusai\)](https://tr.wikipedia.org/wiki/Otuz_Alt%C4%B1_Fuji_Da%C4%9F%C4%B1_Manzar_as%C4%B1_(Hokusai))

Engravings and linocut prints exhibit a similar level of quality. The different aspect of linocut printing of the 20th century is the use of linoleum sheets instead of wooden blocks. Additionally, as the surface of the linoleum is smooth, it leaves behind a rough texture. Linocut printing is suitable for those who are new to printmaking due to its relatively low cost of materials and ease of learning. Another technique, the collagraph, can be produced without a printing machine. Instead of treating the surface itself, pieces of fabric, plants or plastic are brought together on a surface. The collagraph exhibits a wide range of possibilities in terms of the expression of complex textures and subtle gestures (Hill, 2018) (Figures 3 and 4).



**Figure 3.** Henri Matisse, "Dors, Dormeuse aux Longs Cils (Varyant IV) ("Sleep, Sleeper with the Long Eyelashes (Varyant IV)), 1944, linocut print in black ink on white Rives wove paper. <https://www.windsorfineart.com/henri-matisse>



**Figure 4.** Wangechi Mutu, Second Born, 2013, Collagraph print. <https://zanebennettgallery.com/artists/wangechi-mutu/>

Engraving is the oldest form of intaglio printmaking and one of the most difficult to execute. Unlike relief printing, it involves making cuts or grooves on a plate, covering the plate with ink, and wiping the surface so that the ink stays only in the grooves. As the cutouts are made by carving into the plate by hand, it is one of the most difficult printmaking methods to master. There are different production methods according to the cutting technique (all grouped under the term “intaglio”, from Italian). Etching, for example, involves a metal plate covered with a thin, “wax-like” layer and the pattern is drawn onto the plate with a needle. Then the back of the plate is coated with a varnish and the plate is dipped in an acid bath (Figures 5 and 6).

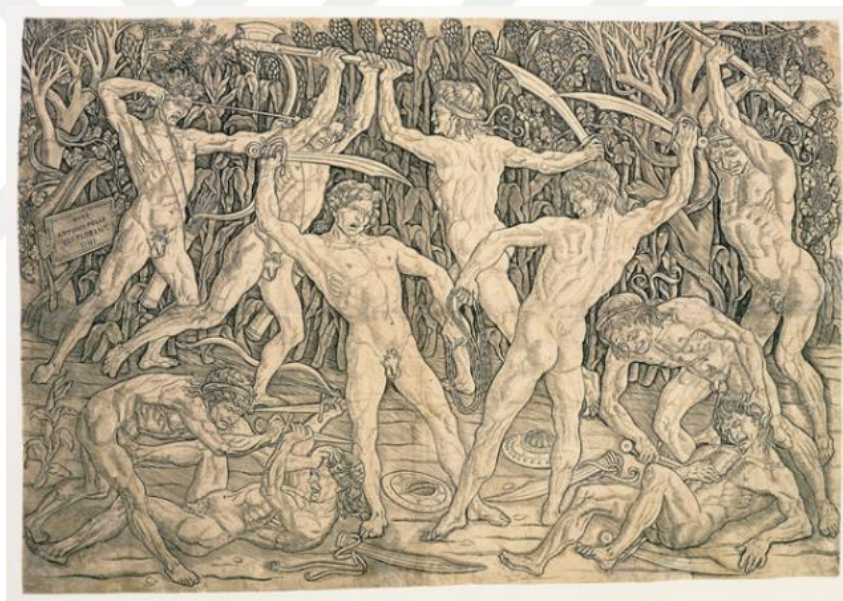


**Figure 5.** Antonio Pollaiuolo, Battle of Nudes, engraving, 39.3 cm x 57.9 cm, approx.1489.

[https://commons.wikimedia.org/wiki/File:Antonio\\_Pollaiuolo\\_-\\_Battle\\_of\\_the\\_Nudes\\_-\\_Google\\_Art\\_Project\\_%28CAH0xbSFjSpKkg%29.jpg](https://commons.wikimedia.org/wiki/File:Antonio_Pollaiuolo_-_Battle_of_the_Nudes_-_Google_Art_Project_%28CAH0xbSFjSpKkg%29.jpg)



**Figure 6.** Rembrandt van Rijn, Saint Jerome Reading in the Wilderness, 1634.  
Etching on paper, 11.2 x 9.1 cm.

<https://www.gallery.ca/magazine/your-collection/at-the-ngc/two-etchings-by-rembrandt-and-the-art-of-being-human>

Invented in the late-19th century, the aquatint technique focuses on shapes rather than lines. This term is used because of the technique's visual qualities, which are akin to those of watercolor. The technique produces color planes when the plate is inked and printed. Another commonly used technique is monotype printing. True to its name, monotypes only produce a single impression. Monotype tends to be preferred by beginners as it is a simple process which does not require a printing press (Figure 7).



**Figure 7.** Mary Cassatt, *The Fitting*, 1890-1891, drypoint and aquatint, 43.8 x 30.5 cm, Brooklyn Museum, <https://www.brooklynmuseum.org/opencollection/objects/475>

Lithography involves a process that depends on the immiscibility of water and oil. The surface of a stone is covered with sand or similar powder, the stone is wetted, and an acidic solution is applied over the entire surface. After the solution is rinsed and the stone has dried, a substance called “gum arabic” is applied to the edges of the stone so that the image can be drawn on it. Lastly, screen-printing, of which *Young Nude* is an example, is a technique that bears mentioning. It involves printing not directly from the surface of a block or plate, but through a template instead. This method allows artists and designers to achieve detailed images quickly and is widely used in the fashion and advertising industries. Historically, Pop-Art artists such as Andy Warhol and Roy Lichtenstein preferred technique for their artworks (Gompertz, 2012; p.245-265) (Figure 8).



**Figure 8.** Henri de Toulouse-Lautrec, Invitation à une exposition, 1898.

Lithograph. 267 x 218 mm.

<https://www.christies.com/features/Collecting-Guide-The-posters-of-Henri-de-Toulouse-Lautrec-10873-1.aspx>

Photography, which played a crucial role in the emergence of digital art, has seen rapid advancements despite its shorter history compared to printmaking. Over a period of only nearly two centuries, it has evolved from the Camera Obscura to digital cameras and, later, to a feature of smartphones. The foundations of photography are built on the Optical and scientific work of the Arab scientist Ibn al-Haytham (Alhazen) in the 11th century. Especially the Kitāb al-Manāẓir; (The Book of Optics) which has survived to this day through its Latin editions, had great influence on the development of perspective and photography, especially during the Renaissance.

At the time, it was not possible to record images in a dark room—they only could reflect an image on a surface upside down, much like the working principle of the eye. This is also called pinhole photography. It was only in the 17th century that the dark

room (or the camera obscura) could be made small enough to be carried easily and that lenses could be used to focus the light.

Photography in the modern sense emerged in France in the 1830s. Joseph Nicéphore Niépce used a dark room and a plate covered with bitumen, which he then exposed to light, to record for the first time an image that did not disappear (Picture 9).



**Figure 9.** The first successful permanent photograph, created by Nicéphore Niépce in 1827 in Saint-Loup-de-Varennnes: A Window View at Le Gras (Saône-et-Loire, Bourgogne, Fransa).

[https://tr.wikipedia.org/wiki/Nic%C3%A9phore\\_Niepce#/media/Dosya:View\\_from\\_the\\_Window\\_at\\_Le\\_Gras,\\_Joseph\\_Nic%C3%A9phore\\_Ni%C3%A9pce.jpg](https://tr.wikipedia.org/wiki/Nic%C3%A9phore_Niepce#/media/Dosya:View_from_the_Window_at_Le_Gras,_Joseph_Nic%C3%A9phore_Ni%C3%A9pce.jpg)

Niépce's experiment influenced another inventor, Louis Daguerre, which led to their collaboration. The result was the daguerreotype: as forerunner to the current day cameras. Daguerre coated a copper plate with silver and exposed it to iodine vapor before exposing it to light. This method was widely used until it was replaced by emulsion plates in the late 1850s.

Emulsion plates or wet plates were both cheaper and had a shorter exposure time. Thus, they became attractive for portraiture and war photography. There are two main types of emulsions: Ambrotype and tintype. While the former uses a glass plate, the latter uses tin plate.

In the 1870s, Richard Maddox produced dry gelatin plates that closely matched wet plates in speed and quality. These dry plates allowed for more freedom for photographers as they could be stored more easily. Hand-held cameras emerged while exposure times became shorter and the first cameras with mechanical shutters were developed. Meanwhile, George Eastman founded the Kodak company in the 1880s and invented the flexible roll film. With this development, photographs could now be taken not only by the wealthy and professionals, but by the public. The cameras produced by the Kodak company were the first cameras affordable by the average person. In the 1930s, photographers such as Henri-Cartier Bresson began to shoot images of everyday life instead of fictional scenes and staged moments, and photojournalists adopted and used this style of photography throughout World War II (Figures 10 and 11).



**Figure 10.** Henri Cartier-Bresson, Autoportrait au stand de tir (Self-portrait at the Shooting Range), 1930, <https://loeildelaphotographie.com/en/fondation-henri-cartier-bresson-pearls-from-the-archives-pp-2-pp-dd/>



**Figure 11.** W. Eugene Smith, *The Pacific War: 1942-1945*,  
<https://www.magnumphotos.com/newsroom/pacific-war-1942-1945/>

During the same period, the Polaroid Model 95 introduced a chemical process by which the film developed inside the camera in less than a minute. This was an expensive camera, but nevertheless attracted public attention with its ability to produce snapshots. By the mid-1960s, the availability of a large variety of models caused the prices to drop to amounts affordable to more people.

In the mid-1950s, the brand Asahi (later renamed Pentax) introduced the Asahiflex, and Nikon released the Nikon F. These were SLR type cameras, and the Nikon F also allowed the use of interchangeable lenses and accessories. Compact cameras were introduced in the late 1970s and early 1980s. These cameras calculated the shutter speed, aperture setting, and focal length, allowing photographers to concentrate on the composition alone.

Ultimately, the 1980s and 1990s saw numerous manufacturers work on cameras that captured and recorded images electronically. Cameras that used digital media instead of film emerged. In 1991, Kodak produced the first digital camera, and followed by Canon, Nikon, Pentax and other manufacturers who offered advanced digital SLR (DSLR) cameras.

## **2.2. Digital Art: 1950-1970**

When the early examples of 'Digital Art' emerged in the 1950s, many art critics questioned whether these works were really art. Throughout its evolutionary process, "Digital Art" was criticized in terms of its meaning, style and form. However, as technology advanced, the works of artists who created digital art became more and more accepted in the art world. Today, the use of the term 'Digital Art' and digital art being a subject in universities is the clearest example of its adoption as medium. Moreover, some artworks involve a professional production process, such as John Gerrard's 2017 piece, "Western Flag (Spindletop Texas)" (Figure 12). The artwork displays the Lucas Gusher site in Texas, Spindletop, which in 1901 became the world's first major oil reserve and is today a wasteland. The artwork involved the digital recreation of the area in a simulation. A flagpole was erected in the center of the area, which billowed a flag made out of pressurized black smoke. The computer-generated Spindletop is simulated parallel to the same field in Texas throughout the year, with the days getting longer and shorter with the seasons. The simulation is indefinite, with no beginning or end, and is run live by a software which calculates each frame of the animation in real time (Gerard, n.d.).



**Figure 12.** John Gerrard, Western Flag (Spindletop/Texas), 2017, installation.  
<http://www.johngerrard.net/western-flag-spindletop-texas-2017.html>

A pioneering figure, German artist Manfred Mohr's 2007 artwork *P-1271c* is an important example of digital art that bears references to art history (Figure 13). The 2000s are the history of Mohr's images showing movement in a blatant way, and the viewer can see the movements of a cube at any time. This period, during which the colors are chosen randomly by the software, clearly conveys the forms and the relationships between them. On the other hand, Manfred Mohr's concreteness can be detected in his non-disguising of computers. The computers are placed on the floor, while the artwork is displayed on wall-mounted screens. The exposed computer is perceived as a clear reflection of its being an instrument of the artwork on display. Screens have become the canvases of our age (Arapoğlu, 2020).



**Figure 13.** Manfred Mohr, P-1271c, 2007.  
[https://www.borusancontemporary.com/tr/blog-manfred-mohr-sanat-tarihinde-dijital-perspektif\\_915](https://www.borusancontemporary.com/tr/blog-manfred-mohr-sanat-tarihinde-dijital-perspektif_915)

Looking at John Lansdown's black and white photographic print from the 1970s, we see two dancers depicted as silhouettes (Figure 14). Inside the black silhouette are small white computer-generated stick-figure dancers. Black versions of these stick-figures are dotted around the outside of the silhouette and at the top of the image. The artwork is an early example of computer-based imagery (Lansdown, n.d.). Meanwhile, Jean-Pierre Hébert's "Vent Noir II" (1989) is one of the earliest examples of a drawing created digitally (Figure 15). The artwork involved calculations done with the computers of the period and produced instructions that directed the printer to draw the desired geometry (Hébert, n.d.).



**Figure 14.** John Lansdown, Photograph, circa 1970s, 38.4cm x 30cm.  
<https://collections.vam.ac.uk/item/O499540/photograph-lansdown-john>

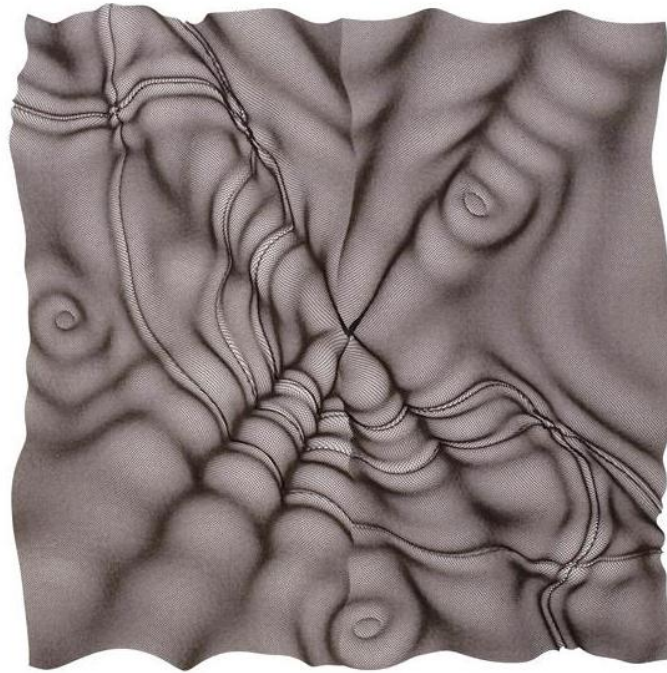


**Figure 15.** Jean-Pierre Hebert, Vent Noir II, (1989),  
Pen and ink.

<http://www.jeanpierrehebert.com/4s.html>

Another notable figure was Ronald "Ron" Davis, an American artist known for geometric abstraction, abstract illusionism, lyrical abstraction, and 3-dimensional (3D) computer graphics. His work titled "Brown with String" (Picture 16) is another early example.



**Figure 16.** Ronald Davis, Brown with String, 1982, acrylic and wire on  
canvas, 86x251 cm.

[http://irondavis.com/a\\_art/a80\\_ptg/a8c\\_splatter\\_ptgs/p0685r\\_brown-string.html](http://irondavis.com/a_art/a80_ptg/a8c_splatter_ptgs/p0685r_brown-string.html)

SArtists first began experimenting with computers in the 1950s, and the first exhibition of computer-based artworks, titled *Computer-Generated Pictures*, was held at the Howard Wise Gallery in New York (Noll, 2016, p.232- 239). The exhibition featured works of artists like A. Michael Noll and Béla Julesz. None of the paintings were sold and the show received very little press. However, the *New York Times* ran a detailed and impressive article about the exhibition (Figure 17).



**Figure 17.** Noll & Julesz, *Computer-Generated Pictures*, 1965. <http://dada.compart-bremen.de/item/exhibition/172>

*Cybernetic Serendipity*, one of the earliest large-scale exhibitions of Digital Art, was held in 1968 at the Institute of Contemporary Arts in London (MacGregor, 2002, p.11-13). Most of the artworks produced in this exhibition were graphics-based and involved geometric forms in random combinations (Figure 18).

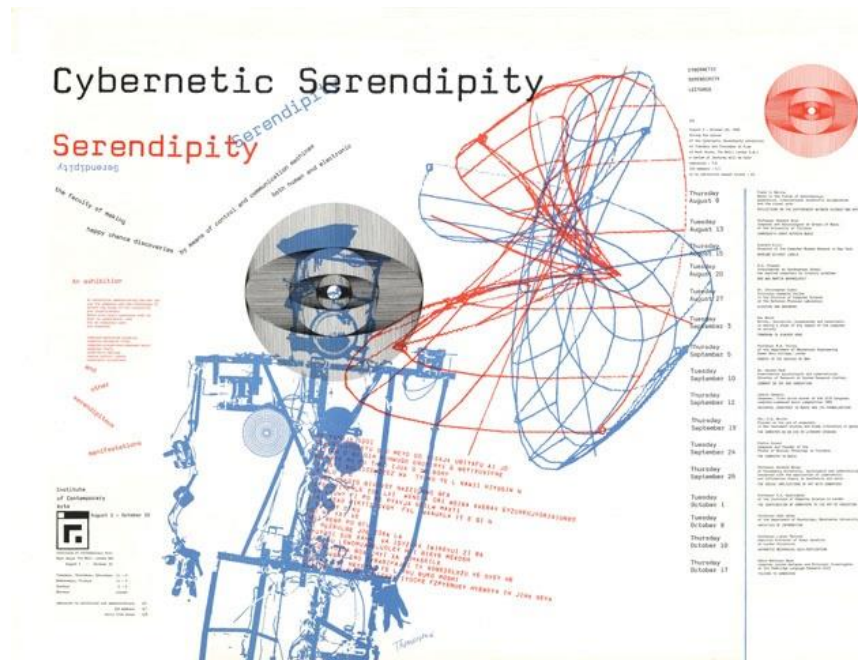


**Figure 18.** Cybernetic Serendipity, Exhibition Poster, London Institute of Contemporary Arts, 1968. <https://archive.ica.art/whats-on/cybernetic-serendipity-documentation/>

In 1967, Robert Rauschenberg and Robert Whitman, together with engineers Billy Klüver and Fred Waldhauer founded a collective. They named it EAT (Experiments in Art and Technology). Its mission was to create co-operation between the arts and ever-evolving technology. This collaboration led to installations and performances that involved innovative electronic systems for the time, using electrical circuits, video projections, wireless audio projections, and Doppler sonar devices. Most of these works cannot truly be called digital art due to the relative outdatedness of the technology at the time. Unlike art movements or production methods that rejected technological advances or stayed distant, however, the members of the EAT group were the pioneers of a form of art production that embraced and explored them (Figure 19).

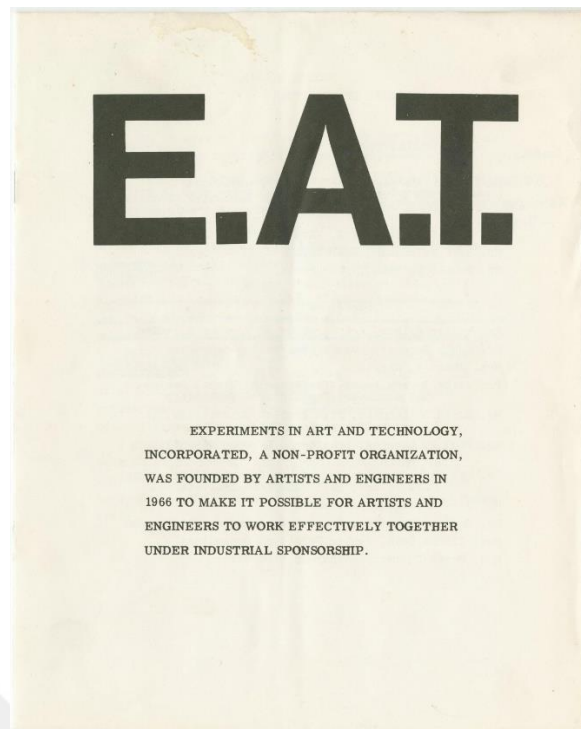


**Figure 20:** The Experiments in Art and Technology group brochure, circa 1966.  
Robert Rauschenberg and EAT.  
<https://www.rauschenbergfoundation.org/art/archive/eat-booklet-rauschenbergs-edits>

The experimental work of EAT demonstrated an unprecedented interdisciplinarity between artists and technology. This interdisciplinarity was previously seen in the Dada movement in the avant-garde period and the Fluxus movement in the neo-avant-garde period. Conceptual Art, Performance Art, experimental music, and video art also made great theoretical and practical contributions to the revolutionary digital art of the 1960s.

What art history accepts as the first digital artwork was created in the 1960s at the Bell Labs, the scientific research company where EAT founder Billy Klüver worked. In their 1966 work *Young Nude*, computer-based graphic designers Kenneth C. Knowlton and Leon Harmon, converted the photograph of a young naked woman into an image made up of computer pixels, creating a depiction of one of the oldest

subjects in art history, the naked female body, in one of the most important artistic movements of the 20th century. (Lynch, 2021, p.25) (Figure 20).



**Figure 20.** Leon Harmon & Ken Knowlton, *Computer Nude (Studies in Perception I)*, 1967, screen-print, Collection Buffalo AKG Art Museum.  
<https://collections.vam.ac.uk/item/O239963/studies-in-perception-i-print-harmon-leon/>

After a brief history of printmaking and the camera, which form the basis of 'Digital Art', we can now return to the development of digital art. After EAT, artists who created conceptually oriented works started to take advantage of the opportunities provided by the constantly developing new technologies for their artistic creations. In 1969, Allan Kaprow created *Hello*, a video happening, in which a group of participants interacted through television screens. This work was a thirty-minute experimental television program featuring six artists. Five television cameras and twenty-seven monitors connected four remote locations over a closed-circuit television network. The monitors talked to each other while people dispatched to various locations said words such as "Hello, I see you" on camera. Kaprow directed the proceedings in the control room at the studio. The event examined the nature of "communication" and Kaprow

called attention to the connections made between real people by metaphorically short-circuiting the television network (Stiles & Shanken, 2000, 89). We can see that, by the 1970s, a group of artists had started to work using televisions, recording equipment and network resources provided by newly developed computers (Figure 21). With enough attention, video can be used as a tool to eliminate the imposing aspects of television—the obligation to watch programs ordered by others (Bozkurt, 2005, 92).



**Figure 21.** Allan Kaprow, *Hello*, 1969, Interactive video-happening.  
<http://www.medienkunstnetz.de/works/hello-kaprow/>

### 2.3. Digital Art: 1970-2000

The term “The Electronic Super Highway” was coined by the Korean-American artist Nam June Paik, who is hailed as the father of video art, in his 1974 article *Media Planning for the Postindustrial Society: The 21<sup>st</sup> Century is now only 26 years away* (Paik, 1974). Paik used the term to describe the possibility of bringing people from different geographies and social roots together through shared experiences (Paik, 1974).

This idea of communication at a global scale was realized with the emergence and spread of mobile phones and the Internet. In the 1970s, the Apple II computer

model made the technological breakthrough that allowed color graphics to be rendered on a personal computer screen for the first time. In 1979, the modem<sup>3</sup> enabled digital signals to be transmitted over telephone lines, thus paving the way for data transfer and internet use.

An important development in the history of Digital Art was the introduction of the light pen or stylus pen in the 1970s. This was a development that provided flexibility and allowed a user to move and juxtapose elements on a computer monitor. World-famous artists such as David Hockney and Richard Hamilton have experimented with this technology (Picture 22).

“Digital Art” encompasses not only images created on a computer screen, but also the forms of art production that utilize computer technology. Harold Cohen develops his own computer programs to create abstract illustrations and colors them by hand. Computer programs are also used to control the movement of kinetic sculptures (Figure 23).



**Figure 22.** David Hockney, *Untitled, 582* (2010). iPad Drawing.  
<https://news.artnet.com/art-world/david-hockney-windows-book-1716369>

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<sup>3</sup> Modem, by definition, is a combination of the words "Modulator" and "Demodulator". A dialer or Modem is a device that connects computers to the public network and connects a computer to a remote computer (Wikipedia).



**Figure 23.** Harold Cohen, The first color image created by AARON, 1995, Computer Museum, Boston, MA. <https://computerhistory.org/blog/harold-cohen-and-aaron-a-40-year-collaboration/>

As technology and computer software developed, the possibilities for digital art continued to grow. The Copy Art Movement, which started in the United States, featured artists such as Lieve Prins, Jurgen O. Olbrich and Bruno Munari and greatly proliferated digital-based art production methods in the decade of 1976-1986. Moreover, the introduction of inkjet printers in 1976 enabled artists to produce giclee<sup>4</sup> prints of their works much more easily. Artists such as Jean Mathiaut, Philippe Jeantet, Jean-Pierre Garrault, and Daniel Cabanis have also experimented with flatbed copies, image processing, video integration, and digital graphics.

Computer-based animation developed significantly after 1980, and the resulting aesthetic images based on the bright color and pixel formula had a significant influence

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<sup>4</sup> The word giclée is derived from the French word “gicleur” (to squirt, to spray) and was first used by Jack Duganne in 1991. The purpose of the use of the word is to distinguish this type of printing from the applications in the commercial printing sector, and in the 2000s, the word began to take place increasingly in the work tags with the definition of "giclée printing". Giclée is used to describe digital high-quality fine art prints made with inkjet printers.

on artists' creations. Graphics software advanced and programs such as Adobe Photoshop and Illustrator became more commonly available, and thus began the era of design software. Additionally, as graphic design tools such as Quantel Paintbox emerged, artists began to explore and exploit these new creative resources. Nam June Paik's 1984 satellite installation, *Good Morning, Mr. Orwell* was broadcast live internationally, and set an important example in proving the mass accessibility of digital art and of the term "electronic superhighway" (Figure 24).



**Figure 24.** Nam June Paik, *Good Morning, Mr. Orwell*, 1984, on-air-installation.  
<https://www.thecollector.com/nam-june-paik-artist/>

In the 1980s and 1990s, "Digital Art" started to create interactive spaces that placed the viewer and the artist at the intersection between the real and the virtual worlds. Artists focused on transforming images via computer software. So, companies such as Adobe developed vector art software and easy-to-use artistic programs such as Adobe Illustrator in 1982. These are among the programs still used by artists to create digital art. The digital manipulation of photographs with software such as Photoshop has also led to the emergence of a new generation of contemporary artists like Andreas Gursky and Jeff Wall. And in an international context, the artist group Dumb Type, for

example, which was founded in Japan in the 1980s, began to create installations using music, dance, theater, video, and photography, which immerse the viewers completely. The group created their first show to represent the idea of how technology reveals a dark matter in people's daily lives, and its members trained in a variety of disciplines including visual arts, theatre, dance, architecture, musical composition, and computer programming (Dumb Type, n.d.).

Postmodernist architects such as Frank O. Gehry developed the Deconstructivism movement as an avant-garde movement with a kind of anti-Euclidean geometry by using computer software developed for the aviation industry (Shastri, 2017, p.10391). This form of 3D digital art is on display in creations such as the Guggenheim Museum in Bilbao. On the other hand, advancements in hardware have also affected the creative industry. Many artists now use Apple products and focus on the iPad and similar touch-screen technologies that make computer images more accessible (Figure 25).



**Figure 25.** Frank Gehry, Bilbao Guggenheim Museum, Bilbao.  
[https://tr.wikipedia.org/wiki/Guggenheim\\_M%C3%BCzesi\\_\(Bilbao\)](https://tr.wikipedia.org/wiki/Guggenheim_M%C3%BCzesi_(Bilbao))

With the widespread rise of the internet in the 1990s, digital art has become easier and more accessible for both artists and audiences. By combining images, video and audio files, artists have begun to explore and implement ways in which the Internet can be used as an appropriate aesthetic tool. For example, Olia Lialina's film *My Boyfriend Came Back from the War* (1996), in which the viewers must activate a series of interfaces to create an emotional and engaging narrative, has marked a major turning point.

Some critics have separated the spread of the Internet from the development of digital art and coined a new artistic trend: Internet art or "net.art" (Kutup, 2010, p.14). However, as the invention and development of new technologies continue, it would not be wrong to consider digital art, which has a much wider scope, as the main category and to place net.art under its umbrella.

Examples such as the Nasty Nets collective show that the internet allows artists from different countries and across different social classes to interact, collaborate and exchange ideas in a way that was previously impossible. While most art movements in the history of art largely tended to arise from geographical proximity and social interaction, the artists of the 1990s were evidently able to initiate intercontinental artistic trends.

As the importance of the Internet increased in social life and became the fundamental part of society, relationships, and most importantly commerce, artists began to use the Internet as a platform with which to undertake their creative goals. In his 2008 artwork *Pseudo Event*, Justin Kemp used a guest's photographs at a ribbon-cutting ceremony in a collage, using online resources to create a means of artistic expression. Some artists produce online works underline and expose the sense of

disconnection-from-reality created by the use of the internet and the proliferation of personalities created by social media. The early period works of artists like Marisa Olson, who used the term post-internet to name the post-digital art era, pointed to the performative nature of creating online identities. Artists such as Olson, Gene McHugh, and Petra Cortright used blogs and video sharing sites such as YouTube as artistic tools. These platforms are inherently online and are increasingly becoming an integral part of everyday life.



### **3. DISTINCTION BETWEEN DIGITALIZATION AND DIGITAL ART**

#### **3.1 Digitalization**

Digitalization describes the use of digital technologies to change a business model and provide opportunities that generate new revenues and values. Digitalization using digitalized information is used for the process facilitating workflows and making processes easier and more efficient. The way to achieve success is to adopt digital culture, especially in the technology-oriented world of the current day. Digitization and digitalization are different concepts. Digitization is the conversion of printed files and documents into digital files and documents. The data and information remain the same, only accessibility and means of storage change. It is useful as important information is rendered easily accessible. Digitalization, however, is the name given to the strategy or process of using digital technologies that result in modifications that change the essence of business models. Digital art, as defined above, refers to a type of art that involves any graphic image or digital image formats created via a computer or similar hardware.

#### **3.2 Digital Art: From 2000 to Today**

Since the 2000s, touchscreens, smartphone apps and 3D printers have found their place among new tools for artistic production. In the era of digital technology, plastic arts use digital innovations to examine the modern world from a digital point of view. From an instrumental standpoint, digital technology can be seen as an extension of more traditional techniques. For example, in the context of photography, digital cameras allow us to take more risks—different compositions can be attempted, and the resulting images can be manipulated. In this respect, the work of Liam Fitzpatrick is a good

example. As smartphones become an extension of the outlook on nature or the city, new technologies have gotten in use in the name of performance. In essence, Performance Art does not need digital technologies. However, digital technologies are often used to enrich and modernize them. With a few computerized calculations, all perceptual processes can be transformed. A gesture can be turned into a picture, or an image can transform into written text. The movements of dancers can be used to generate sound with the use of sensors. Unlike a traditional approach, this is a method of expression that contemporary performance art is only beginning to explore.

Digital technologies have opened the way for new disciplines as well as expanding the realms of expression vis-à-vis traditional means of art production. Augmented reality, 3-D images, and other robotic practices are all created via computer technologies. Information technologies and related fields have provided artists with unique creative resources. Digital tools are used to create 3-D models that are not possible through traditional methods.

There are subcategories that fall within the broad definition of digital art. It would be beneficial to briefly go over them.

### **3.2.1 Art on Screen**

Many digital artworks are produced in a screen viewable format and therefore cannot exist without the related technology. For example, Nam June Paik's work titled *Good Morning, Mr. Orwell* (1984) is concerned with the nature of television communication. And today, an artwork uses YouTube or another internet service to examine the interactive nature of the internet. Ryan Trecartin, who put his video installation *A Family Finds Entertainment* (2004) on the web, is one example (Figure

26). Another example is Petra Cortright, who is known for her early use of animation graphics on vibrant YouTube videos (Figure 27).



**Figure 26.** Ryan Trecartin, *A Family Finds Entertainment*, 2004.  
<https://whitney.org/collection/works/27607>



**Figure 27.** Petra Cortright, *Running Neo-Geo Games Under Mame*, 2018.  
<https://digital.artplay.com/blogs/artists/petra-cortright-1>

### 3.2.2 Digital Sculpture

Digital art can also take a physical form and be exhibited in the form of a sculpture. Maurizio Bolognini's series *Programmed Machines* (1992-7) is cited as a work where the screens are hidden, and the viewer focuses on the physical properties of the machines themselves (Figure 28). Nam June Paik's *Electronic Superhighway: Continental U.S., Alaska, Hawaii* (1994) features numerous television screens, etc. (Figure 29). Trevor Paglen and Jacob Appelbaum's *Autonomy Cube* (2014) is both a sculpture and an open-access Wi-Fi hotspot (Figure 29).

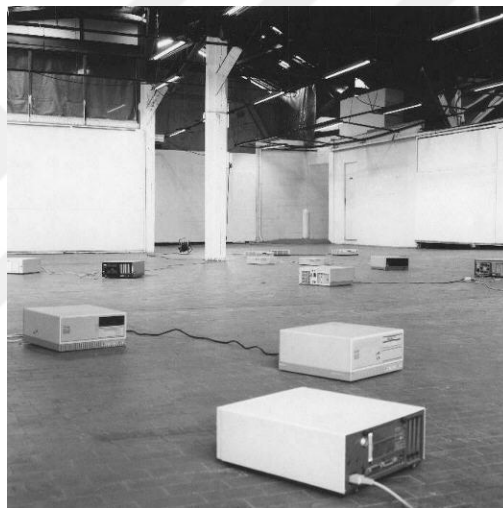


**Figure 28.** Maurizio Bolognini, *Programmed Machines*, 1992-7. <https://www.bolognini.org/intro.htm>



**Figure 29.** Nam June Paik, *Electronic Superhighway: Continental U.S., Alaska, Hawaii*, 1994. <https://americanart.si.edu/artwork/electronic-superhighway-continental-us-alaska-hawaii-71478>

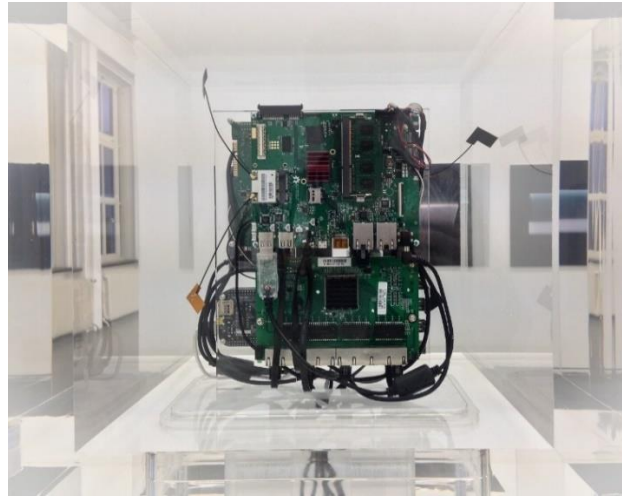


**Figure 30.** Trevor Paglen ve Jacob Appelbaum, Autonomy Cube, 2014.  
[https://en.wikipedia.org/wiki/Autonomy\\_Cube](https://en.wikipedia.org/wiki/Autonomy_Cube)

### 3.2.3 Interactive Digital Installations

A core element of digital art has always been interaction. As computers entered the installation art scene, interactive experiences in the virtual world began to emerge (Wands, 2006). One example is The Rain Room (2012), in which the digital art studio Random International created a simulation of a downpour. A mechanism detected the position of the members of the audience and prevented the rain from falling on those spots. Thus, a viewer could experience the rain without getting wet (Figure 31).



**Figure 31.** Random International, Rain Room, 2012.  
<https://www.moma.org/calendar/exhibitions/1352>

### 3.2.4 Computer Generated Images

When computers became publicly available, many artists started using basic programming systems. Frieder Nake's *Hommage à Paul Klee 13/9/65 Nr.2* (1965) is one of the earliest examples of art produced using a computer algorithm (Figure 32). Petra Cortright also uses software to produce images that can be printed as "digital pictures" on two-dimensional surfaces after they are produced (Figure 33). It is possible to cite Jeremy Blake's digital collages as examples in this context (Figure 34). Instead of producing his own images, Cory Archangel hacked the Super Mario video game and used the cloud graphics in the game to create his own work (Figure 35).

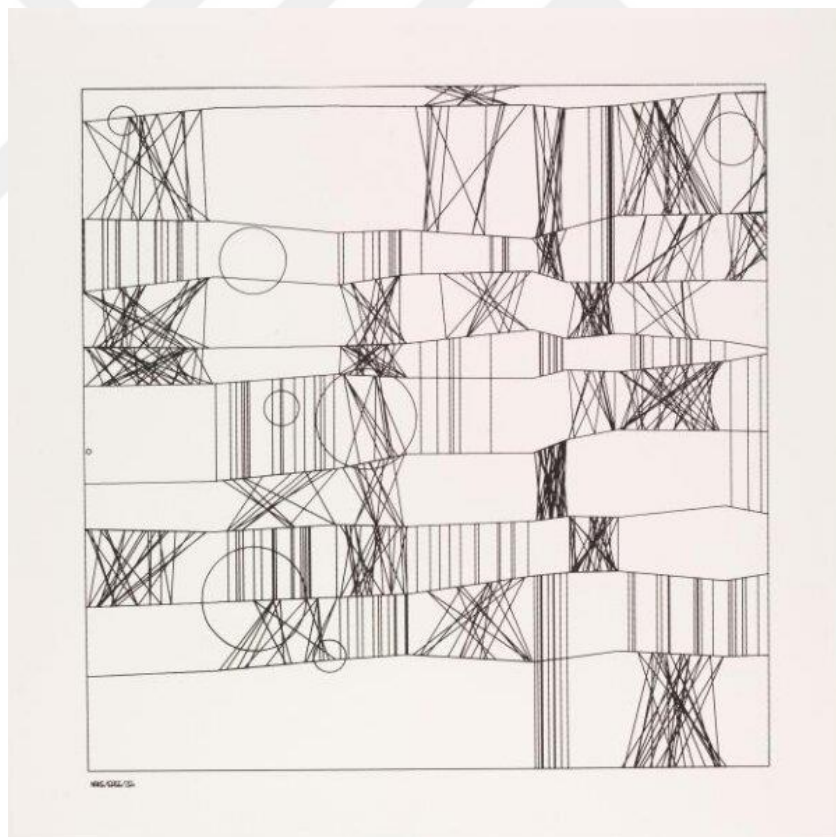


**Figure 32.** Frieder Nake, *Hommage à Paul Klee 13/9/65 Nr.2*, 1965.  
<https://collections.vam.ac.uk/item/O211685/hommage-a-paul-klee-13965-print-nake-frieder/hommage-%C3%A0-paul-klee-13965-print-nake-frieder/>



**Figure 33.** Petra Cortright, 15\_independentBUICKS.\$\$\$, 2015.  
[https://www.mutualart.com/Artwork/15\\_independentBUICKS----/F68A43D24CDED778](https://www.mutualart.com/Artwork/15_independentBUICKS----/F68A43D24CDED778)



**Figure 34.** Jeremy Blake, Sodium Family Values, 2005, digital C-print.  
<https://www.jeremyblakeestate.com/digital-prints>

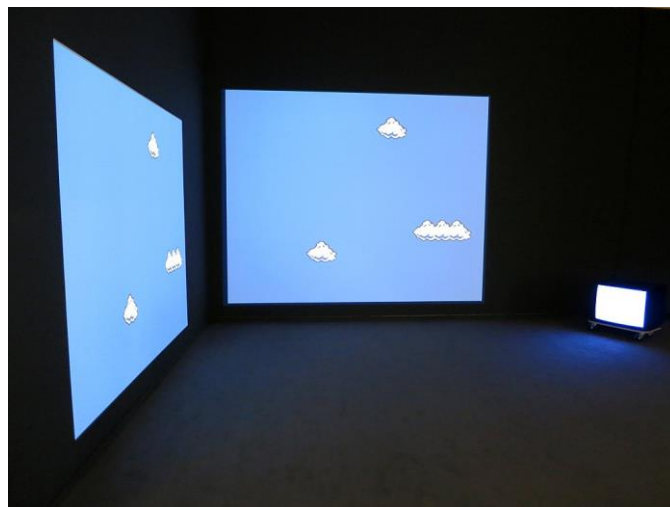


**Figure 35.** Cory Archangel, Super Mario Clouds, 2013.  
[https://en.wikipedia.org/wiki/Super\\_Mario\\_Clouds#/media/File:Super\\_Mario\\_Cloud\\_v2k3\\_\(9045882480\).jpg](https://en.wikipedia.org/wiki/Super_Mario_Clouds#/media/File:Super_Mario_Cloud_v2k3_(9045882480).jpg)

### 3.2.5 Internet as a Medium

The artists who use the internet in their works have opened their works to be viewed outside the traditional gallery space and reached a larger audience in an extremely economical way. While some artists can present their works to the sector outside galleries and museum representations via their personal websites, some use the internet itself as a tool. For example, Cao Fei created a universe as a work of art on Second Life, a virtual reality platform (Figure 36).

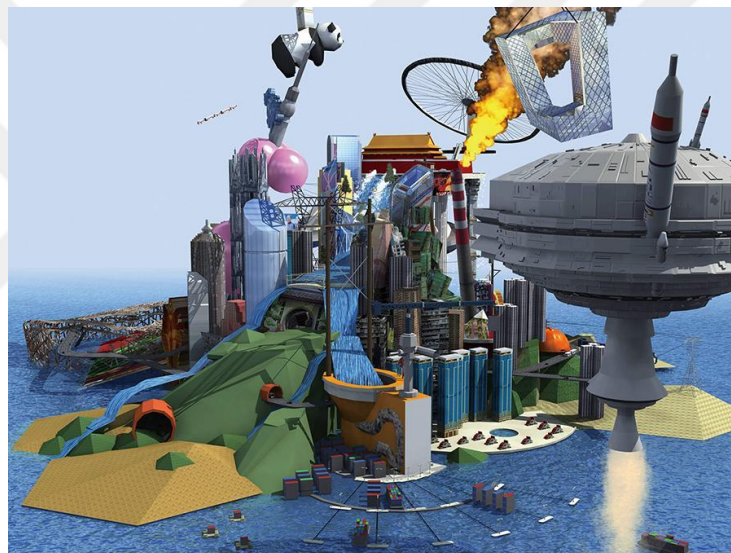


**Figure 36.** Cao Fei, *RMB City: A Second Life City Planning*, 2007, video still.  
<https://www.frieze.com/article/how-cao-fei-predicted-future>

### 3.3 On NFTs

An essential aspect of a work of art is that it is "unique", and recently “crypto art” appeared—at a first glance—as a method of adding value to digital-based artworks for a certain social class. The key feature of crypto art is that it makes digital files unique. Crypto art is not unduplicable, but NFTs (Non-fungible tokens) function as a special number assigned to an artwork. This number is kept in a database called the

blockchain, which sorts these numbers in a series of data blocks. Thus, NFTs are a type of blockchain technology that serves to register the unique instance of a digital file. By itself, it is not a technology used in the production of artworks (İkiz, 2022).

Blockchain handles the function of verifying that only one account can possess an NFT for a given period. The .jpeg file of an original artwork by a digital artist or the digital reproduction of a previously produced work cannot be sold to two people at once. However, a Pablo Picasso or Vincent Van Gogh print can be purchased in high resolution from a museum, and although this print is of very high quality, the artwork remains the property of the museum. What matters here is the concept of "value".

In art history, art is created in numerous genres and mediums, and this also applies to digital-based art. In this context, for example, "glitch art" is a very popular trend in digital art today. Crypto art appears to be a suitable platform for artists creating works forms such as motion graphic designs and interactive monitors that fall outside of the scope of conventional art. On the other hand, the collector Feride İkiz's observation regarding the trade of NFTs is important with regard to the extent of expansion in this field: "...My team and I examined the big data from the ETH blockchain from April 1st to the end of September 2021. [We came across] the fact that in late September 2021, about 20% of collectors owned 80% of NFTs (İkiz, 2022).

### **3.4. Artificial Intelligence**

Artificial intelligence (AI) is the name given to the ability of a digital computer or a computer-controlled robot to perform tasks associated with sentient beings. This term describes projects to develop systems with intellectual processes that are unique to humans, such as reasoning, discovering meaning, generalization, or the ability to

learn from past experiences. Since the emergence and development of the digital computer in the 1940s, computers have evidently been able to be programmed to perform very complex tasks. For example, computers can competently perform acts such as solving complex mathematical problems or playing chess. However, despite great advances in computer processing speeds and memory capacity, no program has yet been developed that reaches a human level which can handle tasks that require a great deal of quotidian knowledge. Some software, on the other hand, has reached a level of performance akin to those of specialists and professionals for certain tasks. In this respect, artificial intelligence is used in the field of medicine, in search engines to access information and in applications such as voice or handwriting recognition. Before examining the artificial intelligence and art relationship, it would be beneficial to briefly go over the pioneering software in this field.

DALL·E and DALL-E 2 are OpenAI's deep learning models, developed to create digital images through language, through what is called "prompts". DALL-E uses a modified version of GPT-3 to create images. In 2022, OpenAI publicly announced DALL-E 2, which was designed to create more realistic images at higher resolutions that can combine concepts, attributes, and styles. The name of the program is derived from the names of the Pixar character WALL-E and the painter Salvador Dalí. Midjourney is a generative artificial intelligence software created by the San Francisco-based research lab of the same name. Midjourney produces images through written language, much like OpenAI's DALL-E.

Meanwhile, Stable Diffusion is a deep learning program that was released in 2022. It is primarily used to create detailed images conditioned through text prompts. It was developed by the start-up Stability AI in collaboration with numerous academic researchers and non-profit organizations.

The software is a diffusion model—similar to a kind of deep generative neural network. Its code and model weights have been released publicly and can also run on modest hardware with a GPU with at least 8 GB of VRAM.

It is evident that artificial intelligence has been influencing art production for quite some time. Some artists use artificial intelligence, machine learning, and algorithms to create works of art. Artificial intelligence art is the name given to artworks created using intelligent algorithms. We went over the history of the use of computers in artwork creation in the previous chapter. Artists have been creating their works using computers since the 1950s. Frieder Nake, Manfred Mohr and many other artists have used mainframes and algorithms to create visual artworks. It would be useful to point out some artists who use artificial intelligence here.

Sougwen Chung produces works using artificial intelligence and robots and is among the first artists that come to mind in this niche. Her work questions the communication between humans and machines, using robots or herself as an interface between individuals or between the individual and the machine. Memo Akten is a London-based artificial intelligence artist who uses artificial intelligence to reflect how humans make sense of the world.

Another important figure in artificial intelligence art is Mario Klingemann. He creates artwork using code and algorithms. Helena Sarin is another AI artist and software engineer who creates work using the latest technologies. Artist and programmer Gene Kogan is a pioneering educator in the field of creative artificial intelligence, in addition to his artistic work. Mike Tyka, a Google engineer, has helped popularize artificial intelligence as an artistic medium (AIArtists, n.d.).

#### **4. THE ARTS AND CULTURE SCENE IN TURKEY IN THE 20<sup>TH</sup> AND 21<sup>ST</sup> CENTURIES**

Turkish modern art should be evaluated within the political, economic, and cultural context of the world in which it emerged. Doing this chronologically is beyond the purview of this study. Instead, this study touches on certain basic events, facts, people, and some artists and artworks within the scope of art history.

The early period of the Turkish Republic was a period of societal modernization, and state-oriented initiatives of the era had the same goal. Art had also assumed the role of helping realize these reforms and helping the public adopt them as part of this policy. Artworks dealing with subjects like heroism, courage and independence should be examined both in terms of aesthetics and of the newly established republic.

Turkish modern art moves closer to the international art scene after 1945. Within this framework, both national and international social and economic transformations transform daily life and the intellectual scene. Although Turkey exhibited a model that was closed off in terms of production and consumption, it did not remain indifferent to the events around the world. Artistic trends of this era should be viewed as Turkey's efforts to find its place in the contemporary world. The founding of a new Turkish republic, building modern cities and the rapid urbanization that took place during this phase, as well as opening many new museums and increasing support for the arts are all important developments that had great influence on art.

Important developments in art after the "Soldier Painters" and the 1914 Generation are the formation of art groups such as the Independent Painters and Sculptors Association in 1929, the foundation of Group D in 1933, and the opening of the Istanbul Painting and Sculpture Museum in 1937. The establishment of Halkevleri (community centers, lit. People's Houses) in 1932 reveals a desire for the state to

manage the policies regarding culture and art. Discussions in Turkish modern art regarding abstract and figurative trends begin in the late 1940s.

After the Second World War, the center of contemporary art moved from Paris to New York as the USA achieved political dominance in the West. Meanwhile, Turkey was accepted into the NATO and entered a cultural partnership with the USA. Opening up to the international cultural stage through media enabled many foreign artistic trends to arrive in Turkey. Among these trends, abstract art became the new most widespread form of expression.



**Figure 37.** Nejad Melih Devrim, Abstract Composition, 1947-1949, Oil on canvas, 237 x 304 cm, Istanbul Modern Art Museum Collection.  
<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=2513>

Nejad Devrim, Selim Turan and Fahrelnisa Zeid were the first artists to produce lyrical and geometric-abstract works (Figures 37, 38 and 39). At this point, it would be best to mention the Paris School. Paris, in the 1945-1960 period, had a multinational structure that revitalized contemporary painting. Abstract painters such as Nejad Melih

Devrim, Mübin Orhon, Selim Turan, Hakkı Anlı, Albert Bitran, and Fahr-el-Nissa Zeid were part of this structure. These Turkish abstract painters who lived in Paris during this period were often at the center of the Paris School and invited to contribute to important exhibitions.

Later, figures such as Nuri İyem, Ferruh Başağa, and Ömer Uluç, all members of the Tavanarası Grubu (lit. the Attic Group), which was founded in the early 1950s, turned to abstract painting in the 1960s (Figures 42, 43 and 44). This trend initially emerged outside the academy, but later found its place in the academic world through artists such as Sabri Berkel (Figure 45). This period also saw a trend towards non-state liberalization (Başkan, 2014) (Erden, 2012)



**Figure 38.** Selim Turan, Untitled, mixed media on paper, various sizes, Istanbul Modern Art Museum Collection.

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=2513>



**Figure 39.** Fahrelnissa Zeid, Break of the Atom and Vegetal Life, 1962, Oil on canvas, 210x540 cm., Yıldırım Family Collection  
<https://argonotlar.com/fahrelnissa-zeid-ic-dunyalarin-ressami/>



**Figure 40.** Nuri İyem, Soyut – Ölü Dağ (Abstract – Dead Mountain), 1956, 65x49, Oil on Canvas. <http://www.nuriiyem.com/eser/s129-149/>



**Figure 41.** Ferruh Başağa, Abstract Composition, 1962, oil on canvas, 49x59 cm.  
<http://maidekasapoglu.com/ferruh-basaga/>



**Figure 42.** Sabri Berkel, Abstract Composition, 1973, oil on canvas, 195.5x151 cm, Istanbul Modern Art Museum Collection.

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1192>



**Figure 43.** Ömer Uluç, 3 Erkek, 4 Kadın, Ziyaretçiler (3 Men, 4 Women, Visitors), 1989, mixed media on canvas, 180x235 cm, Istanbul Museum of Modern Art

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1061>

The 1960s were dominated by the US occupation of Vietnam and anti-war demonstrations. This period saw abstract trends and figurative expressions develop simultaneously in Turkish art. Nedim Günsür, Cihat Burak and Mehmet Gülerüz (Figures 44-45 and 46) are examples of figurative artists, Mübin Orhon, Abidin Elderoğlu and Adnan Çoker trended towards abstraction.

Television, which started broadcasting in Turkey in 1968, has been an influential part of social life. The effects of industrialization became palpable in the 1970s and the Arabesque culture emerged in Turkey. In addition, rural exodus to metropolitan cities and abroad increased greatly in these years. The 1970s were marked by events such as domestic right-wing and left-wing conflicts and the Cyprus Peace Operation, leading to years of tension. This led to the emergence of a Social Realist movement in this period. The works of Neşet Günel, Aliye Berger and Yüksel Arslan represent these trends (Eşkinat (ed.), 2011).

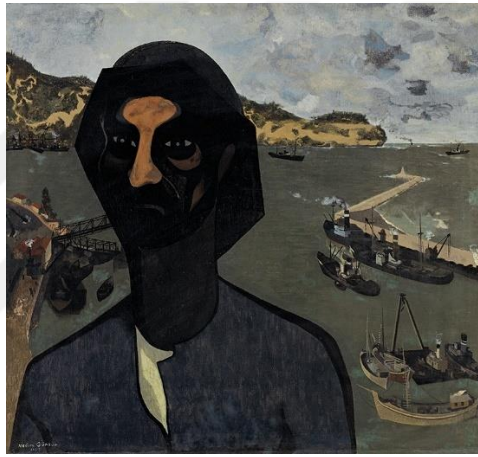


**Figure 44.** Nedim Günsür, Madenci (Miner), 1957, Oil on Canvas, 85x91.5 cm, Istanbul Modern Art Museum.  
<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=2507>

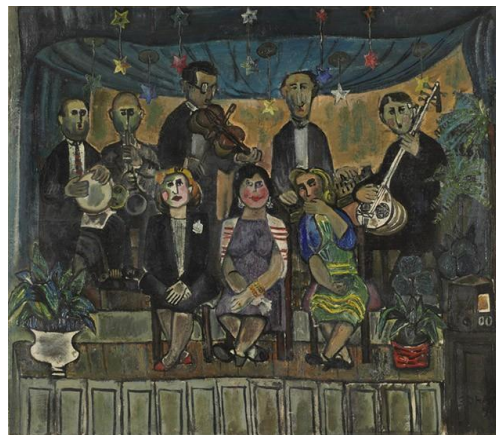


**Figure 45.** Cihat Burak, Saz Heyeti (The Band), 1956, Istanbul Museum of Modern Art Collection. <https://www.istanbulmodern.org/tr/resim-galerisi/sergi/cihat-burak-retrospektifi/32>

The 1980s and 1990s were a neo-liberal era in which modernity and conservatism became intertwined. The Coup of September 12th was the most severe coup in the history of the Republic of Turkey. However, due to the political and economic upheaval experienced since the latter half of the 1970s, it received high public support. Prime Minister Süleyman Demirel and his cabinet were dismissed, and the Turkish Grand National Assembly was dissolved. Associations and political parties dissolved, and political leaders got banned from public service. The 1961 Constitution was invalidated. The replacement constitution emphasized Atatürk's principles of Nationalism, Democracy, Secularism, the Social State and Constitutional State. The establishment of political parties was only allowed a year after the 1982 Constitution came into effect, and the electoral influence of smaller parties was eliminated by the introduction of an electoral threshold (Koçak, 2016: 4-5; Uyar, 2020: 88).

Anavatan Partisi, (*lit. The Motherland Party*) won the elections held in 1983 and came to power as a majority government. These election results proved pleasing to the public as the elections had been civil and legal. The party featured liberals, social democrats, conservatives, and nationalists (Ataman, 2012: 2). While the Prime Minister Turgut Özal emphasized that the 21<sup>st</sup> century would be the age of technology and information, he underlined that the service sector needed talented, capable, and knowledgeable people. Their major policy topics included education, public health, and technology. According to the government, the country would prosper with the import and use of high technology.

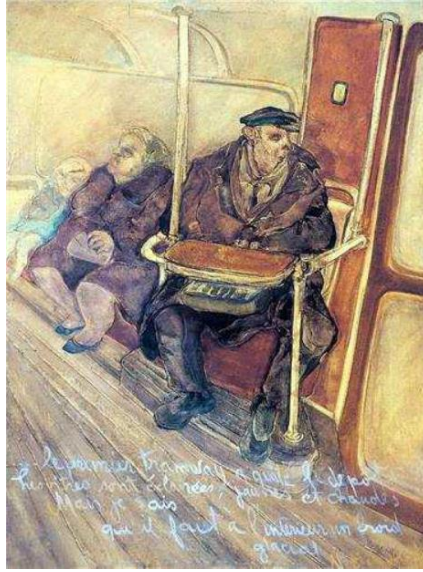


**Figure 46.** Mehmet Gülerüz, Otobüs Biletçisi (Bus Ticket Vendor), Oil on Canvas, 130x96cm, 1970. (Öztürk, 2019).

The 1990s was a period of technological resources, growth in imports, ease of travel, and an increasing public welfare. This period saw many works focused on identity and politics. Figures like İpek Duben, Bedri Baykam, Kutluğ Ataman, as well as Canan, Fikret Atay and Ferhat Özgür produced some exemplary works during this period (Figure 47,48,49,50,51 ve 52).



**Figure 47.** İpek Duben, Şerife 3 (1981), Şerife 2 (1981).  
<https://saltonline.org/tr/2386/ten-beden-ben-ipek-duben>

The artist İpek Duben opened her first exhibition “Şerife” in 1982, which exhibited an iconographic female identity. Here, the Turkish woman is depicted through reiterations within a series. Şerife represents the second generation of urban migration.

The tragic depiction of Şerife, portrayed as a hollow dress, represents a headless woman, that is, a woman without an identity or a mind. In a sense, she is deprived of personhood (Çarmıklı, 2016).



**Figure 48.** Bedri Baykam, Ingres, Gérôme, This is my Bath, 1987, Broken mirrors and mixed media on plywood, 202x860 cm, Private Collection.

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1195>

A reinterpretation of Jean Auguste Dominique Ingres's *The Turkish Bath* and Jean-Léon Gérôme's *La Grande Piscine de Brousse*, Bedri Baykam's "Ingres, Gérôme, This is my Bath" also featured the artist's own image. The piece could be viewed as an insider's response to or an appeal against to the depiction of bath and harem imagery by foreign painters who were not allowed to enter these places and thus exoticized them in their imagination, painting them from an orientalist perspective.



**Figure 49.** Kutluğ Ataman, Women Who Wear Wigs, 1999, Istanbul Modern Art Museum Collection.

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1190>

In his video-installation “Women Who Wear Wigs”, Kutluğ Ataman shows us four different women on four discrete screens placed side-by-side. The women in the videos talk about wearing wigs in order to change and rebuild their identities under pressure. The screens as a whole draw attention to the strict policies of identity in Turkey (Uzunoğlu, 2013, 14).



**Figure 50.** CANAN, *Acaib'ül Mahlukat II (Strange Creatures II)*, 2014, miniature on paper, ink and photography. 62 x 47.5 cm.  
<https://awarewomenartists.com/en/artiste/canan-senol/>

The 2000s were marked by the crash of two passenger planes into the New York World Trade Center towers and another plane crashing into the Pentagon in Washington D.C. on September 11th, 2001, in the USA. In Turkey, the decade witnessed works where artists problematized individual and social identities. (Amirsadeghi, 2010).

CANAN's work "Acaib'ül Mahlukat II" (Strange Creatures II) takes its name from Kazvine's 1595 literary work titled "Acaib'ül Mahlukat ve Garaib'ül Mevcudat" (Strange Creatures and Extraordinary Beings). The piece depicts animals in nature and fairy tale creatures such as the “simurg”, intertwined. The work takes after the

depictions of the simurg and some animals in “Falname”, “Adam and Eve’s Expulsion from Paradise” and “Solomon and Belkıs, Queen of Sheba”.



**Figure 51.** Fikret Atay, *Tinica*, 2004, video, 7' 32", *Istanbul Modern Art Museum Collection*. <https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1541>

In Fikret Atay's 2004 video titled "Tinica", a young man living in Batman is seen having turned an oil can, plastic bucket, metal rod and other garbage he found into a drum set and playing drums. After a while he stops and throws the drum set down the hill. There are no listeners except the slope connecting the mountains to the city center.



**Figure 52.** Ferhat Özgür, *Şarkı Söyleyebilirim (I Can Sing)*, 2008, video, 7', *Istanbul Modern Art Museum Collection*.

[https://www.istanbulmodern.org/tr/uyelik/genc-modern/ferhat-ozgur-sarki-soyleyebilirim\\_1545.html](https://www.istanbulmodern.org/tr/uyelik/genc-modern/ferhat-ozgur-sarki-soyleyebilirim_1545.html)

Built around the religious chant "Hallelujah", Ferhat Özgür's video titled "I Can Sing" (2008) finds a sexual form in playing a male voice in the form of a hymn/song from the mouth of a woman wearing a headscarf. Regarding the piece, Özgür stated: “The irony that the video conveys through the phrase “Hallelujah”, which is an expression of giving thanks during worship, in religious songs, hymns, and prayers, is a reference to the earthly life, love and existence, the reality of the power of arms, and its superiority in spite of humanity’s belief in the existence of God and a supreme 'love' in its infinite depth and truth” (Özgür, 2023).

In May 2013, the Gezi Park protests started as a collective popular uprising, which not only influenced politics, economy, and culture, but took art in a different direction as well. Issues such as identity, gender, politics, and history became the main themes of Turkish modern art in the 2000s. Figures such as Taner Ceylan, Nezaket Ekici, Ferhat Özgür and Selma Gürbüz are notable artists of this period (Figure 53,54 ve 55).

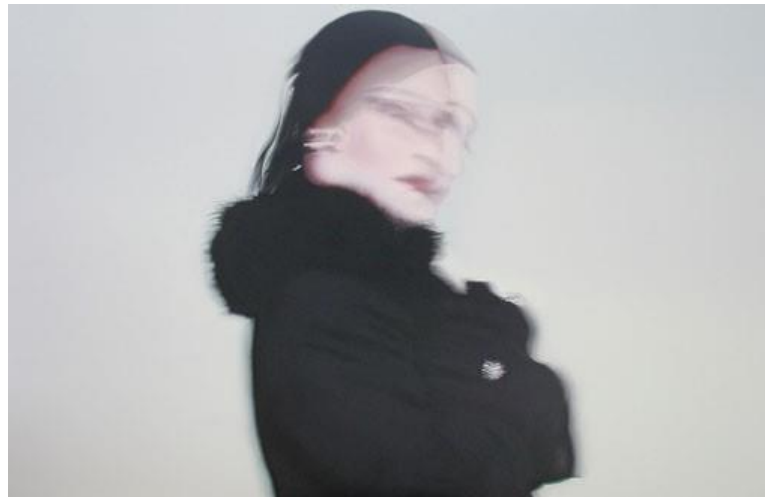


**Figure 53.** Taner Ceylan, Beyaz Fon Önünde Alp (Alp On A White Background), 2006, oil on canvas, 115x180 cm, Istanbul Modern Art Museum Collection.  
<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1038>



**Figure 54.** Nezaket Ekici, Parıldayan Herşey Altın Değildir Ama (Not All That Glitters Is Gold), 2014. [https://www.istanbulmodern.org/tr/etkinlikler/gecmis-etkinlikler/nezaket-ekici-performans-ve-soylesisi\\_1371.html](https://www.istanbulmodern.org/tr/etkinlikler/gecmis-etkinlikler/nezaket-ekici-performans-ve-soylesisi_1371.html)

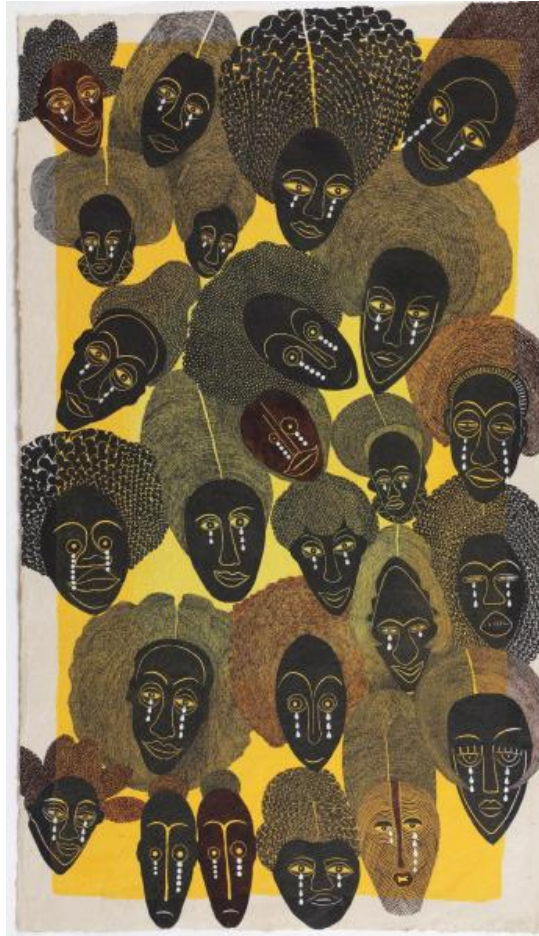


**Figure 55.** Selma Gürbüz, Birbirimize İyi Bakalım (Take Care Of Each Other), 2021. <https://vogue.com.tr/metropol/selma-gurbuz-dunya-diye-bir-yer-ile-istanbul-modernde>

While there were few institutions supporting contemporary art in Turkey in the 1990s, breakthroughs in the 1990s paved the way for great developments in the fields of art and culture in the 2000s. The influence of state support in the arts evident from the foundation of the Turkish Republic to the mid-1970s. The increase in the number of fine arts faculties and galleries in the 1960s and the increase in the number of collectors in the 1980s were important factors. The 90s was the era of faster communication and globalization of the art scene, and contemporary art trends could be closely followed through biennials and large-scale exhibitions. The 2000s became a period institutionalization of contemporary art in Turkey, which continues to this day.

## 5. ARTISTS WORKING IN THE FIELD OF DIGITAL ART IN TURKEY AND THEIR WORKS

The history of “Digital Art” in Turkey is relatively recent when compared to examples abroad. The emergence of digital art in Turkey dates back to the introduction of the internet into Turkey<sup>5</sup> and placing it in the latter half of the 1990s (Ertan, E., n.d.). After the proliferation of the Internet, the launch of departments of visual communication design in universities is considered a continuation of this process. Before this academic development, though, came the artistic efforts of pioneering artists such as Teoman Madra, whose work we will touch upon later. These artists not only used the computer technologies of the period, but also followed the pioneering intellectual and artistic efforts in the field of digital art in the 1950s and beyond. In addition, Nil Yalter, an artist of Turkish origin who lives and works in Paris, has also been produced multimedia art using computer graphics since the latter half of the 1990s – the material regarding Yalter will be mainly examined under the title of French Art. However, as we attempted to summarize in the previous chapter, the 1990s was a period where the preliminary steps of institutionalization took place and pointed to an era in which more and more artists and creative work emerged in this field. Another important factor in the history of digital art in Turkey was the launch of the International Istanbul Biennial in 1987, which has presented artworks that include newly developed technological tools and exhibition techniques and introduced different artists and their production styles and techniques in a global context to Turkey. In this context, it would be fitting to mention and examine artists and artworks who present early examples in this field.

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<sup>5</sup> The internet was first used in Turkey on April 12, 1993 (Internet in Turkey, n.d.).

Born in 1931, Teoman Madra is a photographer and multimedia artist. He is considered to have created some of the earliest examples of digital art in Turkey. Madra's works can be described as abstract images created by the light in a digital medium. Influenced by the art movement Fluxus and especially its intermedia approach, he made videos, installations, and sound installations (Higgins, 2001). Madra has been developing light tricks in front of the camera since the mid-1960s, which led to some examples of a kind of abstract photography (Kahraman, 2010). For many years Madra has been known for his abstract form experiments, in which he used photography and video techniques and featured avant-garde music works (Tansuğ, 1995).

The artist's early digital works with were done on the AMIGA computer, and later created online works and video artworks on PCs after 1998 (Madra, T. date not specified). While Madra uses technological tools and methods, he usually blends them with improvised jazz and experimental music genres. Madra cares about the simultaneous production of analog and digital works in both music and photography. His first exhibition took place at the Beyoğlu Art Gallery in 1964. Madra also took part in events such as the 1967 Paris Biennial, the 48th International Venice Biennale, the 2006 Mediterranean Countries Festival and the 2008 Amber Fest (Figures 56, 57, 58 and 59).



**Figure 56.** Teoman Madra, Selection of artworks inspired by light, 2011.  
<https://isea-archives.siggraph.org/art-events/teoman-madra-selection-of-artworks-inspired-by-light/>



**Figure 57.** Teoman Madra, Selection of artworks inspired by light, 2011.  
<https://isea-archives.siggraph.org/art-events/teoman-madra-selection-of-artworks-inspired-by-light/>



**Figure 58.** Teoman Madra, Selection of artworks inspired by light, 2011.  
<https://isea-archives.siggraph.org/art-events/teoman-madra-selection-of-artworks-inspired-by-light/>

Born in Ankara in 1956, artist Hamdi Telli won an award in a photography competition about “Turkey”, organized by the Turkish Ministry of Culture in 1974. After a while, Telli became interested in "Digital Art" alongside photography and taught a "Computer Graphics" course between 1987-1989 (a first in Turkey) at Mimar Sinan University, Faculty of Fine Arts. Telli still teaches photography and digital art in many public and private institutions and continues to create in these fields. Hamdi Telli has been producing digital art since 1987. His artistic work is centered on mathematics. Early on, the artist worked with photography like Madra, but later began creating works using binary code, which he argued was the basis of 'Digital Art' (Telli, 2021). (Telli, 2021). (Figures 59 and 60).

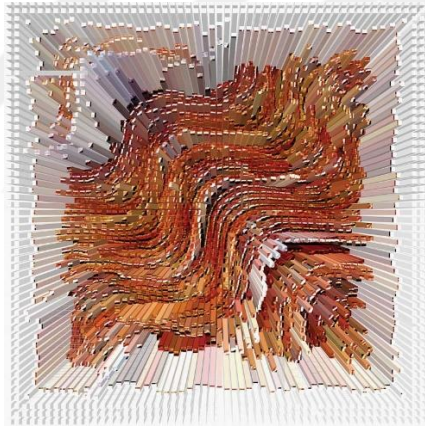


**Figure 59.** Hamdi Telli, 2002.

<https://kontrastdergi.com/hamdi-telli-sayilarin-sanati-sanatin-sayisali-27-sayi/>

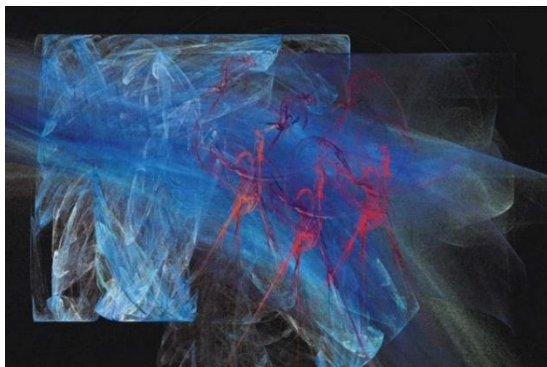


**Figure 60.** Hamdi Telli, 2006.

<https://kontrastdergi.com/hamdi-telli-sayilarin-sanati-sanatin-sayisali-27-sayi/>

Reha Bilir is another artist whose method involves processing his artwork and photographs digitally. In 2008, He won the Şinasi Barutçu Cup in 2008, and the Sami Güner Cup in 2009, both prestigious photography awards in Turkey. He has taught photography in more than 20 countries and opened photography exhibitions in more than 40. He was listed among the earliest Turkish photographers to make computer edits on photography in the publication titled "Turkish Photography after 1960", prepared by Güler Ertan in 2005 to coincide with Bilir's exhibition titled "Digital Frames" (Ertan). In the context of digital art, his works are notable for using techniques such as photo processing and installation (Figures 61 and 62).



**Figure 61.** Reha Bilir, Sonsuzluk (Infinity).  
<https://www.rehabilir.com/tr/FotografGalerisi>



**Figure 62.** Reha Bilir, Sonsuzluk (Infinity).  
<https://www.rehabilir.com/tr/FotografGalerisi>

Sadık Demiröz uses photography as a tool in its purest form. He makes it a principle to create with this tool without being stuck in its chemical or electronical boundaries. His approach prioritizes thought, which brings his work closer to conceptual art. In terms of technique, he produces works that are sometimes traditional and sometimes mixed-media (Figures 63 and 64).



**Figure 63.** Sadık Demiröz, Reflection of The Reality 2.  
<https://www.photoawards.com/winner/zoomOLD.php?eid=28910&comp=6&mc=50513&type=subcat&sub=Other&cat=Fine%20Art&level=pro&count=2>



**Figure 64.** Sadık Demiröz, Reflection of The Reality 2.  
<https://www.photoawards.com/winner/zoomOLD.php?eid=28910&comp=6&mc=50513&type=subcat&sub=Other&cat=Fine%20Art&level=pro&count=2>

Another important figure, Orhan Cem Çetin, mainly produces optics-based art. Desiring to go beyond photography as a mere recording device, the artist tries to expand the effect of the device using subjective touches. With his works, Çetin tries to make the invisible visible using the technical resources of his tools by playing with the scale of the images. Since his first exhibition, Familiar Things, which featured works he created using the paper negative painting technique he developed in 1988, he has participated in many exhibitions in Turkey and abroad. His 1993 series titled “Reincarnation” is the first digital photography series observed in the field of photography in Turkey (Çetin, n.d.). His works in this series involved digital scans of film photography, processing them through a computer and printing them on 35mm color reversal film using a Polaroid film device (Figures 65 ve 66).



**Figure 65.** Orhan Cem Çetin, Annane (Grandmother), from the Reincarnation series, 1993. <https://www.orhancemcetin.com/renkarnasyon?pgid=kzo89cp4-a4040a99-ef9a-4295-8588-55cd5631a4e6>

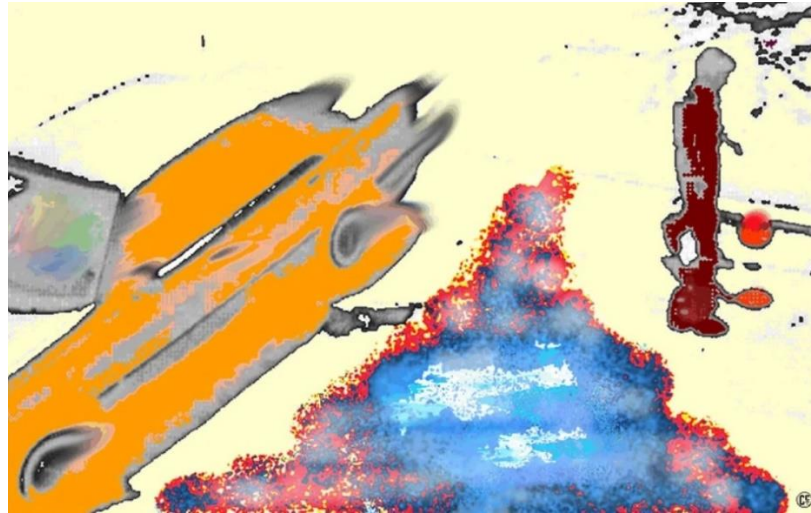


**Figure 66.** Orhan Cem Çetin, Untitled, from the Reincarnation series, 1993.  
<https://www.orhancemcetin.com/renkarnasyon?pgid=kzo89cp4-a4040a99-ef9a-4295-8588-55cd5631a4e6>

Renowned photographer Mehmet Turgut uses photo processing and printing techniques and utilizes code to create works about themes of virtual reality (Figures 67 and 68).



**Figure 67.** Mehmet Turgut, Out of Control, 2007.  
<https://www.deviantart.com/mehmeturgut/art/out-of-control-I-66836748>



**Figure 68.** Mehmet Turgut, Suicide, 2012.

<https://www.deviantart.com/mehmeturgut/art/out-of-control-I-66836748>

Sibel Avcı Tuğal graduated from the Istanbul Technical University with a B.S. in Electronics Engineering and continued to create art while working in the professional field. She has been working on graphic design, original illustrations and compositions using the computer since 1995. The artist has also been conducting academic research and mainly creating works in the field of "Digital Art" since 1995 (Avcı Tuğal, n.d.) Sibel Avcı Tuğal utilizes multimedia graphics, interactive multimedia, web design and digital painting, and creates contextual design and abstract works by using code in her artworks (Figure 69 and 70).

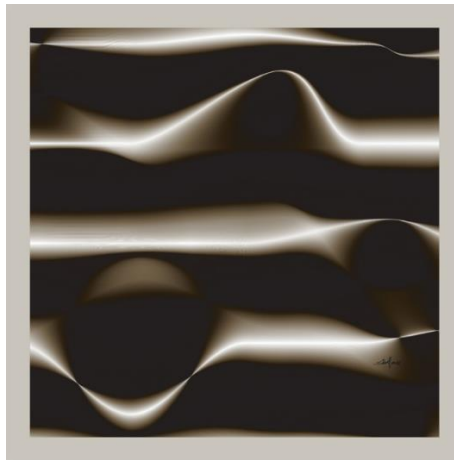


**Figure 69.** Sibel Avcı Tuğal, Resistance (Direniş), CGD, 90x90cm, Digital Diasac Print, 2018. <https://sibelavci.com/portfolio/>



**Figure 70.** Sibel Avcı Tuğal, Metallic Dance 4, CGD, 90x90cm, 2018.  
<https://sibelavci.com/portfolio/>

Ansen is a notable figure who creates sarcastic artwork using a multidisciplinary method. In addition to his three-dimensional works, he also produces digital art in which he deals with the themes of software, abstraction and artificial intelligence (Ansen, n.d.). (Figures 71 and 72).



**Figure 71.** Ansen, Racon..., Digital print-monoprint, 140 x 96 cm, 2005.  
<https://www.artxist.com/Sanatci-Cv/Ansen-/5>



**Figure 72.** Ansen, Miracle, Lambda-Monoprint, 251x122 cm, 2006.  
<https://www.artxist.com/Sanatci-Cv/Ansen-/5>

Hande Şekerciler is an artist especially known for her figurative sculptures. She also uses new technologies in her art. Her work combines classical forms with digital resources. She mainly produces works in the field of digital sculpture, touching on the themes of binary coding, abstraction, and design. Hande Şekerciler is also one half of an artistic duo with Arda Yalkın—a side project called ha:ar that aims at a new aesthetic

convergence in which they seek ways to incorporate digital technology into traditional art production (Figures 73 and 74).



**Figure 73.** Hande Şekerciler, from the Ecstasy Exhibition, 2021. <https://artdogistanbul.com/cermodern-ecstasy-ile-kapilarini-acti/>

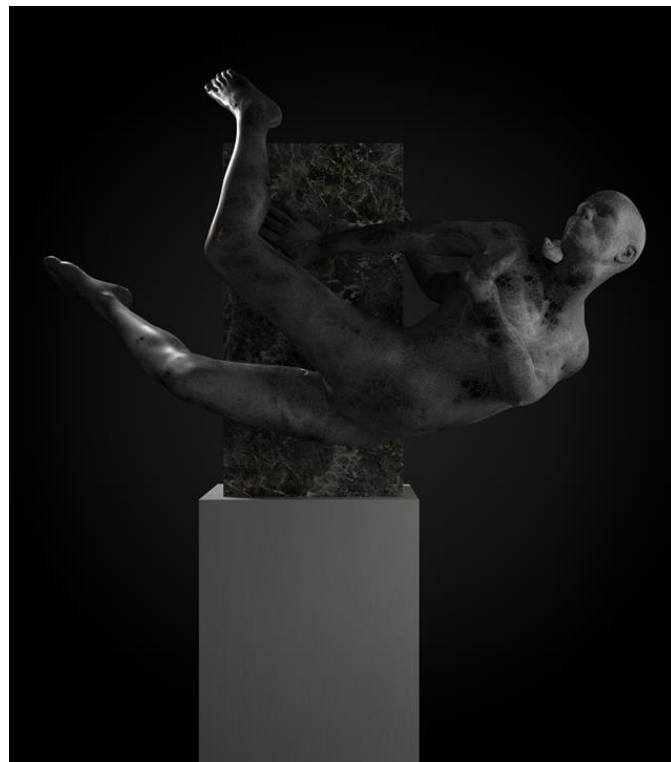


**Figure 74.** Hande Şekerciler, Ecstasy No:15, 82x55x48 cm, custom made chemical patina bronze, 2021. <https://artdogistanbul.com/cermodern-ecstasy-ile-kapilarini-acti/>

Haluk Akakçe is another artist working in digital art. He examines the relationship between humans and technology and explores the aesthetics of this relationship's potential to produce new forms and meanings in the field of art. His works consist of animated video projections, murals and sound installations that feature abstract and imaginative landscapes where biology, architecture, geometry and metaphysics coexist. The artist's works are high-resolution digital graphic images of representations based on the singularity of perceptual experience, where abstract forms create illusions, transforming or abstracting reality. Akakçe uses an eclectic set of aesthetic references alongside a semi-fractal expansive logic. These references include Celtic and Islamic architecture, Art Deco, science fiction, American comics, and contemporary fashion (Akakçe, n.d.). For example, in his work "The Birth of Art", hyper-real flowers move in a virtual world and both the visuals and the musical theme represent the speed of modern life, while the stones reflected on the digital flowers create an ambience of peace. Using the computer, the artist explores and expands the boundaries of traditional painting. His paintings, such as "Black on White and White on Black (The Fiction of an Isolated Object)" and "Blue and Black on White", are designed as minimal illustrations based on the flow of lines and the use of a limited color palette (Figures 75 and 76).



**Figure 75.** Haluk Akakçe, *The Birth of Art*, 2003, Single Channel video-projection, 4'. Istanbul Modern Art Museum Collection.

<https://www.istanbulmodern.org/en/collection/collection/5?t=3&id=1026>



**Figure 76.** Haluk Akakçe, Black on White and White on Black (The Fiction of an Isolated Object), 2003, Single Channel video-projection.  
<http://www.bugadacargnel.com/en/exhibitions/50093-haluk-akakce/works/241>

Kerem Sami Hünel works in video games and animation and is especially known for his animation titled “Kayıp Armağan” (The Lost Gift). He is also known for his video games such as İstanbul Kıyamet Vakti (lit. Doomsday İstanbul), Süper Can and Elementis, and a comic book work called Detective Mahir. The “Free World” series of illustrations used here were produced for a hybrid animated film project (Figures 77 and 78).



**Figure 77.** Kerem Sami Hünel, Free World, 2021.  
<https://www.artstation.com/artwork/A9n3LN>



**Figure 78.** Kerem Sami Hünel, Free World, 2021.  
<https://www.artstation.com/artwork/A9n3LN>

Candaş Şişman is a digital artist who creates projects with an ontological approach, which generally deal with the tension between organic and inorganic, such as his works *Metamorfoz*, *Edicisum*, *Flux*, *EFF-LUX*, *Nod*, *Oscillation*, *Noiseflor*, *SYNPhon*, *Patern of Possibilities*, *Sonicfield-01*, *RE-CONN-ACT*, *IPO-cle*, *Makromikro*, *Makrokozmos*, *CYCL*, *Transition*, *Centralized*, *Refraction* and *Isofield*. Şişman combines the mediums of installation, animation and music with themes like coding, interactivity and virtual reality. *Probability Pattern Version 2* uses a generative algorithm that randomly generates and selects new values and cells to reveal a random-relational pattern on the digital canvas. The model was derived from the accumulation of many possibilities through different time periods of experience, where the algorithm undertakes a performative process. When the time cycle ends, the system resets and restarts to create a new, unique pattern. The system was also combined with sounds specific to each pattern generated on the screen to create an auditory model (Şişman, n.d.). The audience is given the chance to observe hundreds of patterns in a loop and is invited to question probability, order, chaos and uncertainty. The project thus reminds us that we exist as a result of coincidences within a capillary system of possibilities (Figures 79 and 80).

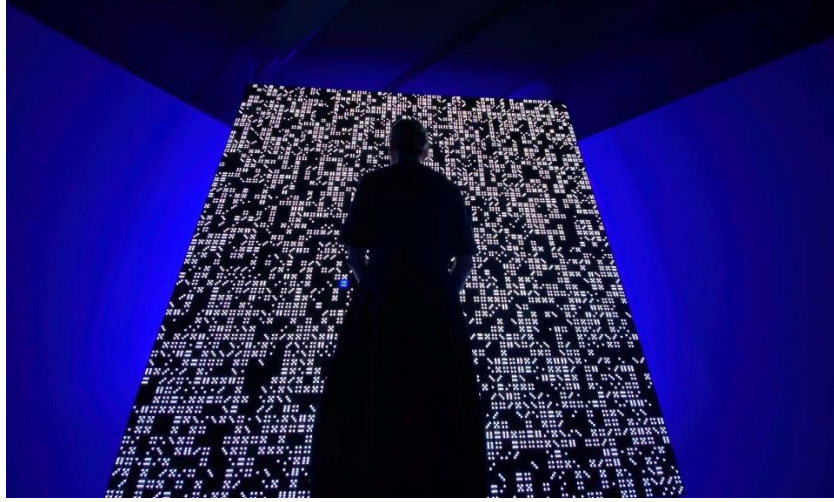


**Figure 79.** Candaş Şişman, Pattern of Possibility V2, 2022, installation, 224x224cm.  
<https://csismn.com/Patterns-of-Possibility-v2>



**Figure 80.** Candaş Şişman, Pattern of Possibility V2, 2022, installation, 224x224cm.  
<https://csismn.com/Patterns-of-Possibility-v2>

Refik Anadol is a world-renowned artist in the field of digital art. He creates his work with a historical approach using forms, techniques and themes such as artificial intelligence, algorithm, memory, reproduction, (Oğuzhan, 2020, 3). His notable works include Melting Memories (2018), Machine Hallucinations (2019), Quantum Memories (2020), Sense of Space (2021) and Renaissance Dreams: AI Cinema AI Cinema (2021).

Anadol's work questions what it means to be human in the age of artificial intelligence, with the challenges and possibilities that computing imposes on humanity. It explores how the perception and experience of time and space has radically changed in an age dominated by machines in our daily lives. The artist is interested in how the digital age and machine intelligence provide new aesthetic techniques to create environments that offer a dynamic sense of space. Located at the crossroads of art, science and technology, Anadol's site-specific three-dimensional data sculptures and paintings, live audiovisual performances and immersive installations take various virtual and physical forms (Anadol, n.d.) (Figures 81, 82 and 83).



**Figure 81.** Refik Anadol, Melting Memories, 2018.  
<https://www.gazetebirlik.com/haber/refik-anadoldan-eriyen-hatiralar-1915/>



**Figure 82.** Refik Anadol, Machine Hallucination, 2019.  
<https://www.trthaber.com/foto-galeri/refik-anadolun-sergisine-new-yorkta-buyuk-ilgi/22127.html>



**Figure 83.** Refik Anadol, Quantum Memories, 2020.

https://www.artfulliving.com.tr/gundem/refik-anadoldan-ngv-trienali-icin-kuantum-hatiralar-i-22540

Burak Arıkan's works aim for the creative use of science of network and attempt to render complex network systems visible. Among his notable works are Penal Systems Network, Higher Education Industrial Complex, Networks of Dispossession, Network of Foundations and Corporations Through Shared Board Members: Turkey Edition. Arıkan's software, prints, installations and performances have been exhibited in many domestic and international institutions (Arıkan, n.d.) (Figure 84 ve 85).



**Figure 84.** Burak Arıkan, Penal Systems Network, 2014.

https://burak-arikan.com/tr/penal-systems-network/

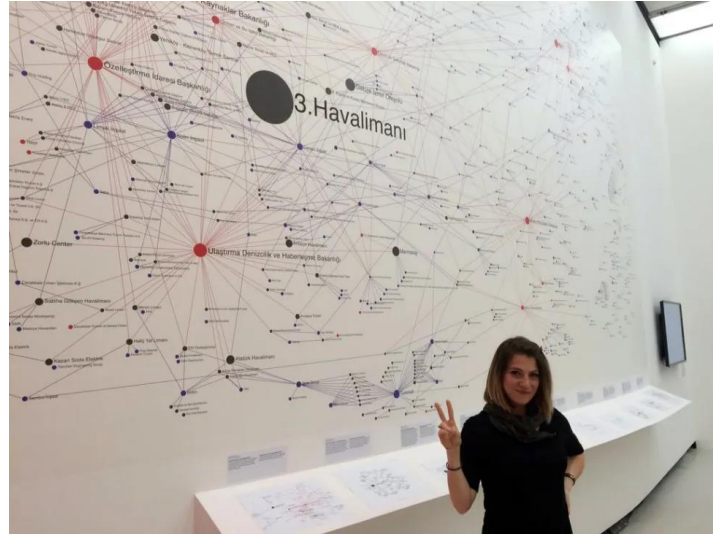


**Figure 85.** Burak Arıkan, Networks of Dispossession, 2016.  
<https://burak-arikan.com/tr/penal-systems-network/>

Renowned artist Selçuk Artut uses themes such as digital music, artificial intelligence, augmented reality, audio/visual performances and computer technologies in his work. He joined the group Replikas in 1998 and established the performance platform Raw, where live and creative coding and productions based on visual and auditory performance are created. The artist's work titled "Geomart-ut8" appears to be a questioning of the evolution of geometric patterns in art. Geometric patterns reveal a rich world with their complex structures and perfect placements encountered at different levels within the visual content they present. The art of geometry, which takes inspiration from abstractions, creates mysterious bridges between the perceived and the designed. When these bridges are built, they have a simple structure that allows one to look through a window extending to absoluteness, repetition, infinity, simplicity, complexity, order, and chaos. Artut's "geomart-ut" series try to depict a transformation in which simple geometric forms gain movement and turn into complex structures in a world of perception where meaning is bereft of expression (Figure 86).

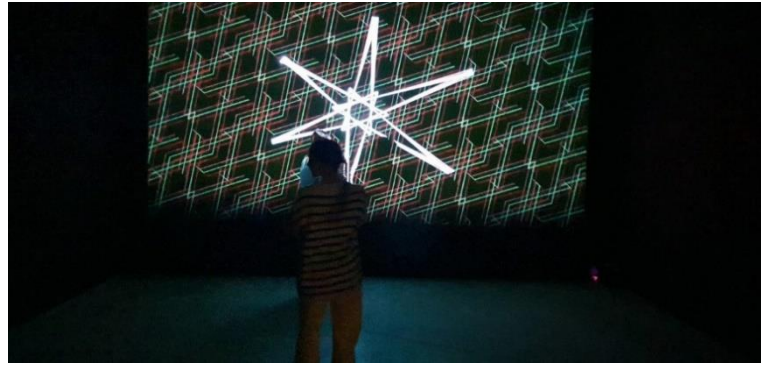


**Figure 86.** Selçuk Artut, Geomart-ut8, 3'26'', technological art, laser projection, sound and code, 2022.

<https://burak-arikan.com/tr/penal-systems-network/>

Fatih Aydoğdu also deals with issues such as the language of mass media, media aesthetics and cultural politics in his works. Since 1990, Aydoğdu's art has been displayed in exhibitions in many cities, especially in Vienna, New York and Istanbul. Aydoğdu's "ERROR – Title Included" aims to create a different "syntax" by using the "warning schemes"—which have existed in PCs and the internet language since their inceptions—in the face of censorship and central authoritative initiatives that want to take digital communication under their full control after their privatization of physical public spaces. The work was designed to comment directly on the political, social, economic and ecological connections in the media through this language (Aydoğdu, 2012) (Aydoğdu, 2012) (Figure 87).



**Figure 87.** Fatih Aydoğdu, "ERROR – Title Included", 2012.

[https://alumni.sabanciuniv.edu/sites/alumni.sabanciuniv.edu/files/trnl\\_katalog\\_commons\\_tense\\_web.pdf](https://alumni.sabanciuniv.edu/sites/alumni.sabanciuniv.edu/files/trnl_katalog_commons_tense_web.pdf)

Ali Miharbi's work takes many forms, whether they're graphic, photographic or sculptural creations or dynamic systems that operate with live or recorded data. Games with their rules changed, or sighing, groaning, whispering air currents, or machines that whip, scratch and tickle the walls of the exhibition space can be on display for the audience. The artist explores issues such as the formation and evolution of complex systems, the symbiotic relationship we establish with artificial objects, and the materiality behind information by navigating between social, technical, historical and contemporary perspectives, and doesn't shy away from their playfulness. The artist's work titled RTÜK is a plug-in for Firefox and allows anonymous users to censor the places they find objectionable on the web page they are browsing. The title of the work criticizes Internet policies by referring to the state censorship institution still operating in Turkey (Figure 88).



**Figure 88.** Ali Miharbi, Marked Territories, 2012.  
[https://alumni.sabanciuniv.edu/sites/alumni.sabanciuniv.edu/files/trnl\\_katalog\\_comm ons\\_tense\\_web.pdf](https://alumni.sabanciuniv.edu/sites/alumni.sabanciuniv.edu/files/trnl_katalog_comm ons_tense_web.pdf)

With a background as an art director and writer and a graduate of Interior and Environmental Design, Ahmet Rüstem Ekici works using 3D drawings, digital new media programs and site-specific installations, and adds dimension to his works using the potential of augmented reality. Utilizing photography, digital drawing, digital collage, ceramics, 3D Printing and ready-made objects, the artist's works take shape around concepts like archeology, architecture, gender, belonging, reproduction, and existence by thematically examining the human body and social codes. His 2021 animation titled Sarcophagus IV, which he created using augmented reality through the medium of digital illustration exemplifies his artistic approach (Figure 89).



**Figure 89.** Ahmet Rüstem Ekici, Sarcophagus IV, 2021, Digital Illustration, 3D Augmented Reality Animation, 100x56 cm.

<https://www.kolekta.com.tr/sanatcilar/ahmet-rustem-ekici/>

Hakan Sorar, a Mechanical Engineer, began working on his creations, in which combines various printing techniques with digital and traditional work, after taking part in workshops on various artistic practices and working as a photographer for online and print publications. In addition to his art projects, Sorar works on photography and 3D design, the body and the digital body, focusing on subjects such as the body, gender, human-space relationship, and architecture. In his 2D/3D graphical compositions, in

which he brings together human figures and architectural elements, he examines the relationship between the individual and their environment (Figure 90).



**Figure 90.** Hakan Sorar, *Through the Skin* serisinden, 2019.  
<https://www.unlimiteddrag.com/post/hakan-sorar-in-through-the-skin-sergisi-dijitalde>

Erdal İnci is a new media artist, painter, photographer, filmmaker and street artist. He is particularly known for his animated clone videos available online in a scaled-down GIF format. According to the artist, these animations are also concerned with the physics of sound (İnci, n.d.) (Figure 92).



**Figure 91.** Erdal İnci, *Stumblers*, <https://erdalinci.com/#>

“oddviz”, an Istanbul-based art collective that focuses on scanning objects and locations using the photogrammetry technique and produces 3D digital copies, holds an important place in the field of digital art. The group consists of Çağrı Taşkın, an architect who works on 3D modeling and visualization, Serkan Kaptan, an engineer working in the field of digital art, performance art, and political ecology, and Erdal İnci, a painting graduate who works in the fields of photography and digital arts (Figure 92).



**Figure 92.** oddviz, 2017 | Single Channel 4k Video, 2' 30" (excerpt).  
<https://www.oddviz.com/work/hotel>

Sculptor Hande Şekerciler and new media artist Arda Yalkın founded ha:ar to combine classical approach to art with modern technologies. They work in a wide variety of fields, including video, animation, music, robotic performance, artificial intelligence, as well as more traditional methods like painting and sculpture. Ha:ar's works primarily explore "the conflict between the civilization created by humanity, the technology it produces, and its way of existence" (Şekerciler & Yalkın, n.d.) (Figure 93). Demirel states that he has been following ha:ar's combination of sculpture and

digital fields for years and that whatever innovations there are to be found in the digital medium can be seen in their works (2022).



**Figure 93.** ha:ar, Impossible Sculptures, no:10, 2020, CGI, UV Print Light Box.  
<https://www.kolekta.com.tr/yapit/impossible-sculptures-no10/>

Pak, formerly known as Murat Pak, is a digital artist, cryptocurrency investor and programmer. Pak's identity is unknown, and some assert that he may be a group of people. Pak is also known for creating the curation platform Archillect, which is an internet bot that reshapes media based on user interactions with content hosted on various social platforms.<sup>6</sup> (Baştürk, 2021) (Figure 94). About Pak's place in the NFT scene on a global scale, Kına Demirel states that we have to proudly say that we have a gem like Refik Anadol but and also remember that it's Murat Pak's works that are being talked about" (Demirel, 2022).

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<sup>6</sup> The term bot is used to mean "robot" in the IT world. Robots, which can perform many computer operations semi-automatically, function in the field of informatics. The indexing technology used by search engines is one of the main areas for which they are known (Bot, 2023).



**Figure 94.** Pak, Pixel, 2021. <https://artdogistanbul.com/pakin-tek-pikseline-1-3-milyon-dolar/>

Bager Akbay is a designer, artist and instructor, and is particularly known as the creator of the Robot Poet Deniz Yılmaz. His works have been exhibited in festivals like Ars Electronica, Today's Art and Transmediale. Akbay is one of the authors of the book *Scratch for Children*, and is also the co-founder of İskele47 and a co-curator of the Istanbul Maker Faire. He is a board member of Başka Bir Okul Mümkün Derneği (A Different Kind of School is Possible Association), which aims to establish participatory, peaceful learning communities, and is itself a part of Amber Platform, which has been organizing festivals in the field of technology and art since 2007 (Akbay, n.d.) On the subject of the artist's work Robot Poet Deniz Yılmaz, sociologist Ebru Yetişkin states: "There have been robots all around the world before that write poetry or novels, or paint. What makes Deniz Yılmaz's poems special, however, is that the source that makes up the foundation for these poems, or the data that provides the raw material, is the work of ordinary people who write poems for the "Poets of Our Country" column in the Posta newspaper. What we have here is a robot that wants to be one of them by reading these poems, that wants to be recognized as an artist and demands citizenship rights, and his poems." (Yetişkin, 2016). In another article, Yetişkin describes the project as follows: "To put it bluntly, we have been working with

Bager Akbay, Mine Kaplangı and others since 2015 for The Sad Story of Deniz Yılmaz. It is essentially one of the collective creations that led to the development of a paratactical design in this context”. (Yetişkin, 2019; p.223) (Figures 95, 96 and 97).



**Figure 95.** Bager Akbay, Robot Poet Deniz Yılmaz, 2016.  
<https://onedio.com/haber/robot-sair-deniz-yilmaz-dan-ilk-siir-kitabi-739614>

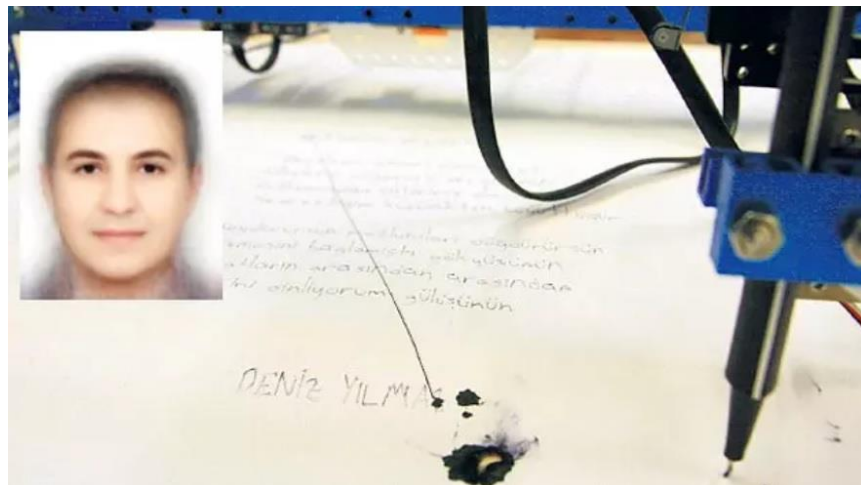


**Figure 96.** Bager Akbay, Robot Poet Deniz Yılmaz, 2016.  
<https://onedio.com/haber/robot-sair-deniz-yilmaz-dan-ilk-siir-kitabi-739614>

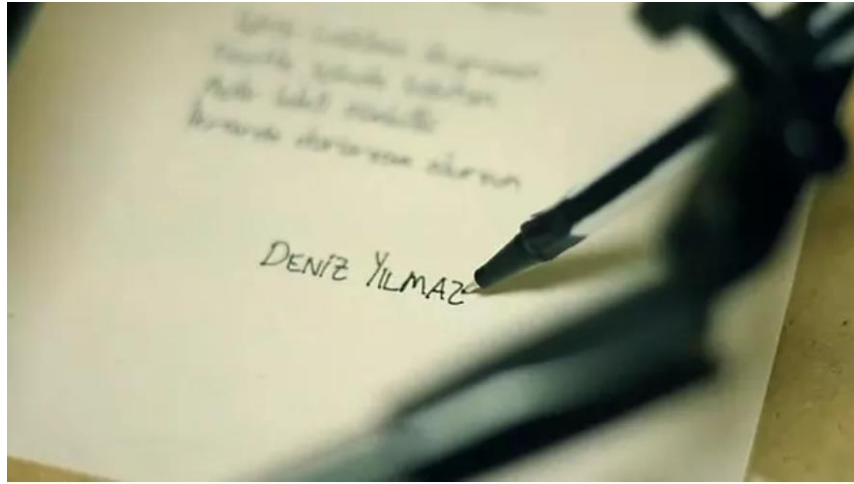


**Figure 97.** Bager Akbay, Robot Poet Deniz Yılmaz, 2016.  
<https://onedio.com/haber/robot-sair-deniz-yilmaz-dan-ilk-siir-kitabi-739614>

Kerem Ozan Bayraktar's work is concerned with the formation of an environment, physically and conceptually. The artist uses digital visualization, photography, animation, models, everyday objects, text and graphics to focus on various aspects and qualities of natural and artificial systems (Bayraktar, n.d.). In his artwork, titled Funeral Cortège, he uses algorithms. Thus, a seemingly natural complexity is fictively presented to the viewer (Figure 98).

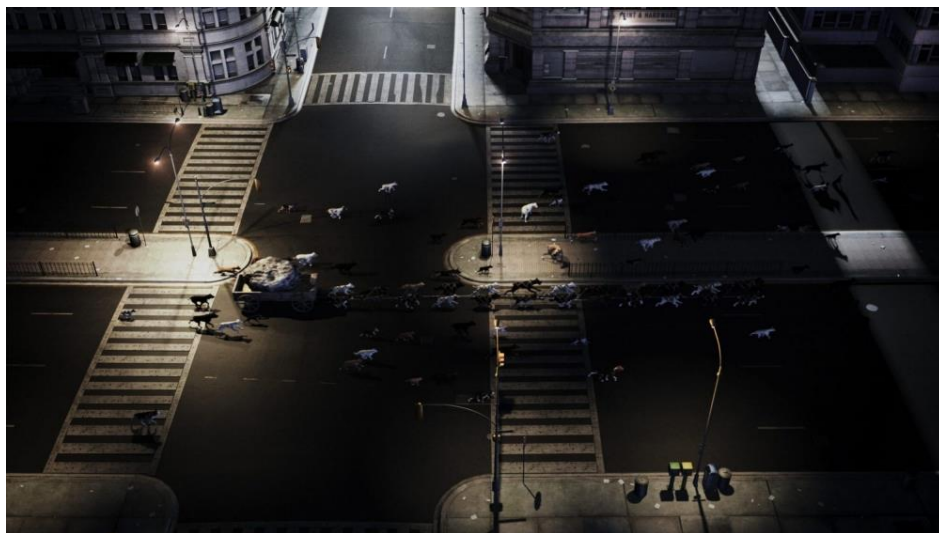


**Figure 98:** Kerem Ozan Bayraktar, Funeral Cortège, 2015, archival pigment print, 120x68 cm.

Meanwhile, Seren Şehitoğlu focuses on the conditions of our times, creating work concerned with people's living conditions and experiences. Focusing on the impact of technology on our lives in recent years, the artist draws attention through his images to the use of technology and how it transforms ethical boundaries (Şehitoğlu, n.d.). Their untitled work (from the Cubbyhole Series) illustrates this trend with clarity (Figures 99 and 100).



**Figure 99:** Seren Şehitoğlu, Untitled (from the Cubbyhole series), 2015, Print mounted between plexiglass and composite, 90x135 cm.



**Figure 100:** Seren Şehitoğlu, Untitled (from the Cubbyhole series), 2015, Print mounted between plexiglass and composite, 74 x 120 cm.

## 6. CONCLUSION

Around the world in general and in Turkey in particular, humanity as a whole is dominated socially, economically and politically by digital information in cultural, artistic and educational contexts. By participating in various forms of immaterial labor, affective production and symbolic operations, humanity assumes a role that simply produces and consumes content.

While the cognitive world imposes its machinic characteristics on human individuals, their relations, and creations, artists try to understand the logic behind the emergence and operation of this world and to open it up for discussion.

The first chapter of this thesis, titled “The Emergence and Development of Digital Art in Turkey” stated how the study would tackle its perspective vis-à-vis establishing and reviewing the historical process and the methodology thereof that would be applied. In the second chapter, a brief history of Digital Art was recounted, in addition to both the technological innovations that were important in the development of its evolutionary process and the artists who played a role in it. Then, the history of printmaking and photography, the two important mediums at the core of digital art, were discussed. As part of this thread, the study summarized the process starting in the 1950s, when digital art emerged, up until the 2000s. One example the study provided was Kenneth C. Knowlton and Leon Harmon's 1966 work “Young Nude”, which is generally accepted in art history to be the first digital artwork. In addition to these examples, milestones such as the structure of computers in the 1970s, their data transfer capabilities, and the introduction of the light pen (or stylus pen) were underlined. The study additionally touched on the proliferation of the internet, as well as net.art and artists that use social media platforms.

The third chapter provided the definition and process of digitalization, and the developments in the digitalized art scene were discussed through a historical lens. Since the 2000s, touchscreens, smartphone applications and 3D printers have become new tools for art production. In line with this topic, the thesis examined the following subcategories of “Digital Art”: Art on Screen, Digital Sculpture, Interactive Digital Installations, Computer-Generated Images, and Internet as Media, defined them, and examined the artworks created in these fields. The last part of this chapter briefly mentioned NFTs (Non-fungible tokens), which is a contemporary innovation.

The fourth chapter examines the Culture and Art Scene in Turkey in the 20th and 21st Centuries. The time period in which Turkish modern art emerged was reviewed within its political, economic and cultural context. In this respect, certain basic events, facts and people were mentioned, as well as relevant artists and their works specifically through the lens of art history. The study first goes over the early modernization period of the Republic of Turkey, its state-oriented structure, and its convergence to the international arena after 1945. Abstract trends and figurative expressions in Turkish art that developed simultaneously in the 1960s were examined, after which the study provided examples for the Social Realist approach that flourished in the 1970s. The study then touched on a redefined art in Turkey in 1980s, which started with the Coup of September 12th. Examples were provided of artworks that tackled issues of identity and politics in art, which came as a result of the proliferation of technological resources, the growth in imports, the ease of travel, and increased public welfare in the 1990s. Finally, the study examined the 2000s, we are currently in, where art has evolved alongside politics, economy and culture and is marked with issues such as identity, gender, politics, and history.

The fifth chapter focused on the history of Digital Art in Turkey. The study describes how introduction of the internet in Turkey in the latter half of the 1990s brought with it a new momentum in the creation of new art, and touches on the launch of visual communication design departments in universities. Additionally, Turkish artists and their works are examined, starting with pioneering artists like Teoman Madra. The thesis also underlined that Digital Art, and, in this context, technological innovations have both positive and negative sides. These contradictions and criticisms will be touched on in the following section which features opinions from professionals working in the field of digital art in Turkey. First, Nusret Polat makes the following statement in spite of the nature of digital art and the difficulties it will encounter:

Retinal art is a type of art that only appeals to the eye and creates short-term emotional impact. I want the artwork to invite the viewer to think and ask questions. In this sense, it is highly probable that digital art will take a different direction within itself. I can't imagine that digital artists will simply submit art to the retinal. (2023)

For example, deep learning models known as DALL-E and DALL-E 2, developed by Open Artificial Intelligence to create digital images from natural language descriptions called "information systems" are a significant advancement in this field. Open Artificial Intelligence developed and designed DALL-E 2 to create more realistic images at higher resolutions that can "combine concepts, attributes and styles". However, there are concerns regarding DALL-E 2 and similar image generation models. The reason for these concerns is their likelihood to be used to spread fraud and various misinformation and to put artists, photographers and graphic designers out of work with their speed and ease of use.

On the other hand, the short-term effects of technological innovations may be attractive, but their long-term consequences are also among the issues that artists criticize. Topics such as economic trends, marketing, fashion and lifestyles are part of this critique. This is apparent, for example, in Fatih Aydoğdu's work "ERROR-Title Included", as it addresses the issues of information inflation, the dilution of meaning, and the near disappearance of important content or even actions. However, conformism is determined not by technological conditions but mainly through prevailing human qualities and capabilities. Artists, then, examine their subjects from a perspective that requires a certain sensitivity and responsibility. In addition to all this, the nature of museology has also transformed. For example, X-Media Art Museum functions as Turkey's first digital art museum, and its collection consists solely of IPs (Özkan, 2023). There are also many institutions and events that support digital art in Turkey. For example, the Istanbul Biennial regularly features digital art installations and performances, while Borusan Contemporary is a dedicated space for contemporary art, including digital art. The Digital Art Museum in Istanbul is another institution that exhibits digital art and hosts exhibitions and events (Avcı Tuğal, 2023).

Digital art also affects visual perception and culture. Artist and academic Sibel Avcı Tuğal's thoughts on the topic are as follows:

In addition to traditional art works, I think that the Internet in particular has begun to affect and improve visual perception and culture, and technological media have begun to nudge traditional painting to different grounds, like in the early stages of photography. (2023).

Thus, as an effect of technological resources, which, over the years, have become easier to use, as well as international exhibitions, biennials, and art fairs from

Europe and around the world; art, artists and audiences in Turkey have become influenced and began to transform. According to Avcı Tuğal,

Digital art in Turkey has been on the rise in recent years with the rise in the number of artists using digital technology to create their works. Turkey has always had a strong artistic tradition, and this is reflected in its now growing digital art scene” (2023).

Digital art is often viewed as a dynamic laboratory for creating interactions with untapped potential. Today, it embodies the contradictions that lie between technocracy, opportunism and superficiality on the one hand, and intelligent, challenging and thoughtful artistic approaches on the other.

Esra Özkan underlines that digital art has entered our lives more as a result of the COVID-19 pandemic, and that the development of artificial intelligence in the period leading up to the pandemic and the emergence of wearable technologies (such as watches, phones, headphones) have led to the word digital becoming a much larger part of our lives (Özkan, 2023). Additionally, in the years before the recent economic recession, the prices of software and hardware had been on a relatively downward trend, which was democratizing. There are now more opportunities to access information and education over the Internet. As artists’ interest in new media and society’s interest in new technology rise, artists working in this field and their works become more visible in the public sphere and are more often added to collections (Yalkın, 2023).

This process has also transformed the traditions with regard to the display of digital art. Öncü of the Atlas Space metaverse virtual world shares his thoughts on the subject:

At Atlas Space, there are three main topics that are indispensable for us

regarding the digitalization of art. We develop all our art experiences around these values. Art can be said to be a primarily urban activity. It is difficult for it to both reach different countries and small settlements. With the technology we have developed, however, we remove these limits of access to art, and enable art to reach art lovers wherever they may be, whether it's via mobile devices, computers, virtual reality glasses, or tablets. Another point is that art's ability to captivate and fascinate rises to whole new levels with technology. Finally, we see digitalization as a great resource for art's ability to bring people together (Öncü, 2023).

Current technology has become a tool used not only by the people but also, logically, by artists to create art. Many figures in the art world often refer to the rising importance of medium. Additionally, we now see many professional artists from traditional medium backgrounds collaborating with young artists (Özkan, 2023). Yalkın summarizes this collaboration as follows:

However, it is very important for artists to learn technology, which is the language of today, so that they can participate in this discourse that I am talking about, or be able to interact with other disciplines, and generate ideas that may shape the changing world. It is not possible any longer to speak of the future without being knowledgeable about concepts like the blockchain, artificial intelligence, augmented reality, artificial human, or data visualization (2023).

Although digital art may appear like an umbrella term for technological arts, it actually goes far beyond. The most important topic in the digital field is the computer-human relationship. Today, an artist who wishes to create work in this field tends to collaborate with an engineer, or a scientist if they are working with biotechnology.

Today's artists operate in a multidisciplinary structure (Özkan, 2023). Ebru Yetişkin states, in a manner that supports the selection of artists and works in this thesis:

In new media art, interpretations can be made through how the form itself is used rather than strongly connecting the meaning with the content” (Yetişkin, 2012).

Artists have abandoned the strict production methods and one-sided perspectives of various disciplines and have begun to use a common language and common tools, which causes the boundaries to melt and mix with each other (Yalkın, 2023).

We see that Selçuk Artut has also taken a rather critical position on the subject: Digital art often looks decorative. It exists within an approach that focuses on form and shape. This fails to satisfy if you come from a traditional artistic background or value intellectual thought. That's why the concept of NFTs has emerged at this point today. It was created in a commercial marketplace that takes precedence over Digital Art. It has turned into a speculative asset, and it would not be right for everyone to accept it unconditionally. When an idea spreads, things like profit concerns or pretension are born in its wake. People will talk about a digital work, saying that it utilizes data. But when we look at the work itself, we cannot find any information about what data it supposedly uses (2023).

As it stands, the ever-accelerating development and updates of technology and the existence of artificial intelligence closely affect art and the creative industries. The increasingly digitalized world's pace of integration into art has increased over time and continues to do so. Today, we are witnessing again and again that well-known artists who have been creating work using various mediums and tools for many years start

making use of digital technologies. The rising number of digital artworks entering large museums or collectors' collections, and new digital art exhibitions/festivals/programs launching every year, as well as the innovative efforts and digital centers opened by universities make the existence of digitalization in art more and more palpable.

As technology rapidly advances, some Turkish artists have kept up with technological changes to produce works in the field of digital art. The rapidity of these advances, which transforms time and space, has a quality of intense acceleration, as evident in the works of the artists examined in this study. Today, the genre known as New Media is greatly expanding, and wholly incorporates digital art. The exhibitions and publications done in this context prove these developments.

Those who produce and write the history of the emergence and development of digital art in Turkey belong to the same group. Therefore, this attempt to write its history without accumulating an abundance of bibliography to influence its critical standpoint with its subjects may provide an adequate contribution to subsequent studies. If the author of this research can be a small part of such a large potential study, she will happily consider her efforts a success.

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## APPENDIX A

### INTERVIEWS

#### FERİDE İKİZ / COLLECTOR

**1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I am a partner at the international consulting company PwC. I graduated from Boğaziçi University, Department of Business Administration in 1998. I collect contemporary artists' works from different disciplines. My collection largely consists of sculpture, installation art, video art, and some examples of digital art (Diasac and lightbox prints, videos and images in NFT format). I would sum up the main theme of my collection as being 'Human'. The current century is a period where perhaps the most radical and rapid transformation in human history is taking place, and the technological developments are dazzling. Unfortunately, humanity still encounters serious issues. All of these issues influence contemporary art, and my collection consists of works that deal with them.

I have always admired artists who constantly improve themselves and adopt the latest technologies in their work, whether it is 3D modeling on a computer before carving a sculpture or creating a completely digital video or painting. I have always believed that the adaptation of new technologies in art practices is important. I support young artists and their educational activities and residency programs in the field of new technologies (one of these is the Piksel New Media artist program, founded by the artist duo Hande Şekerciler, Arda Yalkın, who are also the founders of ha:ar, as well as being my close friends and artists in my collection... I have been a supporter since the day it was founded).

I am also a supporting member of Istanbul Modern and Arter. Some of my collection exhibitions were: "Transformation" (December 2018, curated by İsmail Dönmez) and "Crash" (CI, June 2021, curated by ha:ar).

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

I am not an expert in this field, but I can relay my own impressions from the late 1990s as a close follower of contemporary art. When it comes to Contemporary Art in Turkey, I would need to start with the Istanbul Biennials, which I would say were crucially enlightening. That period represents a time in which I discovered contemporary art productions, visited international exhibitions, and had the opportunity to meet great artists thanks to the International Istanbul Biennials, which started in 1987. That was a time of major political and economic transformation globally, with the collapse of the Berlin Wall in 1989, the dissolution of the Soviet Union in the 1990s, the Gulf War, the emergence of capitalism as the sole economic model, and globalization. The late 1990s brought an end to all those years when the State Gallery of Fine Arts was the only exhibition venue in Bursa (one of Turkey's most economically developed metropolitan cities), private museums did not yet exist in Turkey, and the exhibitions held consisted mainly of watercolor and oil paintings. It became a period of enlightenment for young art audiences like me.

In the years that followed, the free-market economy created an environment that incentivized investing in art. It was a period where corporate and private collections multiplied. With the state incentivizing the private sector toward corporate collectorship, or in other words, offloading its important responsibilities in the field of culture to the private sector, the period saw a fast procession new private sector

exhibitions and cultural venues, private museums, growing private collections, and an increased cultural sharing through biennials and festivals. Major institutions of the period were Yapı Kredi Center for Culture and Art, Akbank Art, Sabancı Museum, Istanbul Modern Art Museum, Pera Museum, Santral Istanbul, Borusan Contemporary, ARTER, while the important events and organizations were Istanbul Biennials and Contemporary Istanbul Art Fair.

In the early 2000s, 95% of artists did not have gallery representation. Therefore, there was not much of a place for the Contemporary Art market in Turkey as it is known today. However, with the increasing capital invested in art in those years, the market began to form. The galleries opened after that period created the market. The 2000s was also a time when the world discovered types of art other than western art. Many in the market wondered if Turkish art, much like Chinese, Indian, and Iranian art before it, could open itself up to the world.

The year 2010 was a cataclysmic period for the art market. Sotheby's in London held Turkish Contemporary Art auctions in 2007-2009. This situation created the expectation that Turkish Contemporary Art would enter foreign collections. With that, the market started to boom. Early in 2010 and 2011, the prices became very high. The auctions in London were not very successful.

In 2008-2009, Turkish collectors started to follow fairs and expos abroad. They started to compare foreign artists' works with Turkish artists. Turkish artists' prices seemed to have gotten very similar to those of artists known all over the world. Turkish collectors also started to purchase works from foreign artists.

The buyers, who spearheaded the Turkish market's rise, shifted to other markets. The Turkish market went into a sort of decline. While the budgets allocated to art increased, Turkish artists' share in those budgets decreased. The market failed to recover after

2011-2012, too. And in 2018, the market bottomed out due to certain local and global economic crises. In 2019 and beyond, the competition increased even more. Galleries in Turkey started to represent even more foreign artists.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

What we are witnessing is that technology has opened a new era in art history. While the current century brings us perhaps the most radical and rapid process of transformation in humanity's history, it is quite normal for artists, whom I believe to have an important role as opinion leaders in society, to explore how new technologies may be utilized within their creative processes. There is a quote, attributed to Renoir if I am not mistaken, that there would have been no impressionism without tubes of paint. Impressionists at that time benefited from these technologies like the introduction of tubed paint or the invention of photography. These were important technological developments for their respective periods. They liberated artists and allowed them to work outside their workshops. This caused everything from the subject of the painting to the color and light used at that time to change and to be strange at first. I think we are currently going through something similar.

Digital art did not begin with NFTs but gained widespread popularity and awareness through NFTs. NFTs are a blockchain technology for validating the uniqueness of a digital file. It is not in itself a technology used in the production of an artwork. In a way, we can compare NFTs to containers in the logistics industry in our actual lives. It facilitated the transfer of an artwork in digital file form from the creator to the buyer for money, that is, their trade.

This resulted in the emergence of crypto art markets. Due to the increasing volume of transactions and the astronomical rise of their prices in a very short time, Digital Art and NFTs attracted the attention of millions all over the world, including Turkey, and started a discourse.

It is true that crypto art markets where actual NFT artworks are sold have been greatly convenient for artists who use digital mediums. The artist can work without a workshop, save up on a lot of expenses. These were platforms where artists who could not find representation in galleries could exist and even earn money. Artists are paid royalties from the secondary market sales of NFTs, too. This is regulated on the blockchain. This filled a vital gap in traditional markets. However, the gas fees (commissions) increased with as Ethereum appreciated. Entering these platforms has become costly for artists.

Some platforms are, in a way, very liberal: An artist can easily “mint” their work on these. However, most major platforms accept artists through a screening process from the applications they receive. In these aspects, it is both different from and akin to traditional markets. Digital technologies are also just tools, after all—the important factor is the artist, their passion and what they want to express.

Crypto art markets did not launch on the back of artists we know from traditional art markets. Illustrators, motion graphic artists and, of course, those in the know regarding this technology started to sell their works by converting them into crypto works. Crypto miners and people who owned cryptocurrencies immediately accepted this aesthetic and started to buy. Later, certain wealthy figures of the world and collectors such as Elon Musk entered the scene.

2018-2019 is when many platforms emerged that sold art on the blockchain. At the time, Bitcoin remained affordable, so it was very convenient for artists to sign up for these platforms. In 2020, with the pandemic, the transformation accelerated, and the

sales skyrocketed. In early 2021, we saw astronomical prices in the market, and this continued for a while after Christie's Beeple auction and Sotheby's Pak auction. These astronomical prices and the price fluctuations are pretty scary. As a collector, you can create a collection of artworks that you find valuable. Those works have value because of the creative effort the artist put into that work. But the market's pricing can change very dramatically. The volatility of cryptocurrencies like Ethereum also has a big hand in this.

After March 2021, we started to see important artists we know from traditional markets on those platforms. These artists started to bring a different audience of collectors with them. For example, SuperRare distinguished itself with a series they launched in March with Verisart (which provides blockchain certification services), where artists such as Neil Beloufa, Petra Cortright, Shepard Fairey, AES+F put their first NFTs up for sale. Pace Gallery sold my John Gerrard favorite work, "Western Flag", on Foundation as an NFT. Some of these are important artists of the conventional art markets: For example, AES+F is a 4-person collective that has been creating digital art since 1987. They have artworks in the world's most famous museums' collections. They received many prestigious awards such as the Kandinsky and were exhibited at the Venice Biennale. Verisart did a similar launch (with the auction house Artsy) in early 2022 with "22 for 2022". It featured very successful artists who have works in museum collections, who have produced conceptual works working in photography or video. Among them was Mat Collishaw, for example, who is a British artist who did a solo show with Arter in 2014 and has been featured in very important museums and private collections. He sold his first NFT there. These artists are definitely more cautious and more selective, and most of them are curatorially skilled. They prefer NFT markets that work with artists who create art with actual content, which I think should be the case (feral file, snark.art,

arsty nft, TEIA tezos, and SuperRare are some of them). However, the progress is still slow for these artists. Most are in their research and learning phase, which is very normal. Still, the relationship between these artists and this world is gradually getting stronger.

These developments saw wide coverage in mass media due to their astronomical prices and attracted the attention of a wide audience, as well as financial investors, art investors and collectors—both around the world and in Turkey.

I think concepts, expectations, and everything else became very confusing both around the world and in Turkey. Are we talking about digital art, are we exploring the use of new technologies in the production of art, are we discussing certification possibilities on the blockchain, are we discussing an artist's creations using artificial intelligence, or are we discussing an art market structured on the blockchain? It's all intertwined. There was confusion, and there still is.

People have become confused about whether every NFT is a work of art, which it is not—there are strategy games and collectibles in there. Anyone who could mint<sup>7</sup> a file on the blockchain and put it up for sale on a liberal NFT platform declared themselves an artist, thinking they were going to make a lot of money. The feeling of missing out on something has spread among financial investors, creatives, artists, collectors, the general art audience and tech enthusiasts in almost every sector. (FOMO effect, the fear of missing out).

Total NFT sales in December 2020 were around 30 million. 12-month cumulative sales barely reached \$100 million. They reached \$2 billion in the first half of 2021 and \$22

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<sup>7</sup> The term "mint" is used to describe the conversion of digital data into digital assets registered on a blockchain. Digital assets produced in this format contain an image or video file. By using minting process, these digital assets are stored in decentralized databases or distributed structures.

billion by the end of September (some of this number may be collectibles rather than artwork). While the crypto art market was very small compared to the \$65 billion art market (which dropped to \$50 billion in 2020), there was an abnormal growth in 2021 that occurred with the pandemic. A volume of 22 billion dollars; that is an astonishing number.

Mario Klingemann, an artist for Google Arts and Culture, who is also an expert coder and creator of very experimental artworks, defines this as the "attention economy".

What I mean by this is that an NFT, once sold, changes hands maybe 5 or 6 times and gains value on an average of 60 cents on the dollar each time. This does not reflect the real dynamics of the art market. We can call this part of the FOMO effect (fear of missing out).

There are some great artists I follow and some collectors who have bought their work, but the second-hand markets are never that active. The people who buy hold onto their purchases, just like in traditional markets. I don't buy works to sell either, but, for example, there was a piece that I wanted to keep forever and only sold it because of a very good offer from another collector (a family that owns a modern museum in Japan), for which I ended up feeling very sorry.

We were expecting the hype numbers to normalize after a while, which started to happen in 2022—the depreciation of cryptocurrencies also played a part in this.

Nevertheless, I believe NFTs and crypto art markets will persist.

There was this perception that whatever an artist makes will sell, and those who don't do NFTs are missing out. This is wrong. If you look at the statistics, very few of the artists are able to actually sell work there. According to Artnet, only 2.5 percent of the works that are sold are priced at \$700 or more, and 34 percent are under \$100. The

remaining sales are made for the figures even lower. This means that there is nothing meaningful left from sales to artists.

But rest assured, serious artists sell well above these numbers. An artist whose video work is priced at \$2500, maybe \$10 or 25000 in the conventional art market will also sell that work on here at those prices.

There is a perception that every artist who enters earns hundreds of thousands of dollars because of the hype surrounding it. And of course there were people who did earn that much. It is known that Pak's sales brought in \$250 million—I do not know how much of it went directly to the artist, but Pak is one of the first—he's the first artist to achieve \$1 million in NFT sales on the blockchain. Beeple was right behind him in 2020. Some good artists I know from Turkey have also earned good money. And I have just mentioned the prices for the works of very important artists.

There is another study that I would like to talk about. PwC Turkey Deals Advisory Data Analytics services team, which I lead, published a report in April 2022.

<https://www.pwc.com.tr/nft-islemlerine-detayli-bir-bakis> [find the summary of the report and the main report here]

My team and I reviewed the ETH blockchain big data from April 1st until the end of September 2021. We analyzed approximately 2 million transactions and a transaction volume of around \$5 billion. One key finding was the fact that by late September 2021, about 20% of collectors owned 80% of all NFTs. This is called the Pareto Equation. In fact, the concentration is actually much higher, with 2% of collectors owning 50% of all NFTs. These are serious concentration figures. There are other analyzes in our study. So, there is no such thing as making record financial gains in the short term. And I'm talking about artworks here, not speculative projects.

There is still a long way to go vis-à-vis the development of artwork production through artificial intelligence and machine learning and discovering ways to make blockchain technology part of artwork production. The works that come out as a result of these projects, you can exhibit as video installations on displays and venues, or you can sell them as NFTs if they are single-channel video works. Or you can simply certify them as NFTs.

A splendid period has begun for artists and collectors who do not hesitate to experience innovations and those who want to constantly improve and learn. One positive aspect of the widespread acceptance of digital art, both around the world and in Turkey, has been the easier access to the funds required for production and education for artists. This popularity has also enabled art to have a larger share of the resources that financially strong institutions allocate for social projects. For example, the Piksel New Media artist program, founded by the artist duo Hande Şekerciler, Arda Yalkın, who are also the founders of ha:ar, as well as being my close friends and artists in my collection, and of which I have been a supporter from the very beginning, has recently been launched. It received a record contribution from Odeabank to finance young Turkish artists in education and development programs abroad in the field of new technologies. I think examples such as this and others have seriously been influenced by the buzz around NFTs. It could have taken longer to attract the attention of financially able private or corporate collectors to the art created using these new technologies and to raise funds for production and research.

You asked about digital art in Turkey. And I think there is only one market—the borders have been eliminated as part of these technological possibilities, and competition has only increased. While this created an opportunity for Turkish artists, it also poses a serious risk because of the increased competition. I do not believe we have such a thing

as Digital Art in Turkey. There is Digital Art in the World. It would be shortsighted and unsustainable to define and operate within the geographical boundaries of any country, both as artists and as platforms. Just as there are many serious and globally successful technology start-ups from Turkey (I come across very successful companies that attract foreign investors as part of my line of work), there are opportunities for very successful artists to come out of Turkey and be recognized around the world.

Half of the corporations that are among the largest in the world today weren't even operating 5-10 years ago. Most of them are technology companies, blockchain companies, crypto miners, and exchanges. Their partners have amassed huge fortunes. Today, new Medici have been born to the art world. With these new Medici's and the new digital mediums that they love, digital artworks and crypto art markets will inevitably grow. However, we will not see most of the \$65 billion art market consist solely of NFTs—there will obviously still be diversity.

#### **4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

I don't think that I am the right person, equipped and competent enough to make a comprehensive sociological analysis in this field. But I am glad when art viewership increases for any reason. Works that catch the interest of the masses tend to be works that appeal to popular taste: aesthetic works that are easy to perceive or pleasing to the eye. On the other hand, this increased interest causes bad artwork to appear in our daily lives.

The positive side of all this, as I mentioned before, is that this newfound popularity has made it relatively easy to find financing for good projects, for art production and art education projects. The floodgates have opened for R&D for artists. I think we are

just seeing the beginning of what can be done with these very important new technologies. Some works sold today, even in NFT markets, are produced with relatively simple technologies. However, it is possible to create using much more complex technological tools. Most people who know and can use technologies like artificial intelligence algorithms are not artists, or very few of them are, and it will take a long time for great artists to master these technologies. But the doors are now open for productive collaborations. Therefore, the works of art the audiences experience will gradually improve.

#### **5) Finally, is there anything else you would like to add?**

I enjoy reading Yuval Noah Harari's books and often cite "21 Lessons for the 21st Century". Countries that were developing in the last century all have somehow become developed countries, although some took a little longer. However, there exists a gap after this, and the bridge is near collapse. Countries that do not invest in technology, do not adapt their educational systems, do not prioritize research and development, these societies will remain on the farther side of the bridge when it has collapsed.

Half of humanity will find themselves without a function. This is terrifying. Professions will change rapidly and many of our current skills will become useless. Now, throughout history, both the peasant and the worker had a function, and when they revolted, the lords, kings, and capitalist bosses would end up losing sleep. This is how they got some rights compared to the beginning of the 20th century. But now a significant part of humanity is at risk of becoming useless. This is very dangerous.

Art is another field that will evidently change the most rapidly. I have been talking about this in various speeches I have made since 2019. I was saying that artists would need to adapt production techniques to new technologies and open themselves up to

new mediums such as New Media Art and digital art, and then COVID-19 accelerated these developments.

Today, there are very successful examples from Turkey who do New Media Art/Digital Art and have gained renown around the world in a very short time. The rest will only come so long as we work hard and remain open to innovation.

**KINA DEMİREL / COLLECTOR****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

My name is Kına Demirel. From an early age, I have had the opportunity to deal with many different branches of art, like theater and piano. I only became interested in figurative arts during my university years. When I returned to Turkey and settled in Istanbul, I received training on collecting, and gained more interest in different art styles visiting many art galleries. Thanks to my ex-spouse, I witnessed the launch of Gallery X-ist, which gave me the opportunity to see young Turkish contemporary artists develop. And I have been actively developing my own collection for the last five years. I am currently the general manager for Migros' media company Mimedea. I have a busy professional life. I get rid of the stress in my professional life by keeping up with contemporary art. I continue to cultivate myself using many different sources to develop my own collection. My interests in contemporary art have recently initially turned to artists who expressed themselves through photography, and then to Contemporary African Art. At the moment, I take pains to include both the photography of contemporary African artists and the works of contemporary Turkish women artists in my collection.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

I think contemporary Turkish art has developed in a multivocal fashion after the 2000s. When we look at the previous periods, I think there had been artists who were technically very capable, who nevertheless produced similar works of art in the styles that collectors and galleries liked. However, I think that different styles have developed since 2000, especially as the art ecosystem in Istanbul developed and there was more

support for young artists. This points to the last 20 years being a period in which Turkish art has developed differently and both galleries and artists have made their voices heard. If we were to visit the Istanbul Contemporary Art Fair today, we would see many works and artists that incorporate many techniques at the same time, from oil painting, to sculpture, photography, installation, digital works and NFTs. Still, I don't believe that the Turkish art ecosystem is very developed. I think that a country with such a large population ought to have a higher number of artists, galleries, art consultants, museums and auctions. I also believe that many Turkish artists should find more international representation and that contemporary Turkish art should be more commonly known.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

When you think about digital art, the first thing that comes to mind is art done on a computer, but I think we should not forget that digital art actually starts with photography. Photography and its invention I think is one of the greatest inventions of this century. I think that going from only the aristocracy being able to have their own pictures made, to families and individuals being able to photograph and archive themselves, their families and what they see in their surroundings, thanks to photography, led to a great deal of democratization and liberty for humanity. I believe that art also developed that way. On the other hand, the essence of the artist and the art does not change. The artist tries to explain their own troubles and problems to the world, using many different techniques. Artists who used mediums like oil painting, sculpture, and acrylic in the past, as the techniques offered by computers improved, started to experiment with digital art, artists being curious by their very nature. At this point, I think digital art will progress a lot, especially thanks to younger artists. Many artistic branches will progress from photography to video art, from digital installations to

NFTs, but we are still only just beginning. I don't think that young artists in Turkey differ much in their production methods from their colleagues from around the world—they too can discover the same techniques and constantly improve themselves. We must proudly say that we have gems like Refik Anadol out in the world. We must remember that Murat Pak's works are also the talk of the NFT world. On the other hand, I enjoy viewing the works of Murat Balta, Ansen, Candaş Şişman, Özge Topçu and Oddvitz. These works not only display digital techniques, but also very strongly feature influences and stories of these lands. In particular, I closely follow ha:ar. I have kept up with Arda Yalkın and Hande Şekerciler and how they have developed their blend of sculpture and digital work for years. Whatever is new in the field of digital art, you can find in their works. And beyond that, especially when NFTs began to emerge, I witnessed that young artists help each other a lot to spread and learn these techniques. Pıksel, which ha:ar founded, for example, tries to cultivate young talents in the field of digital art every year, and presents their works to us art lovers. So, I think that the very shallow Turkish art ecosystem will only develop further by providing lifeblood to this ecosystem of young Turkish artists.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

I think that, much more than digital art, art itself has a lot of sociological effects on society. Today, the most recent technique may be in digital art, but these techniques may change tomorrow. Whichever technique the artist feels comfortable with for expressing themselves is the right one for them. On the other hand, I think that art is one of the most important factors for the progress of a society, for a society to develop and advance its creativity. There is no need for each of us to be artists, but I wish we could be raised like artists from a young age, that is to say, if we could dream more, be

given the opportunities to develop ourselves in ways that would help express ourselves more, and take our children to more museums, galleries, and fairs... I think that a community that thinks like an artist would bring very different, creative solutions to many of our current day problems. So, I tell all my friends and acquaintances at every opportunity: take your child to a gallery, an exhibition or a museum every week. Because I believe that a society nourished by art will develop a lot more through creativity...



## ESRA ÖZKAN / DIGITAL ART CURATOR

### **1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I was born in Istanbul in 1990. I graduated from Yeditepe University Department of Fine Arts. I also did a double major in Art Management. After those, I completed my master's degree in Cultural Management at Bilgi University and my second master's degree in philosophy at Bilgi University.

The subject of my master's thesis for the Department of Philosophy at Bilgi University was post-human experiences in the post-digital era. I examined digital arts for my thesis. I focused on 'bio art spaces' created with technologies such as biohacking and bio digital. I have been active in the art industry since 2011 and have focused on contemporary art. Since 2016, I've been working on digital art and my focus on contemporary art has thus changed. I could never gel with paint. I thought that somehow the material was limiting me. That's why digital art caught my attention. I worked in museums for many years, in Pera Museum. I worked for about 6 years.

I worked at a gallery, at the Elgiz Museum and even as a Fair Organizer. We did the New York expo. I was working internationally. But I experienced a real breaking point in 2016 and switched to digital.

In 2016, I started a journey with the consulting firm ArtBizTech that would last three years. We held a competition. It was actually more of a program. We provided mentoring services to young people under the age of 35. We exhibited the works of artists working in the genres of bio art, kinetic art, and data art, and mentored them.

The jury members made the selection. Many participants were engineers and artists from various fields. We called the program Bangprix. It stands for: the atom, neurons,

and genes. Such works generally constitute the subcategory of digital art. Atoms referred to the science part, the neurons science and human, and the genes or the DNA covered fields like bio art.

In 2019-2021, I was a curator for the “plug-in” section of Contemporary Istanbul. It was a long process. I handled that part of the fair for 3 years. Meanwhile, I became the Artist Director for the Istanbul Digital Arts Fair in 2020. I still do that.

Between 2019-2020, we prepared a report on the International Mobility of artists working in digital fields with Art Bistek. The report covered 500 artists, with participation from 24 countries. It garnered a lot of attention and we got invited to Montreal. There is a program called Tas designer. There we presented our report and conducted a workshop. We also presented the report at Akbank Sanat in Istanbul. Here, we examined how artists working on the digital art field can be mobile. Of course, these were before the pandemic. During the pandemic, this whole thing became even more valuable. Because mobility has become essential for everyone. Everyone is getting mobile.

Afterwards, of course, I opened many digital arts exhibitions. Among our group were many experts such as industrial engineers, designers, and robotics experts.

When the offer came from Contemporary Istanbul, digital arts had begun to be more commonly known. I work with both Turkish and foreign artists. Our structure involves young people, professionals—everyone comes together.

Then I became the director and curator of X-Media Art.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

Digital Arts goes as far back as Futurism and Fluxus. These trends start with Performance. Then, as technologies such as artificial intelligence advanced and computers, cameras and video were introduced into our lives, digital arts made progress. In fact, the first VR device was used during that period. The first use of VR was by NASA in combat.

In 1990, with the widespread use of the internet and the computer's introduction into our daily lives, digital art begins in earnest. The 2000s saw interactive arts come into our lives, and they truly rise in the 2010s. In 2010-2020, we see kinetic artworks, artificial intelligence, machine learning, and in 2020 immersive spaces like x-media.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Digital art has entered our lives more after the pandemic. In fact, it was not just the pandemic, but also the development of artificial intelligence and the introduction of wearable technologies (such as smartwatches, phones, headsets) into our lives led to the word digital coming up more often in daily life.

As those in the business, we have always been online. But the more widespread use and awareness of digital platforms have naturally increased interest in digital art. The pandemic has led to an increase in both digital awareness and digital art. Digital art goes far beyond the displays we all see. It includes Kinetic art, data art, algorithms, and new media.

New media has a new meaning. The medium is changing.

Bio art, NFT trades, crypto art, blockchains are all emerging concepts. Right now, digital art looks like a visual platform where we spectate the works of famous figures. But it's not like that. History tells us that there is no such thing.

This includes performances made with technology. There are many beautiful examples of that around the world.

The most important topic of this field is the computer-human relationship.

Today, an artist who wishes to create work in this field tends to collaborate with an engineer, or a scientist if they are working with biotechnology. Today's artists operate in a multidisciplinary structure. We started to see this more often after the 1990s, in the 2000s. The way people work is changing. You can paint or sculpt by yourself. But if you do not understand computers, it is very difficult to succeed. Actually, it used to be like this before, too: If you didn't know how to work with clay, you would get help. Or if you didn't know the paint, you would ask how much oil to put in it. Nothing has changed. Only the medium has changed.

What we see in Digital art is that there are no borders. On the contrary, all borders have been eliminated. It is a field where design, art, engineering, natural sciences are all intertwined. So, the boundary between engineering and social sciences has completely melted away—we no longer make that distinction. On the contrary, we try to explain how they can merge and work as one. The importance of digital art is going beyond the collective and actually working together.

Another topic is artworks without identity, which we call non-byner. You are in a decentralized space where you are able to more freely express yourself through an avatar without revealing your identity. Decentralization means being freer. I think that is the gist of it. Going digital doesn't mean “oh, I used to paint, let's do that on a

computer now”. It could just be one of the subcategories, like illustration or animation. But when you really pour it into an algorithm, you start creating a digital story. Then digital art begins.

And the artists should ask themselves how much pixel art I do know, how much animation art do I do. Taking a tablet in your hand and doing something is not digital art, it should not be perceived as such.

Where there is data, there is performance, there is wearable electronic textiles. There is a subject called electronic textiles.

#### **4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

The age of the average artist has dropped. These days we see many artists between the ages of 18-24. We have opened a new door for them. Looking at blockchains and NFTs, the kids working in this field are often younger than twenty-five or even under the age of 20. These people became wealthy. We are the ones who established this system, different generations support and cultivate each other.

Fine arts become more meaningful as generations become closer with each other. When there is need, we see collaborations between young artists and professional artists who have gone digital.

X-Media Art Museum Turkey's first digital art museum, so its museology does not operate like conventional museology. Its collection consists of IP. It has a great technical infrastructure. These days, curators who work with digital artists must know the techniques in the field as well as a technical team. You have got to know what you are working with. It's not just about buying and running a USB drive. Curators who

want to work in this field need to learn the technical infrastructure. It took me only six months to learn the infrastructure of the X-media Art Museum. And before that, there is the preparatory process. You are designing an experiential space. The exhibition venue can now be thought of as an experiential space. It should not be thought of as just placing things. Copyrights and licenses are obtained. It is necessary to know and follow the legal process. It's not enough just to get the permissions, you have artworks that are maybe 60 million pixels high in resolution. For this reason, the equipment should be suitable as well. This museum was first established inside Das Das. We reached 65 thousand viewers within 2 months. We also opened in Bodrum, then we came here. The devices and the technology we use here would make up 35 movie theaters. It is a great infrastructure.

We have new exhibition plans, and we are working with a large team of artists: Sound designers, 3D animators, graphic designers... We will create new work with a team of 10 people.

We will continue to keep old works on our servers. There are 5-6 servers. These are terabyte servers. We can use them for two works at the same time. This is an experiential zone. We are creating a reality on a different scale.

**PINAR ÖNCÜ/ ATLAS SPACE****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

Hello, of course. I'm Pinar Öncü. I am a technology entrepreneur and mentor. I am a founding partner and the Chief Operating Officer of Atlas Space.

I graduated from Gazi University, Department of City and Regional Planning in 2010. I then continued my studies at Paris Sorbonne University for a while. After graduating, I started working in the field of technology, which I have always been interested in.

While I was working in a geographic information systems company on the METU campus, I started a master's degree in that same field at METU. During this period, because of my interest in software development, data analysis and processing, I took part in a joint GIS<sup>8</sup> master's program between Vrije Universiteit Brussel and Katholieke Universiteit Leuven.

My technological expertise, which involved the development of geographic information systems analysis modules, spatial simulation development and image processing, evolved over time into areas like software development for institutions, game development, and VR/AR development.

Today, as a founding partner and the COO of Atlas Space, I manage our company's international operations and activities from Miami.

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<sup>8</sup> GIS (Geographic Information System) is a geographic information system consisting of integrated computer hardware and software that stores, manages, analyzes, organizes, outputs, and visualizes geographic data. This process takes place in a spatial database (GIS, n.d.).

### **1a / How did your education lead you to a foray into the Metaverse?**

The Metaverse and many of the technologies related to it did not have educational resources and didn't even conceptually exist when I was a student.

I am personally interested in neuroscience and human psychology. When my experience in developing multi-parameter strategic plans (more than spatial design) I gained through my education in city planning, my technology experiences in the sector, and neuroscience came together, a human-oriented, spatial technology design emerged in the intersection. In fact, I would say it was interesting how the chips fell in where they did. If you had told me that I would be doing this job today when I graduated, I would have lost my mind with excitement.

### **2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

I would like to split this question into two, and I will answer it purely through my personal observations. I wouldn't want to make any further comments as I lack the art history training.

First, I'll start by criticizing ourselves as it's a national habit. As a child of the 90s and as someone who has had the opportunity to live abroad frequently since the 2010s, I believe that, in Turkey, art isn't given the space it deserves in our lives. I have observed that in many countries I have been to, both in metropolitan cities and in smaller settlements, art is more carefully supported, included in people's lives, and people are encouraged to participate in art. Although the economies of these countries influence this situation, I still think that we are making excuses for ourselves beyond a certain point.

On the other hand, I find some of the more recent activities carried out to raise awareness about art in our country hope-inspiring and even exciting. Now, we have great art events that enter everyone's agenda when they come to town, even those who have little to no interest in art. Cities set up various art exhibitions and performances in public spaces. We have indispensable Turkish artists in distinguished international art spaces. In that respect, I find the improvements very exciting, and I would like to state that we are happy to contribute to this as a company, to disseminate and experiment as much as we can.

**2a/ What role do you play in the digitalization of art? Your job did not exist 50 years ago, do you have the job of the future?**

The digitalization of real life, and even the creation of a place, artwork or object that does not physically exist directly in a digital space is now part of our reality. Our team comes from an architectural background. We started our journey presenting our architectural designs in virtual reality before the foundation was even laid in the ground, making people imagine. This showed us that we can digitally design limitless spaces and interactions. Naturally, the digitalization of art has also been a subject that we have been sensitively focused on.

At Atlas Space, there are three main topics that are indispensable for us regarding the digitalization of art. We develop all our art experiences around these values.

Art can be said to be a primarily urban activity. It is difficult for it to both reach different countries and small settlements. With the technology we have developed, however, we remove these limits of access to art, and enable art to reach art lovers wherever they may be, whether it's via mobile devices, computers, virtual reality glasses, or tablets. Imagine being someone living in Istanbul and being able to say "Today, after lunch, I will visit an art gallery in Hong Kong," or being a young person who lives in difficult

economic conditions in the countryside and can still get a design education in New York or find himself at a concert in London through a computer screen.

Another point is that art's ability to captivate and fascinate rises to whole new levels with technology. Thanks to virtual reality technology, we are now able to exhibit art in spaces that overlap with the emotion and message it wants to convey, where it can trigger your emotions, which the work is able to target much more intensely. Now, especially while exhibiting art regarding a world problem in their focus, an artist can provide an atmosphere that fits the message.

Finally, we see digitalization as a great resource for art's ability to bring people together. Thanks to the multi-user technology we have developed, we allow art lovers with similar interests to come together and exchange ideas in a digital and three-dimensional gallery.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Technology has always been an instrument for art creation. Back in the days when people drew on cave walls, no one had different textured paints, pianos, or even alphabets. You could enjoy bird sounds, but a piano recital could not be heard. Compared to the current day, we can see that the works that emerge today with developing technology are much more advanced and involve entirely different parameters.

We can also say that digital art is a new category that has emerged with developing technology. Unlimited spatial depth and mobility are now indispensable parameters of art. This way, artworks that we cannot even describe in the physical world can exist,

and it makes it possible for works of art that are created directly in the digital world to be brought to life through technology, exhibited and presented to art lovers.

We are living in a period in Turkey where our artists can have their names written in world history. The high interest in technology in our country gives us hope that we can train more digital artists in the future.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

The development of technology has always been transformative for human history. Developments in fields such as the Metaverse, the blockchain and artificial intelligence pave the way for a serious transformation for art today.

Thanks to these technologies, access to art, the ability of artists to trace their work and protect their rights, and the exchange of artworks between art lovers allow us to go far beyond just seeing a work of art: We get the opportunity to experience it.

On the other hand, today's hottest topic is artificial intelligence and visual, 3D model-based and text-based content generation tools. This naturally leads to the question of “Will artificial intelligence replace human beings?”. Aside from the issue of whether they can replace an artist, I find these tools useful in that they encourage everyone to create content.

n artist is really someone who emphasizes their work through emotional and semantic layers rather than sensory quality, someone who says, “I have a message for the world!” These artificial intelligence tools currently operate through commands entered by a human, within their own limited data sets. We have not yet arrived at a time when we will view artificial intelligence as a danger in itself. But, of course, since they make it so easy to generate content, a heap of content, perhaps a polluting amount of content

will begin to pile up over time and at times things will become terribly complicated. Just like how any false information on the internet spreads very quickly and causes manipulation.

**4a/ What do you think awaits the new generation of viewers in this new Metaverse? What is possible there? What should we imagine as artists, and as art lovers?**

I would like to underline the words access and interaction in particular.

The limits of the audience that an artist can reach are disappearing. Beyond the city and country where they live, the reach now exists in an international dimension. Likewise, the limits for the artists and works that art lovers can access are disappearing. It's like a gigantic art web that completely covers the world.

Now, instead of viewing works from afar, we at times will be able to walk around in them, exhibit them in our own environment, and even customize some parts of the artwork within parameters set by the artist. In short, these are wonderful tools coming into our lives that will help us connect with the work and understand it.

**5) Is there anything else you would like to add?**

I look forward to you publishing your work :) It is invaluable that you are examining an abstract technology like the metaverse, about which everyone has an opinion and likes to argue about it without understanding what it is, because of its big debut and rapid spread. I would like to thank you for your hard work and express my happiness for leaving this space for me here.

**NİLAY DURSUN / ISTANBUL MODERN – DIRECTOR, GENÇ MODERN**

**1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

**1a) How long have you worked at Istanbul Modern? What responsibilities do you have there?**

I am Nilay Dursun. I work at the Istanbul Modern Art Museum. I have been working as an Assistant Curator at the museum since 2019, and I have also been the Director for Genç Modern since 2016. I graduated from Koç University with a degree in Archeology and Art History, and Media and Visual Arts. I received my master's degree from the department of Art and Cultural Management as part of the Museum Curating program run by King's College London in cooperation with Tate Modern. I am currently continuing my education at Galatasaray University. I am at my dissertation stage in the Media and Communication Studies doctoral program. In addition to curating, I continue my research regarding the digitalization of museums, digital communication in museums, sensory exhibition design and experiences.

**2a) Could you tell us a bit about how Istanbul Modern was founded?**

I can answer this with an institutional statement: Founded in 2004, the first seeds of Istanbul Modern were sown at the 1st Istanbul Biennial (then called the 1st International Contemporary Art Exhibitions) in 1987. Since then, there have been efforts to establish a permanent modern art museum in Istanbul. Although various projects were attempted in the years of 1989-1990 through biennials in venues such as the Haliç Shipyard and Feshane, the dream of the museum would take a long time to come true.

After the 8th Istanbul Biennial used the Customs Warehouse #4, located next to Mimar Sinan Fine Arts University, as its main venue in 2003, the establishment of the museum

came to the fore again. The 8000 square meter building, which was built as a dry cargo warehouse for Turkish Maritime Organization, was turned into a fully equipped museum by Tabanlıoğlu Architecture after a 17-year struggle to obtain the necessary permits and approvals.

Established as Turkey's first museum of modern and contemporary art, Istanbul Modern has been designed as an experiential space, including a library, movie theater, study areas, a sculpture garden, a store and a restaurant, and the galleries where collections and current exhibitions are displayed. These venues were adopted by a variety of audiences in a short time and the museum became a cultural center of attraction. Having reached the identity of a cultural symbol and a space that transcends the geography on which it was built, Istanbul Modern proved museums to be one of the most important elements of socio-cultural life as a great space for representation that put its mark on the socio-cultural and economic conditions of the 2000s.

After operating there for 14 years, Istanbul Modern moved to its temporary building in Beyoğlu in May 2018, which would welcome its visitors throughout the construction process of the new building. As Turkey's first modern and contemporary art museum, the new Istanbul Modern building, which is located in the Galataport area, was designed by the Pritzker Prize-winning architect Renzo Piano, who is a member of the world's most important cultural institutions.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Digital art has actually been practiced under different names for many years, both in our country and around the world. I think the reason that we hear this term more often

today stems from the world shifting its focus to digital and online platforms during the pandemic, the fact that artists began to use digital tools more frequently as a production method during this period, and the audiences being able to access art through digital and online methods. It would have been impossible for those few years we spent most of our time online to not affect our daily lives, our creative processes, and, of course, our economy. We have now seen that blockchain technologies, alternative platforms such as the Metaverse, and contemporary art practices such as NFTs, which became part of the discourse along with the others, have gained importance on a global scale. Particularly, the increasing rate of technological advancements and the presence of artificial intelligence closely influence creative industries and art and will continue to do so. The digitalized world's speed of integration of the into art scene is increasing day by day. Today, we are witnessing again and again that well-known artists who have been creating work using various mediums and tools for many years start making use of digital technologies. The rising number of digital artworks entering large museums or collectors' collections, and new digital art exhibitions/festivals/programs launching every year, as well as the innovative efforts and digital centers opened by universities make the existence of digitalization in art more and more palpable. However, as someone who is interested in digital artistic practices, I try to be very careful when I use the concept of "digital art". Art practices guided by technology and digitalization have existed under different names in the art world for many years, as I mentioned. Examples of new media, new technologies and virtual worlds are often included in the method of art production that we categorize as digital today. Now, I think that digital art does not have to focus on digital screens or online content, as it is often thought of, and different aspects of the artworks should be taken into consideration, including their production materials, display styles, thought and execution practices, and conceptual

framework when we call an artwork digital. There have been pioneers who created much literature and projects/exhibitions/works regarding the development of this field in Turkey. The works of Ekmel Ertan, Başak Şenova and Bager Akbay are useful resources for understanding the field's development in Turkey.

**3a) Can you tell us about things you have done in this field as a museum? How would you describe Contemporary Istanbul Plug-in? Can you compare new domestic and international developments?**

As a museum, we organized a project called " Dijital Sanat Alanında Genç Üretimler" (*Young Creations in Digital Art*), which we began the work on in 2021. Istanbul Modern runs the program with contributions from the "Gelecek Gençlerin Kültür Endüstrileri Destek Programı" (*lit. The Future Belongs to the Young, Cultural Industries Support Program*) for the Turkish Ministry of Culture and Tourism. The project aims to reach young artists living in Turkey and young people studying in related fields, and thus has selected 25 participants to meet with artists, academics and researchers from various disciplines. The project aims to increase the skills and resources of the participants in the field of digital art through workshops, artist talks and academic presentations, and focuses on different topics. Some of these topics are the use of digital tools and techniques in works of art with contemporary expressive methods, or the analysis of the constructed and natural environments through emerging technologies. It is also supported by research on new materials and production methods. At the same time, the project will feature events about the history of digital art around the world and in Turkey, and the operation of cultural industries, entrepreneurship, and career building abroad with various figures from the culture-arts sector. The project events will be recorded on video, and those will be shared on the Istanbul Modern social media accounts and will be available to all art lovers.

In addition to the artworks with digital content that we already feature in our collection and in our collection-oriented exhibitions, we also have exhibitions in our upcoming museum schedule that will specifically focus on the field—the interaction between the digitalized world, humankind and society.

**5) Finally, what would you like to add?**

**5a) A suggestion, if you haven't touched on this subject above: How will new applications that Artificial Intelligence (e.g., DALL-E 2, a neural network that generates visual designs) steer us, the art world, and the creation of digital art? Can you address this topic, or any other topics that you are familiar with. How do you intend to handle artists' works with artificial intelligence productions?**

As I mentioned above, since the technology in this field is advancing very rapidly, the consumption of artistic works as well as their production can be quite fast. There are different opinions about the works that are metaverse specific, and the sustainability of NFTs. Trends that quickly skyrocket in any field can often lose that significance just as quickly. And depending on the technique, some artworks may become non-experienceable as technology changes. I think that the benefits that digitalization provides or can provide are unlimited, but it is important to produce work that can be updated and transformed within this framework. On the other hand, the way screen-oriented digital content can be experienced varies quite a lot. This can have results that are positive and sometimes negative. Likewise, online accessibility provides equality in terms of access, while at times restricting the artistic experience.

From a museological point of view, the methods of sharing and explaining the artworks to the audience are just as important as the works that institutions decide to feature or exhibit in their collections. The way and speed of consumption of digital content by different public strata varies especially depending on age. Museum crews have an

important role in this regard. It is also important to technologically maintain artworks and the ease of their user experience especially with works presented through digital devices. Again, depending on the rapidity technological development, the short-lived nature of most digital works in terms of exhibition can prove a problem. In this respect, museums need to closely follow up-to-date practices as well as artists and audiences, and have crews who work in these fields.

Regarding the educational aspect, I can say that, vis-à-vis digital creations, artistic and academic efforts need to follow each other much more closely. When it comes to up-to-date production methods and experiences, the two fields feed each other enormously.

When it comes to the topic of artificial intelligence, we see new sites or tools available for use every day. And these programs and applications are often available for free. Likewise, many examples of the use of artificial intelligence in the field of art exist. Particularly, data analysis and visualization are often prominent. In my opinion, these examples fall into two distinct categories as works that utilize artificial intelligence as a tool or as an end. Sometimes artists make use of artificial intelligence as a part of their process, while sometimes we come across works that focus entirely on artificial intelligence. Of course, this process can lead to works that are often similar. The important factor here is, as always, the functionality of creative and unique ideas... I personally believe that the idea and the research that goes into the work is as important as the outcome of the work when it comes to the field of digital art. When viewed within the framework of site- and project-specific works, these can result in much stronger conceptual efforts. This also helps the audience internalize and establish a connection with the work.

## NUSRET POLAT / SOCIOLOGIST

### **1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I completed my undergraduate, graduate, and doctoral studies at Mimar Sinan Fine Arts University. I work in the fields of Philosophy, Sociology and Art History with an interdisciplinary approach. I was the editor for art magazines such as Genç Sanat, Türkiye'de Sanat, Plato, and Artist. I am a member of AICA Türkiye. I write articles about artists and their exhibitions.

### **2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

The 1990s was part of a period that started in the 1980s, when Turkish art adopted contemporary materials and methods of expression, and the art market emerged. Especially because of the Istanbul Biennial, a closed-off art scene became open and Turkish artists began to take part in international exhibitions. The groundwork for the contemporary art scene we inhabit today was created in those years.

### **3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Digital art is the result of the technology of the era being reflected in art. As an art critic, I focus more on conceptual artwork. I believe that digital art is taking art back to pre-Duchamp retinal art. Retinal art a type of art that only appeals to the eye to create short-term emotional effects. I want art to invite the viewer to think and ask questions. In this sense, it is highly probable that digital art might take a different direction within itself. I can't picture that digital artists will give up art to the retinal. They are still at the very beginning of the road. We'll have to wait and see.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

I don't believe such effects exist yet. We are very new in this field. The field is very new to the world. Not to mention such an influence can only be examined after seeing studies made through sociological methods.



**EKMEL ERTAN / CURATOR, ARTIST, EDUCATOR****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I studied electronics and communications engineering. For many years, I worked as a design and test engineer in the field of telecommunication in Turkey and Europe. I returned to Turkey in 1997 and started a design company, but this time for visual design. I started working in visual design, photography, and multimedia. I started teaching at the Visual Communications Department at Bilgi University in 1999 and continue to teach design and media art courses at different universities today. In 1996, the Internet entered our lives in Turkey, and the first steps for the radical changes today began to be taken, creating greater excitement than it does today. Visual Communication Design programs were then full of young and creative people who had all the excitement of the digital world. In those years, the students in the Visual Communication Design programs of Bilgi University and Sabancı University, and the Information Technologies in Design Master's program—which unfortunately has since ended—started to create incredible works with their awareness of the changing world and an excitement about change. Although all of my courses are essentially design courses, I always saw and used art as an element that paved the way for creativity in the field of design. In my project courses, instead of finding solutions to given design problems, I ask my students to identify a problem themselves—describe it, create it—and produce the solution for that problem. What they didn't see as a problem with would simply not be a problem. I tried to direct their identities as designers to be able to define their own problems, have self-awareness, to be able to create and to add themselves to the solution. Since our medium was digital, after a while, "new media art" works began to pile up. The students created great works and many of these were more matters and

objects of art than those of design. This led me to establish the Amber Arts and Technology Festival, which I launched in 2007. After that, my main fields of work became being the art director for the festival, curatorial work in the field of new media art, and creating or directing many domestic and international projects that exist at the intersection of art and technology, in addition to being an educator.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

The main change that has occurred in the Turkish art scene since the 90s has been the state withdrawing from the contemporary art scene and transferring its powers and responsibilities to private capital. It was during the first phase of neoliberal policies in Turkey. In an economically and politically liberalized environment, society tried to overcome the trauma of the 80s coup by reacting through art. The first curated exhibitions and events organized by artist groups and their avant-garde (for the Turkish art scene) activities in the early 90s, the increased activity brought on by the democratization trend in culture and arts as the European Union eligibility criteria entered the public discourse again in the 2000s, and simultaneously the art market and its development as another extension of neoliberalism created an active and productive period until the 2010s.

The anti-democratic practices and policies of the autocratic system, which has been increasingly felt since the latter half of the 2010s, increasing political pressure and restricted freedom of expression have also caused stagnation and seclusion in the art scene. Another reason for this stagnation was the difficulty for independent artists and art initiatives to exist and maintain their practices in the art market and an art scene that had been rendered insecure by the difficult conditions of neoliberalism and privatized

by privately owned art institutions. The current day art scene took shape to become increasingly controlled, very restrained, lacking in enthusiasm, with only the art market visible on the horizon. It is cut off from the masses, limited to the reach of the elite and the educated middle class, and unable to move beyond the center.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Whether or not Digital Art is a term that has entered our vocabulary recently depends on what you mean by Digital Art. Digital Art has been used since the 80s but was used in a different context than today. Since the 80s, we have referred to the field we call 'Digital Art' by many different names—and it is possible to trace this variety of names back to the 60s—such as multimedia, electronic art, computer art, new media art, virtual art, information art, and digital art. New Media Art has established itself as the most inclusive and descriptive term and has been used for a long time before the field came under the umbrella of contemporary art. I prefer to approach New Media Art as an artistic movement, akin to the movements that came after the 60s, but unlike those, it has a uniqueness provided by technology. Precisely as the New Media movement began losing momentum in the 2010s and started to integrate with contemporary art, and digital technologies was embraced in the entire art field, and with the emergence of terms such as the Blockchain, NFT Art and the Metaverse after 2010, Digital Art has become an all-inclusive, broad umbrella term.

Today, as technologies and their uses increase and diversify, the term Digital Art includes all kinds of art that uses digital resources as a medium. It could be an illustration, like many of the NFT examples, or a sculpture or a video that uses AI.

Unlike New Media Art, Digital Art covers everything digital and does not imply a critical approach.

Therefore, if you ask me, Digital Art is a term that says nothing except that digital technologies are used at one part of the work or process. Most of the time it is nothing than a marketing term.

I'm assuming, though, that you're using the term Digital Art in place of an expanded New Media. So New Media + NFTs, VR, etc. In general, in the choice of this term, there is also the inability to understand the “New”. Taken as an artistic movement, the word “New” becomes an adjective belonging to that movement and its period; in other words, “New Media” becomes a noun phrase. As such, the fact that the media has lost its “newness” after four decades does not detract from its meaning.

On the other hand, the use of the term Digital Art both expands and limits its meaning. When we say 'Digital Art' today, what we understand is, in a sense, contemporary art; depending on how you understand the term in the context of the discourse around its use. In other words, we are talking about a type of contemporary art, but these are examples created by digital ingenuity and are also a part of the art market, much like capital-C Contemporary Art. But they do not have an obligation to be critical like Contemporary Art, as they have overcome the problems of Modernism. So, “Digital Art” as a term that describes a space that functions to create an exclusive position (current, technological, new, etc.) for new artists and art examples to enter the field of Contemporary Art; to liberate the art scene from political obligations forced by Contemporary Art with apolitical but effective (often due to their sheer size) and beautiful visuals, and ultimately to whitewash digital technologies and, with them, the technology companies that have become some of the largest in the world. That last one

is their biggest function. A world transformed by digital technologies needs a new type of art – and an art market to go with it– for technology platforms to maintain their dominance.

We don't need to talk much about the works themselves. There are some very good artworks, some that create controversy and some that do not, some that are controversial but very ordinary—but the frameworks and systems in which these works exist interest me more than individual artists and works.

**3a// Can you talk about your activities in this field? What do you think about Contemporary Istanbul Plug-in? Can you compare new domestic and international developments?**

Plug-in is a section of the Contemporary Istanbul Art Fair that's dedicated to the works of "Digital Art"—in today's parlance—that use new technologies. CI must observe the transforming international market and even expand its own market by participating in that transformation, while opening new areas for consumption by educating its own art buyers. There has always been a gap between New Media Art and the Contemporary Art world, and these two worlds, which are not interested in each other and do not follow each other very much, have started to converge as technology became more common and became a basic element of our daily lives. We are in fact talking about the Contemporary Art world finally beginning to understand that transformation. Plug-in was an indicator of this newfound awareness in the Turkish art market.

What we did in this field was built on different foundations and a different outlook. We were not interested in digital art because we saw it as a salable object. If you look up and try to understand what Amber Platform has been doing since 2007, you will regret that your question was built around Plug-in—or so I would like. Plug-in was an event that we (I, the researchers and artists related to Amber Platform, the New Media

generation) saw as the commercialization of new media art at that time, which we knew was inevitable but chose not to take part in. But, of course, the works exhibited in Plug-in as well as their curators came from the Amber Platform circles, because those circles were what created that field.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

From what I have said so far, you must have understood that I do not equate New Media Art with Digital Art, and that I have basically attributed a political attitude to the former. Through that, I look at the current state of the relationship between art and technology, which is what Digital Art is, that is, what it has come to, and it is not retroactively inclusive and does not include all possible intersections between art and technology. What you call 'Digital Art' is one of the expanding spaces in the art market within today's neoliberal system – or present day capitalism –, or simply a term or field that attempts to completely replace Contemporary Art.

The world is changing, and the main factor of this change is technology. It has always been this way, but it is of more import now that we have arrived at a historical breaking point similar to the industrial revolution. The art of a changing world, of course, is also changing. That's the issue: New Media Art was the period that started this change in the field of art, it was only the beginning - it goes as far back as the 60s. However, while making this change visible and trying to show the direction in which we are evolving, New Media Art also criticized technology, exposed its dangers, and asked questions about what kind of technology and life we want. Digital Art, on the other hand, especially after the pandemic—has been the art of the current day status-quo, where platform capitalism validates its dominance, all foreseen dangers have become realities

of our daily lives, no longer subject to questions. That's why some beautiful visuals that relate to and exist for no matter but for the sake of technology, with their use of 'deep' technology and their sheer size to impress us, are able to be the star pieces of 'Digital Art'. Surely this tells us something.

Contemporary Art has always been like this, a juxtaposition of many conflicting things. It is expected to be critical by nature, but it is also expanded by the system that creates everything it criticizes. It softens the critique with one hand and turns it into a product with the other. This is now done—*anew*—under the term Digital Art.

As Contemporary Art canonizes and affirms that Modernism – and by extension capitalism - is the only ideal, Digital Art today serves to spread and validate the idea that today's technology is the only possible and ideal technology. This serves to achieve the same thing: the validation of the system.

**4a/ What do you think awaits the new generation of audiences in this new Metaverse / digitalized art world? What possibilities are there? What should we imagine as artists, as art lovers? What do you think will change in our lives, as a curator, art manager, artist, and educator?**

Not long ago, we witnessed how a thing called NFT Art came into our lives but disappeared at almost the same speed - at least for now. NFTs have entered the world of art, opening up a new space for the production, distribution and consumption of Digital Art while also introducing new proposals. It opened the door for many digital artists, which allowed a substantial number of young artists to enter the art world in some way and find spaces to express themselves. In fact, it enabled us to meet the techniques, interests and expressions of the new generation, the digital-native generation born into the digital world especially. “Digital” is not only a technology, but also our lives as transformed by this technology, our perceptions, and the way we live, as a whole. It is also digital postmodernism. That's why NFTs were important, allowing

the new generation to enter the art world with their own tools. But neither NFTs nor the NFT generation revolutionized the arts. On the other hand, the NFT art relationship was entirely fueled for digital currency to gain new ground.

I think we live in a period of transition that will take a very long time; we are trying everything. Until the balance of power is re-established, many things will gain momentum and get ahead of others or fall behind. The Metaverse is one of these things, and it is possible that it will be largely realized. In fact, I think of the Metaverse as the evolution of digital technologies from being a tool for our lives to being a medium. I don't mean, of course, the ludicrous world launched by the Meta company (formerly Facebook). When we think in the context of the work of art, the medium has an ontological value for the work. Digital media is no longer a tool for today's people. This is not new, of course, McLuhan said in the 50s that technology has become our existential extensions. Now those extensions have gained an existential dimension. What matters is how digital technologies can increase the possibility of a just and egalitarian life as part of this transformation without dividing humanity into new castes.

##### **5) Finally, what would you like to add?**

**5a) A suggestion, if you haven't touched on this subject above: How will new applications that Artificial Intelligence (e.g., DALL-E 2, a neural network that generates visual designs) steer us, the art world, and the creation of digital art? Can you address this topic, or any other topics that you are familiar with.**

Artificial Intelligence is one of the technologies I mentioned above. With the industrial revolution, machines expanded our physical and mechanical capabilities—they were the tools we delegated jobs that we could not do using our bodies. We had already assigned these tasks to other living beings, and then to mechanical mechanisms and machines. This delegation did not diminish our value as human beings. On the contrary, it glorified human beings and caused us to position humans above all beings as the

dominators of our environment and all other living things. The human was a superior being, not with its physical strength, but thanks to its mind and emotions. Today, we are in a critical phase, one which we call the Anthropocene—we are realizing that this 300-year process is turning the million-year-old world upside down. With the digital revolution, we have seen that the values and actions that make people superior - the mind, consciousness, emotions, and art in this context- would not take us and the world to the utopia for which we had hoped. Though we believed that the thing that makes humankind superior to all other creatures, animate and inanimate, was its ability to write poetry and make art, we suffered two blows at once: The first was to see that we could not make life better despite poetry and art, and the second was that the human-specificity of all these values had become debatable at this point we reached with digital technologies. Our greatest fear, or hope, is the possibility that machines will take over our mental and emotional faculties that we assume to be human, through an organization that is out of the control of individuals. This may not be the case exactly, but that's what we're talking about when we talk about artificial intelligence. As a result, we need a total paradigm shift where we reposition everything, all other beings animate and inanimate, as well as machines. The relationship between Artificial Intelligence and art emerges as a powerful tool that allows us to ask new questions at this breaking point.

Amber Platform, with the Amber Art and Technology Festival and its other projects, became a space to discuss these issues. In that sense, Amber Platform looked through the New Media Art lens and stopped there. In this period of discussions about Digital Art, these questions still need to be scrutinized further.

## SELÇUK ARTUT / DIGITAL ARTIST, ACADEMIC, RESEARCHER

### **1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

Since childhood, I have been a person who loved to crack things open, tinker with them, play computer games, write computer programs. Then I studied mathematics, which is another favorite subject of mine. At the same time, music had always been in my life, and after a while, it started to take the lead. Music and art became the axis of my life. I started teaching at Sabancı University in 2000. I didn't have a master's or a doctorate at that time. They must have hired me because of my competence in the field. In 2005, I did my master's degree in sound art in England. Then in 2013, I completed my doctorate in the philosophy of technology in the European Advanced Studies program in Switzerland. That has been my academic journey. Additionally, I had many albums released with the band Replikas, with whom I make music professionally.

*(Replikas is a Turkish rock band. Founded in 1993 by Gökçe Akçelik, Barkın Engin and Orçun Baştürk, Replikas expanded with the addition of Selçuk Artut in May 1998 and Erden Özer Yalçinkaya in January 2000. It landed on its current line-up when Yalçinkaya left in 2005 and was replaced by Burak Tamer. (Wikipedia))*

I have a new music project that I'm working on right now. I have published books and articles. I am an artist exhibiting work, I should mention. In summary, I take part in both the academic part, that is, the intellectual part, and the production part. I pass my practice on to my students.

Of course, my interest in mathematics is not at a common, high school level. It can take much more complex forms. I also enjoyed the mathematics education I received at the

university as much as possible. But I decided not to focus on that. University should be seen as a maturation process where you realize what we want and don't want. When I was in my third year of university, my active professional music life started. I decided to become a musician. Mathematics is in everything one way or another. Even today, it is in the lessons I teach. I still use mathematics practically, not as a theoretical science.

**The transition to music and digital art stand very close to each other. Can you elaborate on this a little bit? What could be the reason behind this? What is the connection between these two fields?**

This happened because of both sociological and technological developments. If we go back a hundred years from now, we realize that synthesis methods have been developed to produce sounds that do not exist. These did not occur spontaneously. They were created together with telecommunications technology. For example, the concept of the equalizer, which is used in music, actually comes from phone technology. Music began to evolve electronically in a process between and technology that fed each other. It evolved long before imaging. Synthesizers became popular in music and created a culture. Its technological contemporary in the field of imaging was what started out as television. Then, with the widespread use of computers in the eighties, we started to talk a bit about computer art, but if considering the computer as a platform where you can bring these two fields together, the concept of combining sound and image became a very hot topic. After all, although listening to music is interesting, it creates a different experience with visuals. It can create different questions within you through an unknown. We have seen several examples of this. In architecture, for example, we have the Brussels pavilion in 1967, you listen to an electronic work along with images and art in a grand structure made by Xenakis and Le Corbusier. So, all of a sudden, the combination of images and sound became much more common. This was already

something that we came across quite often in cinema. In particular, synthesizer sounds were also used often in science fiction cinema and were used for sounds that do not belong to the world. When you bring all of these together, it is not surprising that sound and image come together in today's media art. This is a field that has been developing day by day for almost a hundred years.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

The nineties are not a period about which I am very knowledgeable. I finished university at ninety-nine. In the 2000s, I was around as part of the audience and the field that interested me was mostly music. So, I can answer this question starting from the beginning of the 2000s.

I think that the 2000s was a very important period in Turkey's cultural life. Because the cultural outlook had degenerated after the 1980s coup and took form of the Arabesque culture, and at the end of the 90s the outlook evolved into one that aimed to protect our culture. It can also be called a somewhat post-modern stance. I come from one such school. I was making music with bands like that. For comparison, back then, in the nineties, only American songs with English words were played in clubs and bars. When me and the people in the band I was in started to make our own music with Turkish lyrics, there were objections against Turkish music. Then came a break at the end of the nineties. This was a time that I too have witnessed. This was very common in the 2000s. Many bands and artists started to emerge in Turkey as well. For these artists, I mean the artists who use the language of this country. Because if we look at what came before, the artists here at the end of the Ottoman Empire or the beginning of the Republic somehow all went to France. They would be in studios in Paris. That's how

they solidified their training. Over time, the art schools, including the institution I am part of, began to take on a different character. Private schools such as Bilkent, Sabancı and Koç started to invest more in art.

One of the inevitable facts of our country is that some things are simply left to the whims of the private sector. With the private sector gaining momentum in the art scene in the 2000s, the Biennial started to attract a lot of attention. As you know, Koç Holding has been its sponsor and has been running it for a long time. It is a free event. Then, a tradition of expos like Contemporary Istanbul started to emerge in Turkey. If we want to talk about other venues of various sizes, we can talk about Arter. Arter opened. What started as Project Four became Salt and found an identity with the support of Garanti. We can mention the Sakıp Sabancı Museum and the Sadberk Hanım Museum. All of these found themselves in the 2000s. I can't say much about the nineties. As a general summary for the nineties, we can say that the biennial began back then.

I can say that the interest in Istanbul increased from 2000 to 2013. 2010, for example, was the peak for Istanbul. People from Europe had started to move to Istanbul. After London and Berlin, the third stop was Istanbul. It sounded exotic and very interesting. Therefore, I can say that between 2000 and 2013, an extremely rich cultural foundation was created in Istanbul, especially.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

To go over the concept, digital art as a term seems insufficient to me. It seems right to me to talk about technology and art. Because, sorry to be vulgar, when you leave a photography exhibition, you don't say "what a beautiful digital photography

exhibition". I think those discussions are over. So, now, art is digital, analog, these discussions are a little behind the times. Yes, for some it may matter. But when it comes to digital art, obviously, this label remained because of the culture that formed around it. I wish it was called technological art and digital art could be the subtitle. Because when it comes to digital art, people may get the wrong idea that everything drawn in Photoshop is digital art. However, there is a concept called born-digital in English. That means your work is produced entirely based on the new forms, expressions and understandings brought on by the digital world. This goes into other things, for example by writing code or generating software yourself or feeding it from some data. In that sense, when you make, say, a digital installation, calling it "digital art" turns the subject acceptable only through the medium. Those who do not do this are not considered artists. That's why I think it's more appropriate to call it technological art. We are at a point, of course, where things have inevitably advanced through technological evolution. We all look at screens and carry phones. However, our habits there began to become more widespread. Not to mention the pandemic. During the pandemic, people learned how to be together from across long distances. In other words, in doing all those remote meetings and education, people created a place of their own in this digital world. They did not run away from this new reality they encountered. Those who could run from it before, are no longer able to. If you ask me, when they said that we would be switching to remote education during the pandemic, for example, I was a little surprised. We already had been doing many things online. This made it necessary for the masses to modernize and evolve at once. So, people began to lean into their curiosity regarding this field. They said, what is happening today, what is happening on Instagram, and the attraction of the digital art hooked them in. Later, things did not

simply stay on the screen (which is why I find it appropriate to call it technology art) but spread to a wider field. It was fueled by data.

In the meantime, what happened to art? I have very critical opinions about this. Digital art often looks decorative. It exists within an approach that focuses on form and shape. This fails to satisfy if you come from a traditional artistic background or value intellectual thought. That's why the concept of NFTs has emerged at this point today. It was created in a commercial marketplace that takes precedence over Digital Art. It has turned into a speculative asset, and it would not be right for everyone to accept it unconditionally. When an idea spreads, things like profit concerns or pretension are born in its wake. People will talk about a digital work, saying that it utilizes data. But when we look at the work itself, we cannot find any information about what data it supposedly uses. Maybe it's data from murderers. We don't know if the data is really accurate. Sometimes it is said that artificial intelligence created the data. Did artificial intelligence really do it? I've been questioning them a bit. From what I have seen, they are trying to assign meaning to works done through some ambiguous concepts and dubious values. Since my view of art is related to the idea and the essence of the work, I think that most of those works done today are decorative.

### **When you generate ideas, how do you connect them with technological art?**

We need to talk about that through artwork. For example, on the subject of AI, when I used it to produce work, I made something critical of AI. Not everything artificial intelligence does is beautiful. The work also has a fantastical side. The story of that piece I made is based on the disappearance of music in a dystopia. There is an evolving idea to use artificial intelligence to revive music. When you look at an artwork, it is necessary to feel the idea, story and creativity. Pressing a button and thinking you did

something with AI does not represent creativity for me. This obviously causes discrimination as well. Some artists may not be knowledgeable about these subjects. Some artists may not have the resources. Those who do or just know how to press that button should not be automatically considered artists. So, I really like to talk at length about the work. For example, I have recently made some works that examine the art of geometry. These are Islamic geometry studies—geometry became very advanced during the Islamic period. I like presenting content layer by layer. My work is not just decorative. What I was trying to do was to build that bridge between the East and West, where that cultural break happened. Instead of towing an orientalist line or an occultist, that is, a Western facing line, I talk about how civilization does not belong to any hegemony, it is owned by every society. I prefer this. I don't worry about some price speculations or what someone said or did not say about an artwork. Using the work as an interface, I prefer to present an intellectual wealth behind it.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

It increased visits to exhibitions. They don't charge you in places where digital art and technological art are exhibited. The events are public. This is a nice thing, and it invites people to art. But I have to say that, of course, I have questions about how deeply it is understood by people because of its decorative content.

Many artworks we only see as Instagram photos from some people. People follow art to be able to say, "I socialized, I was there, I am part of something like that.". Many people only know certain things on a by-brand basis. Even when we ask for the names of a few artists, they do not even know any in this field. Like every new thing, it is consumed very quickly. No matter how inviting it is, it provides great motivation for

participation, but a responsibility falls to the audience regarding the deepening that is to occur afterwards. I don't think that responsibility is carried enough. I think the number one thing they add to their lives with digital art is entertainment. This is a very natural thing. There is too much grief in this land we live in right now. It's okay to have something that's pretty good to get over it, something that rehabilitates. As I stated in my previous answers, I also think that art has an intellectual responsibility. The artist has part of that responsibility. Maybe it's more than just producing something huge to make a splash. These audiences are just about to start questioning things. Because the artworks we see seem stuck in a rut. They repeat themselves in perpetuity within Digital Art, but they see it primarily as a means of entertainment.

Secondly, I think that it is necessary to reach a phase where they see it as intellectual nourishment. This, of course, requires effort. It's like reading a book. Or something like sitting down and listening to music. There are grounds for this to happen, at least through education. In other words, when they go outside of educational institutions and people other than those who receive training in this field, they see these works from a different perspective. Of course, beyond providing entertainment, the works become more critical.

Of course, I care a lot about other things, with regard to artist meetings and exhibitions, I mean as these become more common the second part I talked about, I mean more than the sheer entertainment value there might be more of an intellectual culminating, or so I desire. But right now, it's more just entertainment for people's lives, and a status symbol is how we evaluate and think about it.

As technology develops and integrates faster into our lives, will the place of art in digital technology become more different? Or will it just continue expanding as a

technological utility? This is a matter of intellectual debate. There are also some people that advocate technological progress over art.

It is very difficult to talk about what is art and what is not. The determinant of these is time. Which of these artworks will endure in the future? Whichever ones are more thought about and talked about, those will remain. In other words, these works will reach a much more valuable point when they are discussed in theses and in more serious literature rather than on Instagram pages. Beyond that, of course, we always hear the names of these companies in the background, of companies that develop some technology well. They support art to increase the appeal of those screens. Now I can't complain too much about this because there is no other support. I mean, maybe if there was support from somewhere else. And accessing these technologies is not easy either. And that there is such a dilemma. While they offer you art, they also sell you technology.

There is a view that technology has always been included in art, and the discovery of paint is a technological advance, and today, with the progress of science, the current technological progress, artificial intelligence will of course join art.

This has not been fully digested yet. Everything is developing very fast. Someone asked me for a piece I did, "Did it involve artificial intelligence?" I said no. It doesn't have to be in everything. Nothing better happens just because it's artificial intelligence. It's kind of like this. It's like when someone comes to you after you paint and says, "Did you use that paint here?" The person who has very good paint isn't necessarily able to paint very well. In other words, we will be able to talk about a more democratic technological art after we overcome this process of digestion. At the moment, I see power and an audience that is helpless because it cannot reach this power and has simply accepted

things. They give value to that work only through certain words. This can happen through either digestion or collective enlightenment. I mean, what is artificial intelligence? Not everyone has to understand it completely. Whether there is artificial intelligence in an artwork does not change much for it.

I think that in the past, the paintings and frescos in churches were something very inaccessible and very different for people. It took many years for them to take paintings home and hang them. Until then, painting was something inaccessible and divine. Of course, we do not approach it so godly at the moment, but for those who are far from technology, can this be a kind of perception of future time and space?

Of course, this also creates the market we just mentioned. So, like, when you get there, maybe it's like you actually went to an expo. In other words, you get pleasure from the latest technology there. Sometimes you even forget the name of the artist and things becomes similar in many ways. This is definitely true in some cases. In my opinion, inevitably, as the size increases, for example, inaccessibility emerges, so there is an admiration there. Or maybe because you can't reach it, from more of an ego point, it gives you this feeling that you are unconditionally defeated or that they are good and you are bad. I mean I can't reach that point. But they have. So that is very good. So you have to get out of this mindset a little bit. Yes. Technological art runs that kind of risk.

##### **5) Finally, is there anything else you would like to add?**

Studies on this subject are very important. As I mentioned before, there is not much talk about these things, it is more like entertainment. But it is not. In other words, there are some expressions that you protest when necessary and praise when necessary. That's not very new either. That's what I really want to say. That's why I'm a little

against the term “new media”. New means I don't have to learn about the past anymore. It's like saying everything after this is new and good. When we say, “I saw this done for the first time, it is very beautiful”, in fact, that reveals our ignorance in some places. Viewers should be careful about this. These things are not really new. Only the mediums have changed. The technology has made some strides, but we have not arrived at strange, inaccessible point intellectually or aesthetically. I don't know if we can. Human imagination has limits. I am not being negative here. This art will reach a beautiful point in time, but it is necessary for artists to be careful about their arrogant attitudes. Nobody is creating the world again. I love modesty because it is an ancient value of these lands. When you regret something, I think it is very important to be able to stand behind it, look at it together, talk about what happened, and criticize it when appropriate. For example, when someone in whose music project we used artificial intelligence in asked if I liked the music that was produced, I said "no, I don't like it". I don't like what artificial intelligence does. I mean, I am not satisfied with the results of my own work of art. Because the main thing is to be able to talk about that. So, I think art starts at that point. Beyond that, you can say “they are beautiful because artificial intelligence made it” and be unable to say anything beyond that.

Artificial intelligence is actually learning as well. After all, it is impossible for it to replace a human being. It connects itself to the knowledge that already exists. I personally do not believe that it can get ahead of people's creativity. Creativity is really something else. I mean, using existing data, it means changing what's already there. But creating something new is a whole other process after all. It is a human talent. Is this talent inspiration, an inner connection, or putting yourself spiritually into the work? Whatever it is, I believe it will always be present.

**I believe that too.**

**Yes, I noticed a few things while researching you. You hosted a panel at Zorlu that I am very sorry to have missed, a chat. About the human potential of the future? What was the content of the talk? Or is it possible for me to access that content?**

I was a moderator there. I also had three guests. Mario Klingemann, Sasha Stiles and Andreas Refsgaard. It was a talk I moderated about artificial intelligence. I also asked challenging questions. Mario Klingeman is an artist using artificial intelligence. I just asked him this; “Could you be an artist without artificial intelligence?” I won't spoil it. Just watch.

(<https://youtu.be/JHFGiQhzKV0>)

Siz matematiği de çok bırakmamışsınız. Nesin matematik köyünde halen dersler veriyorsunuz. Bu derslerin bir amacı var mı? Teknolojiyle ilgili olan kişilere ilham vermek amaçlı mı yoksa tamamen kişisel bir şey, hobi gibi mi?

I am working on the art of geometry. Behind this art is Islamic geometry and its own patterns. I'm looking into that. So, a hunt for patterns began to form within me. You can come across these patterns especially in places of worship, mosques and their entrance doors.

**What is this, a kind of symbol? So, you mean there is a religious symbolism there?**

Actually, there is no symbol. I don't want to talk about any religion. Because the art of geometry advanced in the Islamic period, but it existed in the Hellenistic period before that. But the reason why Islam embraces it is to stay away from symbolism. In other words, when you enter the Church, Jesus stands crucified before you. But when you

enter the mosque, you do not see any symbols. You see something very abstract. In this respect, Islam has accomplished something good. Rather, it preferred to stay away from the figurative by including this abstraction and stance of mathematics. But as far as I can see, whether figurative painting is prohibited in Islam or not is widely discussed, but figurative painting is prohibited in places of worship. I am not a very religious person. That's why I'm talking a little like looking in from the outside, but I was in Jerusalem last year. It is a place where you can see all religions. In terms of symbolism, Jews have a very high level of symbolic beliefs. Because this could be taken as far as worshipping icons, Islam was against that, so Islam preferred geometry and the patterns created by it.

### **Where is there geometry in Islam?**

In Islam, there is a chapter called the art of geometry. Look at the doors of mosques in Istanbul. Look at the carvings there. See the decorations inside. There are so many things. There's something geometric on all of them. Following each other. On top of that, I'm writing a book. It'll be out in a few months. It will be published in New York. I'm trying to generate these with computer code. After doing the mathematical analysis, I lecture about that at the Nesin Village. In other words, it's like examining a geometric pattern, analyzing it mathematically, generating it, and then turning it into a visual. I combined something very old with something new. That's where today's media art comes from.

### **You are with a very large group of artists there in Baku. What is the story there?**

I have been producing geometric artwork for a while. There was also a special kind of technology there. I have a geometric pattern that I use with laser projection. When I

went to Baku, I looked around for these patterns. My work in Baku featured motifs that I could see on several mosques, but I analyzed them because I produced and presented them with code.

**You are also active at Sabancı University, correct?**

I am currently working there as an instructor. I am the department head of the art and design program. It is called the department of Visual Arts and Visual Communication Design.

**It has been said in several interviews that education needs reform. Criticism was made about the fact that technological information is often not given in universities. How do you view Sabancı University in this regard? Can it provide a technological foundation for the students? In other words, can the school educate individuals to get out of the old classical education system and directly use these? Is it technically sufficient?**

Sabancı University is an important university not only for Turkey but also for the world. The first proof of this is that everyone who enrolls in the school, whether they are studying history, psychology, or science, takes a coding class. Secondly, there is a creative coding class I teach. In this course, we work on Islamic Geometry Patterns. Meanwhile, we live in a hegemony that constantly receives art history the Renaissance and pretends there is nothing else. I'm trying to break this. You need to look at it more holistically. Today, Baghdad is bombed-out and destroyed, but way back when, it had an enormous library: the Library of Alexandria. This was a very important library where works from all civilizations were translated into Arabic. Many important scientists came out from there. You can also consider Cordoba on the Andalusian side. In other words, there is a course that involves reading history a little bit before going into design

and making art through programming. There is great freedom within the scope of the program. You can go and take a course in computer science if you want to. In addition to all that, there is a course you can take about important works of art around the world. There is a course you can take regarding the field of visual arts in Turkey. There are studio classes. The students who graduate here leave very well equipped.

A student who gets into Sabancı University decides for themselves which department they want to study. I have students who chose to be an artist when they were considering studying economics, who came in third place in Turkey.



**ARDA YALKIN / DIGITAL ARTIST****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I am a new media artist. I am an artist who uses technology in technological artworks. I use technological mediums. I studied electronics and computers in high school. After that, I attended university, two universities. The first was the tourism business, the second was archaeological resuscitation.

My interest was more in music. I played the guitar. I continued my university studies to postpone my military service. Then I left both universities without graduating. In the early 2000s, late 90s, I became interested in music, or to put it more accurately, music technology. It intrigued me. That was when digital studios were just being established. I designed various voiceover studios and movie dubbing studios. I worked at a company that provided technology infrastructures to these places. I planned how they would all operate, how they would work. I started working as a sound technician at Babylon in 2002.

While working at Babylon, I had the opportunity to work with many musicians. At the same time, I encountered visuals there. I had seen a few concerts. I was very impressed with the audio and video, and their synchronization. In the year 2004, I decided that I wanted to work more with visuals, not just sound. I founded a company in 2004. I did not know much about these things, but through my company at that time, I worked with many artists who were active (Mor ve Ötesi, Pentagonum, Şebnem Ferah, Kenan Doğulu, Tarkan). I started designing stage visuals and making live video performances for the artists I worked with. We were the first to do this job in Turkey. If you ask how these

performances are done, well, now, of course, it is done automatically. There are some machines. Those machines actually generate things according to the sound, but back then it was like this: You would have two computers. Previously, you would have had prepared five-second or ten-second videos that fit the concept. We usually put giant screens behind the band while those videos ran on stage, rather than video animation. Synchronous videos would be played on those screens. These days, more light work is used, but back then we would pick topics with a story. An example would be the work I did with Şebnem Ferah in 2007.

(<https://vimeo.com/4587162>) I did all the design here.

We see the videos as a performance there.

I started making music videos in 2009. A few of these videos garnered great attention, became famous and were broadcast on NTV. They were also viewed abroad. Then a gallery came and asked me to do a similar job for them. I did a video piece and participated in my first exhibition. That first exhibition was about Pop Art and Andy Warhol. The video there was very popular. They put that video in Contemporary Istanbul. From there, it was picked up for a very good collection. So, I understood that I could be a video artist and that I could live off that line of work.

I opened an exhibition in 2012. For that, they had said that we ought to do a video exhibition again. I thought that just by making videos, I couldn't achieve what I wanted. So, I thought I wouldn't be able to earn enough money to survive. So, I decided to paint, and I painted there for the first time in my life. I opened an art exhibition. Of course, there were video works in it, but still, that exhibition sold out. Then I joined Contemporary Istanbul. My work sold out there as well. After that, offers started coming one after another.

I attended Look Barcelona, FIAC, and an expo in the USA and received good responses. I did three solo exhibitions. All three were satisfactory. After that, we founded Ha:ar together with Hande in 2018.

Hande and I had never collaborated before, but we had had an animation studio together since 2009. We shot a lot of commercials. We were doing commercial gigs. I have been working on Ha:ar more since 2018. As Ha:ar, we opened five exhibitions back-to-back. Two in Italy, one in America, one in New York, one in London, one in Istanbul, and we did a performance in Istanbul at Contemporary. We published two books. The period since 2018 has been very busy. We founded Piksel in 2020.

Our goal with Piksel was to convey our own knowledge to people. It grew very quickly. It is an artist support program with a budget of approximately two million liras this year. In fact, we can say that it is one of the biggest single piece artist issues in Turkey. We distribute one million liras to support artists. There is an area that we think has been neglected. People see technology as a tool that imitates something. For example: I want to make a sculpture. You can make that ten-meter by ten-meter statue yourself by hand in a hundred thousand or do it with a machine in five days. So, they go with the machine. This is a method of using machines instead of skilled people. Another approach is to think purely technologically. Then, they think that traditional painting is dead. But there's a big grey area between those two. There is a large undefined space, a void.

I think things that will connect technology to art history are very important. Time moves so fast. Things that focus only on technology are not of interest to us (to me or to Hande). Therefore, what we do is to bring together technology and conventional art. We do not think that in order to master one, it is necessary to reject the other. Because we follow this path, the things we did were unique. This is how we stood out from the

crowd. At the point we are at, we can no longer be called either new media artists or conventional artists. We strongly believe in craftsmanship. We learn instead of relegating things. We cast bronze in our own workshop. We also learn to use robots.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

It wouldn't be right for me to say anything about Turkish art in particular. I opened my first exhibition in 2012. I had been doing creative work before, but I had no connection to the art scene. I can't even say that I followed the art scene. I was interested in music in the 1990s. It was then that this story of integration had begun. The same thing happened with music. Things happened in music technology that had happened in other branches as well. The coming together of artists in Turkey with those abroad, or the people who created art there, naturally took place effortlessly.

The presence of the Internet has facilitated communication. Our access to data sources has increased as the internet became widespread. Thus, we were able to work globally on what we do. I cannot comment about the plastic arts, that is, the conventional art scene. But I will say some things about the technological part. In the early 2000s, there was a VCD department at Bilgi University. (Department of Video Communication and Design) Refik Anadol, for example, graduated from there. There are other friends we know who studied in this department. Many of them became animators, advertisers. Others formed the foundations of new media art in Turkey. Most alumni are now famous people: lecturers, famous designers, famous performance artists.

Capital in Turkey wants to do something very seriously. They want to convey art in Turkey to other countries. And that is as it should be. The state should be the one to do it, but in Turkey, of course, everything is done by the private sector. The private sector

really has great power here. For example: I must admit that Eczacıbaşı, Koç, etc. have great power in this world. Most of them have their own museums. They bring artists from abroad to these museums and send plastic artists from Turkey there. All of these are very nice, but unfortunately there is no such support for new media art in Turkey. I don't know why, but you don't see a new media artist being supported in any museum. We still cannot say that this art is fully accepted by the art world. Despite this, we have many artists who have debuted abroad.

Take, for example, Candaş Şişman. Candaş Şişman has more than one exhibition going on abroad at the moment. There should be five or four. There's one in New York. I know that one. I know there is one in Finland. That one is currently ongoing. No big news about any of them here. But when you say Candaş's name anywhere abroad, he is a well-known person. He is a person who has achieved it all by himself. There are more examples: Ali Demirel, Refik Anadol, Ozan Türkkan, Can Büyükberber. When you go to a place and talk about Turkish artists, these are all people known in those circles, namely in New Media Art circles. This is despite the lack of support. Because we have no roots. Nobody was there to tell us that we couldn't do something, or how we couldn't do it a certain way. These rules only exist in academia. There is such a side to the plastic arts. There are these rules that have endured from the Medici period. There are teachers who are trained according to those rules. There are people who train those teachers. They have schools. They have other stuff. We are not subject to any of these. Therefore, because we build ourselves up and we can communicate and organize among ourselves, we can communicate with the world very easily. Yes, we did not receive support from anything. Without the support of any institution, as Ha:ar, we opened four exhibitions abroad in three years. We were able to open them. I can say that proudly. To sum up, the nineties was the birthplace of our genre, our art. With the greater accessibility of

computer technology and of software, we new media artists established our own rootless art. We threw away our roots, created our own discipline. Call it whatever you like, technology art or art technology, new media art or digital art.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

There is Teoman Madra who did this stuff in the 80s and 90s. Few people know of him. A person who is interested in coding, who is interested in web art, who has made art with Amigas in the eighties. I will not go into these details. Where did the history of this art come from? I won't bother you with it. These are things that are already on the internet. I will share my personal thoughts. Art is our way of communicating with the world, or our way of understanding the world or saying something to the world, giving back to it what we have taken from the world. A means of communication or a digestive system for me. Now there is an example that I use a lot.

One of the topics we talk about the most these days is artificial intelligence. We don't know how fast it will progress or what it will do in time. We can predict what will happen ten years from now, five years from now, seven years from now. Judges, attorneys or prosecutors make decisions based on legal data. The law is kind of like the rules of mathematics. If there's a decision to be made, artificial intelligence can do it better than humans. If we give it the data correctly. So, you won't need a lawyer five years from now, seven years from now, to solve your problems or defend yourself in case of any injustice. You will perhaps resort to special artificial intelligence algorithms trained for this. Now if we as artists want to criticize this situation, or if I want to do some repeated work to reveal a mistake made in this situation, how do I do it?

Right now, if I want to criticize a social phenomenon, I create artworks. In this case, it is extremely meaningless for me to use oil paints to convey the prejudices in artificial intelligence algorithms to you. I could do it, but it would be pointless. Therefore, if I am dealing with an issue like that as an artist, I have to use technology. In other words, it is necessary that digital technology enters art. And we're making a mistake. I say this because this question is asked all the time:

What is the definition of technology?

First, humans made paint by crushing certain stones and plants. We rubbed them on stones. Now isn't that a technology? Man crushes the plant, he sees the color coming out of it. He puts that color on the wall. Notices it to be a painting. Then he realizes, he says, "if I do this not by crushing flowers like this, but by using I don't know what kind of chemistry, it lasts longer." See, the artist is already a person that uses technology. Technology quickly adapts to the artist's world.

In another example, when, at first, we combined clay or pounded stones into goddesses, we suddenly began to carve stone. Then an artist like Michelangelo comes and does a sketch. He transfers this sketch to another slab of marble with all the dimensions with a set of wooden tools used at that time in the marble workshop he had established, and after that, twenty people started to work on it this time. This is also technology at work. It is the technology of enlarging the work you do. What do we do now? I sculpt using a robot. This is how technology is used now. I get a lot of criticism. They ask how there can be art done in a computer. It has to happen if we want to catch up with the times. It seems absurd to me to use technology in every aspect of our lives and then to reject technology at that point.

I use a lot of software. After encountering some applications of artificial intelligence that make art, people stood up, saying that art is dying. We misunderstand the definition of art. Art is not illustration or painting.

Now if you're doing something repetitive, for example, you need to include a story about green apples in your newspaper. Your newspaper needs to put an image on the article about green apples. Suppose this article is about worms in green apples. I need a green apple and a worm. Now a photographer can photograph that, or an illustrator can draw it.

Both the photographer and the illustrator here accept themselves as artists. Whoever calls himself an artist is an artist, but let's say I own a newspaper. Instead of giving you a brief, instead of telling you what kind of picture or illustration I want, I choose to write it down and request this image from artificial intelligence. If I had such an opportunity, of course, I would use artificial intelligence commercially. So, what happens? Artists become unemployed. Then what happens? These people, artists, are against this system. Why? Because it's doing their work. I don't view artificial intelligence like that. I think the purpose of artificial intelligence is that the human brain works very differently from a computer. There are layers. We go deep and make connections between those layers. Say, the stain from an ice cream cone we had in our childhood when we dropped it, it can remind us of something else years later. We are able to use these links between unrelated events. But the capacity of our stomach is very slow. The dig is very slow and the capacity to obtain information is low. They are not always available. We have to think about it and go back gradually, and at some point we reach places we can't get through.

But artificial intelligence is not like that, it can make decisions very quickly. It can make very mathematical connections between objects. But it cannot imagine. I see artificial intelligence as an extension of the human brain, a medium that allows us to do things that we cannot do, and that is how we actually begin to transform into another life form. Artists should start thinking this way already. Artificial intelligence or these new technological tools; How can I transform my own way of thinking or my way of production into something else by using this medium and not as an imitator of an existing thing? They should scrutinize that. There are people who do this, who have started to do it, and they continue to do so.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

There is a collective mistake we make as new media artists, or as people who use technology. Exhibiting the artworks that we produce and bringing our works together with the audience requires great expense, great infrastructure, great work and effort. Therefore, these works cannot be exhibited without funding. We have to find these funds and access the technological tools. In order to exhibit my work, mindfullow, I needed twelve screens, maybe seven hundred, eight hundred thousand liras worth of equipment. This is not something everyone can get into.

There is also the personal archive aspect to this. That is a very interesting issue. I have had panels on new media art conservation with speakers such as Selçuk Ertuğ and İpek Yaylasu. We will publish it in a week or two. You can cooperate with institutions to access this data. Institutions have archives available, but you can usually access a lot of data from the internet. For example, for our own project, we used the sculpture archives of museums for the artificial intelligence sculpture for Contemporary Istanbul. We

accessed thousands of sculptures, built and received data. We created our own dataset, although that is not necessary. Because these major artificial intelligence infrastructures can already acquire all that data for us. They process more data than we can. Because they have very, very, very big infrastructure.

Now because we need such an infrastructure to present these works of art, we have to cooperate with people. You cannot do that with the state because the state does not support the arts in Turkey. We are talking about Turkey, but this is actually the case all over the world. At that point, we face another problem. The artwork we're creating needs to also work for the benefit of the institution we are cooperating with. What is that benefit? Reaching as many people as possible. This is the moment when the artist begins to fall into a trap. You start creating to that end. I'm collaborating with company X, the expectation of company X from me is that, yes, it's art, but if you don't produce something that is inclusive for everyone to come and have fun or put on Instagram, you can't get to do anything else. That's because you can't find that money anymore. This traps the artist.

They criticize Refik Anadol heavily in an article by Jerry Saltz that I am currently reading.

(<https://www.vulture.com/article/jerry-saltz-moma-refik-anadol-unsupervised.html>)

The reason for the criticism is that the content of his artworks appeals to the average person and does not say anything political. When you defend a policy, you are opposing the people who oppose that policy. This situation is contrary to the interests of the company. The aim of companies is always to reach the most people. For this reason, companies do not go with political art.

Then, art that's popular, without a political edge, art that's purely entertainment-based, and digital amusement parks are starting to emerge. Therefore, people see new media art or media art as art that deals with empty things and fetching colors. Maybe that's why museums keep their distance from work in new media art for now.

So, artists then create works that, like DNA, do not actually say anything but make any technical invention or visual invention so they combine these works with so-called statements made up after the fact. Or they combine it with science fiction. When you mention that artificial intelligence combines millions of bits of data to create something, the audience feels as if they have seen technology and the future in that artwork. For this reason, most of the works created remains superficial.

Conventional artists, on the other hand, are more interested in concepts; What is art history? Why is art made? What is the purpose of art? They are more concerned with the conceptual aspects of art.

Those who are working in new media art today tend to get rich from working with art technology or human technology. Most of them do not have an art history education. On the technological side of things, they are trained in computer engineering or VCD. They receive training on using software and the concept of design, but they do not have programs on art.

There is a shortage of people educated in art history and philosophy of art.

That is probably the negative side of it. I think there are some gaps in education, things that need correcting. Let me tell you an example that I know and have witnessed; A person I know closely could not graduate from university for years. He is a very good illustrator. He draws using an iPad. He cannot draw with a pencil. He did not graduate from his university for many years. They forced him to draw on paper, draw with

charcoal. Let me give you another example. Young people studying theater have it very difficult these days.

Today, the stages in theaters are set up digitally. When you model a dress, you use hair. You use stone design for stage decoration. Instead of teaching these in schools, for example, in stage design, they still glue bits of cardboard together and make the students build those models with them. There is a need for reform in education.

The medium in use also influences the way of thinking. If these people are artists, it is necessary to teach them that the way to create art is not just oil painting. Remember, even video art was not accepted for years. Now, people all around the world accept video as a conventional art medium. Most teachers don't know about technology. There needs to be a reform in education.

Technology does not progress at a linear pace. Let me give you an example about the phone that explains this: The date of invention of the telephone is 1870. The first phone call was made in 1870. The first cell phone was in 1970. So, there's a century in between. During those one hundred years, the phone was only able to get rid of the cord. In one hundred years, we were able to cut the cord and throw it away. It has been fifty years since 1970. Exactly half that previous amount. What we have done in that period of fifty years was, we got rid of the cord, we found the Internet, the mobile phone, the displays of the mobile phone got bigger, we put music, social media, banks, finance, newspaper, all the information we need into that phone. So, the phone that we freed from the cord fifty years ago now works like an extension of us.

Therefore, every other thing we would go on to accept as normal became a "groundbreaking" technological development.

Now, with more and more rapid technological advancements, there is a new "groundbreaking" development every three to five years, every other year. It radically changes our previous life. The current "groundbreaking" development is artificial intelligence.

I'll give you an example: My English is not advanced enough to write a book-level text. So, when I wrote long texts in Turkish for my website, I hired a translator and paid him, and he translated the texts I had prepared. Since I started using Artificial Intelligence actively, there has been no need for a translator. I give it the Turkish text and say, "translate this to English, use an intermediate level English". When I describe the language, my result is often better. If it's for a functional thing, like building a website, I only pay the translator for checking. So, what happened is, translation as a job has disappeared.

Let's take music. There is a concept called stock, as in stock music, stock photography. I mean, people use these for everyday creativity, people who make small videos, people who make manuals. All of them will be out of work in a year or two.

How do we see technological art? We go somewhere, we look at a display or we enter a venue and encounter kinetic sculptures. Or we notice technological art within the Metaverse, which is much talked about. We are a long way from the Metaverse. If we are really going to talk about Metaverse, we need to be able to travel between programs. For example:

Here, I am playing a game with Hande. Hande is able to go and buy a Gucci dress from another program while playing that game and put that dress on his avatar in the game or hang an NFT she bought on the wall of her in-game house—that's what I mean by traveling between programs. There has to be a connection between the universes.

As the tools we use to perceive non-physical worlds evolve, as internet connections get faster, we will be able to follow data through three-dimensional images coming through our browsers or through small implants that we will put into our hands. Currently, there are artists who add these little chips to their bodies and make bio-art in this way.

When these become widespread, my guess is that in five or six years from now, our perception of the world will change. We will be online 24/7 in the near future.

What I'm trying to convey is, I will be able to see everything about you when I look at you through the glasses I wear. How old are you? What did you post last, what do you enjoy, where do you go, what stuff did you like? I will be able to see all of that instantly and my view of you will change. Imagine receiving 24/7 information from everything you see in every building you look at, and you adding information to it. That's when everything will change. Digital art hasn't done anything yet, we haven't quite seen it yet. But when the time comes, we will understand what kind of art can be created with digital technology.

Right now, we imitate the types of art that already exist. But when these mediums get involved, then we will find ourselves in a completely different world.

##### **5) Finally, is there anything else you would like to add?**

As ha:ar; we are creating a workshop that we hope to make the biggest in Turkey, and one among very few even in Europe, and even in the world. This workshop will belong to Piksel and will be open to all its accredited artists. It will have a high technological foundation. We are currently trying to complete this workshop. Our aim is to establish a space that lives 24/7 and where people can discuss things. We are trying to use our

resources and make the best of what we have. We have found a nice location here in Turkey. We have also found sponsors. This is our current upcoming project.

Then we will have an exhibition about movement. It is a project we are doing in partnership with an international organization. Transforming movements of the human body into works of art. We have an exhibition project where we work with kinetic sculptures, the production of sound with body movements, or the production of physical sculptures with body movements. We will do it this fall.

Apart from those, we also have a single-piece exhibition project. This is not a collaboration; it is our own artistic project. We want to design a modern temple. In this modern temple, many things will be generated by artificial intelligence, or with the support of artificial intelligence. We will create an experiential space. This involves more work on linguistics and sound. We will produce the texts and the dialogue with a generative artificial intelligence. This will not happen with existing AI, like Chat-GPT. We will use an artificial intelligence that derives its own text, generates speech from it, and this will create an experiential space that belongs to the temple. This is not a religious temple; we will build a temple that ironically examines the methods with which people today satisfy their emotional hunger. The temple will feature a single artwork, and the altar and paintings.

**SİBEL AVCI TUĞAL / ACADEMIC, ARTIST****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

Currently, I am an Associate Professor at FMV Işık University STMF Department of Visual Communication Design (VCD). I am a member of the academic staff as a faculty member. At the same time, I continue my administrative duty as the Head of the VCD Department.

I completed my undergraduate studies at the Istanbul Technical University, Faculty of Electrical and Electronics, as an Electronics and Communications Engineer. After my undergraduate degree, I worked as a project and product engineer in the International Communication Company for 13 years. As a personal venture, I worked as a designer, and product and project manager at the multimedia company of which I was one of the founders. From a young age, I had the chance to grow up in an environment intertwined with art. I think that the fact that I come from artist and educator parents had a big impact on that. Having a physics teacher mother, and an artist and an academic father had a great role in my perceiving combinations of different disciplines to be normal. Besides, I think that my father's Village Institute background also contributed positively to my development process. From a very young age, I have been constantly producing art, especially in the field of painting, and participating in exhibitions, with started working with photography during my university years. My first solo exhibition was when I was 4.5 years old. I chose to study engineering because of my close interest in mathematics. My curiosity about communication determined my major. Since 1995, I have started painting digitally, illustrating and designing on the computer. During my time in Canada, I did graphic design and web design as a freelancer. After returning to Turkey, I started my academic career by joining in the founding staff of FMV Işık

University Faculty of Fine Arts. I completed my graduate studies in Işık University SBE Art Theory and Criticism with a thesis on light and movement: Op Art. I completed my doctorate at Işık University SBE Art Science Doctorate program with a study titled “21st Century Electronic Art and New Trends”, and my Proficiency in Art studies with my “Red Square” Experimental Digital Short Film study at Beykent University SBE Cinema and Television Department. I received the title of Associate Professor in the field of Interdisciplinary Art.

My books “Op Art in the Formation Process” and “Digital Art in the Formation Process” were published in 2011 and in 2018, respectively. In addition to traditional art production, I mainly focus on original painting, illustration and video works in a digital environment. I continue my research and studies in visual design, digital visual design, cultural heritage, museums, university museums, digital culture, visual communication and culture, technology and art, tech-culture, and digitalization. I continue to work on my original, experimental, and idiosyncratic artworks.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

In addition to traditional art, I think that the Internet, especially, has begun to influence and develop visual perception and culture. Technological production tools have begun to move traditional painting to different grounds as a medium, like the early stages of photography. Experimental work has been done with the visual and auditory components of many different narrative languages such as video, computer-aided visual productions, and image manipulation. The case is that the outputs of both direct production technological tools and the production of technological tools affect the conceptual forms of narrative. It is clear that the Internet plays a reinforcing role in

intercultural dialogue. I think that the developing technology has created a vision especially for artists with regard to the new, to standing out and creating a multi-layered narrative experimentally. Today, we encounter many different high-tech environments such as AI (Artificial intelligence), Virtual reality technologies, and Metaverse models. Technological tools have become easier to use over the years, and their contributions to this matter are in plain view. International exhibitions, biennials, art fairs from Europe and around the World influence and develop Turkish art and artists, as well as their audience. In addition to cultural development, unfortunately, there is a decrease in creations originating from our own culture.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Digital art in Turkey has been on the rise in recent years, with increasing numbers of artists using digital technology to create their works. Turkey has a strong art tradition, and this is reflected in the country's growing digital art scene.

Candaş Şişman, known for his digital installations and video works, and Refik Anadol, who works on digital projection and multimedia installations, are some of Turkey's leading digital artists. Other important artists include Osman Koç, Erdal İnci and Selçuk Artut, who are known for their innovative use of digital technology in their art.

There are also many institutions and events that support digital art in Turkey. For example, the Istanbul Biennial regularly features digital art installations and performances, and Borusan Contemporary in Istanbul is a dedicated space for contemporary art, which includes digital art. The Digital Art Museum in Istanbul is another institution that exhibits digital art and hosts exhibitions and events.

Overall, digital art in Turkey is a growing field with many talented artists and institutions supporting its development.

**3a// Can you tell us about your activities in this field? In the preface to your 2018 book “Digital Art”, you say that you are following the trace of the art of the future. Can you elaborate on this a little?**

I maintain my theoretical studies. At the same time, I also continue my applied experimental studies. Although the changes and developments in technology bring different possibilities, the cost of access to technology keeps increasing day by day. I think this is a serious limitation. The main thing I wrote about in my book is that technology is only a tool, and that current conditions and possibilities affect artistic works made with the use of technological tools. For example, the intersection point between these technological creations and the society and processes thereof are closely related to the general dynamics of society. Many works of art made using digital technology may also need technological media or tools for their presentations. I think that this may create a limitation regarding the relationship between society and art to a certain extent. For this reason, such works can sometimes remain only as performances. However, human and human - society dynamics are moving more and more towards the point of addiction to technology. The change in the processes, humankind's place in them and the changes they go through within them can take us in different directions. We'll actually see if that will be the case over time.

**How do you view Contemporary Istanbul Plug-in? Could you compare domestic and international developments? What do you other projects made in Turkey are that made an impact in the digital field?**

Contemporary Istanbul Plug-In is an annual event organized in conjunction with Contemporary Istanbul, which is one of Turkey's largest international art fairs. I can

describe Contemporary Istanbul Plug-In as an online art platform that showcases digital art and new media works with artists from around the world.

The platform brings together audiences and collectors in a global context with artists creating with digital mediums including video art, interactive installations, virtual and augmented reality works, and other digital media. It is an organization that tries to contribute to the field via interviews, panels with experts, and discussions.

I don't want to name names on a project basis. In my opinion, what is valuable is to attempt and do these things and not just to make a splash.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

Digital art and therefore digital design have both positive and negative effects on daily life in Turkey, especially in the context of the audience and the sociology of everyday life.

The positive effects of digital art and design in Turkey can be summarized as follows:

**Increased accessibility:** Digital art is more accessible than traditional art forms as it can be easily shared online and does not require physical space to display. This means more people in Turkey can access and interact with digital art with new visions.

**New forms of expression:** Digital art and digital design narratives allow artists in Turkey to examine and comprehend new forms of expression that had not previously been possible, such as interactive installations, virtual and augmented reality works, and generative art.

Innovative educational opportunities: Digital art can be used to teach various subjects in schools in Turkey in innovative and engaging ways. For example, virtual reality can be used to simulate historical events or scientific concepts or different topics, thus making learning more immersive and interactive.

The negative effects of digital art in Turkey are as follows:

Addiction to technology: The increasing use of digital technology in art can lead to technology addiction in daily life, which can have negative consequences on health and social relations. This issue needs consideration.

Digital overload: The constant bombardment of digital art and media in daily life can lead to information overload, and technology's power to psychologically influence people is only increasing.

Cultural disruption: The global nature of digital art reinforces cultural imperialism.

**4a/ What do you think awaits the new generation of audiences in this new Metaverse / digitalized art world? What possibilities are there? What should we imagine as artists, as art lovers? What do you think will change in our lives, as a curator, art manager, artist, and educator?**

The Metaverse, metaverse models, and the digitalized art world suggest a wide variety of possibilities for a new generation of audiences. For example:

New ways to experience art: The Metaverse and the digitalized art world can offer audiences new ways to experience art, such as immersive virtual reality experiences, interactive installations, and augmented reality artworks.

Intense accessibility: Digitalized art has the potential to be more accessible to audiences regardless of their location or physical ability. This can get more people interested in the arts and allow them to encounter different cultural experiences.

Integration with other digital technologies: The digitalized art world will increasingly integrate with other digital technologies such as social media, artificial intelligence and the blockchain. It is possible that the viewer can also be a part of the artwork.

New business models: new business models such as the digital art world, the sale of digital art, the use of NFTs, and the creation of online art markets are already in the making. I think that the economic discourse and the developments around the world can direct this market or its business branches. There will be new possibilities and opportunities, yes, but a global economic depression will negatively affect this market formation.

Overall, the Metaverse and the digitalized art world will also change the traditional audience to a certain extent and create a new generation of audiences. I think this will involve opportunities to engage with art and culture in innovative ways. However, ethics is an important point here, as different problems may arise with the increasing involvement of technology in the art world.

##### **5) Finally, what would you like to add?**

**5a) A suggestion, if you haven't touched on this subject above: How will new applications that Artificial Intelligence (e.g., DALL-E 2, a neural network that generates visual designs) steer us, the art world, and the creation of digital art? Can you address this topic, or any other topics that you are familiar with.**

New software that Artificial Intelligence (AI) introduces into our lives seems to have the potential to significantly influence the art world and the creation of digital art. An example of such software is DALL-E 2, an AI-powered rendering tool developed by OpenAI.

DALL-E 2 and other AI-powered software can guide us in the art world and in the creation of digital art. For example, new creative possibilities, or increased productivity.

AI-powered tools like DALL-E 2 can generate different content and ideas that are difficult or impossible for humans to create on their own. If a person can use these possibilities as a tool, they will have transcended their own limits. People can learn.

Customized art experiences: AI-powered software can create personalized artworks or experiences tailored to taste. However, it is possible that this might create other problems.

Ethical considerations: AI-powered software could potentially replace human artists or perpetuate prejudices in the art world, and it's important to address these concerns as they arise. Considered the prejudice experienced by photography and then cinema in the past.

In general, AI-powered software like DALL-E 2 will add innovation to the art world, the world of design, and the creation of digital art. However, I think that AI-created systems, environments, creations and their use, process and consumption also have potential negative effects, not only in the field of art, but in every field.

**HAKAN SORAR/ ENGINEER, ARTIST****1) Could you briefly introduce yourself? What is your educational background, field of expertise, and interests?**

I am Hakan Sorar and I started my art career in 2017. After my undergraduate studies in engineering and master's degree in visual communication design, my journey as a storyteller began with the art of photography, which I created with passion. Then I continued working on my art about the body, surface and architecture. Afterwards, I worked in the Aypera project, one of Turkey's leading digital human projects, which will specialize in digital body modeling. I still continue to examine texture and the body using various software. Recently I have focused on artificial intelligence tools.

**2) What are your views and comments regarding the Contemporary Art Scene in Turkey, especially after 1990?**

As artists, we should increase our knowledge of art history and focus on our country's art history in order to better interpret what is happening within our borders. As an artist born in 1991, although I have some generic knowledge from my art history classes, I found the main information thanks to a resource that I found valuable. This source was the 30th anniversary catalog prepared by Mine Sanat, consisting of 3 volumes. It was an enjoyable source to look back on 30 years of Turkish contemporary art, the early period creations and memories of valuable artists. Again, to focus on creations, I follow retrospective exhibitions and exhibitions that focus on specific date ranges. In my personal opinion, innovations were slowly introduced to the art market in the 90s, and I think that although there are original, free and courageous artists, there is a somewhat conservative attitude towards exhibitions. We encounter very few examples, especially with digital creations.

**3) Digital Art is a term that has entered our vocabulary only recently. How do you see the state of Digital Art on a global scale and the position of Turkish Digital Art in particular in it today?**

Rather than dividing art as traditional and digital art, I think that digital tools, much like paints, are our companions we use while creating our stories. There are artists and creators, especially from Turkey, who prepare highly successful artworks, posters, and movie and television opening sequences in the international arena. There are some very inspiring developments taking place. Digital art has started to find a lot of space in museums and galleries in Turkey. In our country, many academics, curators and artists are preparing important efforts regarding the exhibition and preservation of digital art. Piksel and similar organizations increase its visibility and provide support to artists who produce in the digital field.

**3a// Could you tell us about exhibitions you in which took part with your works? What do you think about Contemporary Istanbul Plug-in?**

In the last year, I had the chance to take part in very important exhibitions. One of them was related to Aşıklı Höyük, a neolithic settlement in Central Anatolia. There, I carried out a study about the collaboration between archeology and digital art. Then, we had the chance to exhibit our work titled Theatrum Mundi, which is an interactive experience, at Yarat Contemporary in Baku. Plug-In has been the most enjoyable area for me in CI every year. You always encounter valuable examples of digital art there. I took part in it in 2021, exhibiting my augmented reality sculptures.

**4) How would you describe the positive and negative effects of Digital Art on our daily lives in the context of audiences and everyday life sociology in Turkey?**

Digital art is on the way to become easily accessible for everyone. With most artworks, the audience ceases to be a passive viewer and becomes a part of the experience. Moving images, new virtual surfaces and universes will soon become things we all frequently use. New creators (in terms of aesthetics), if not artists, have emerged.

Creators, individuals suitable for collective work, started to design excellent experiences.

**4a/ What do you think awaits the new generation of audiences in this new Metaverse / digitalized art world?**

The Metaverse has been in our lives for years, it has only changed form. DeviantArt was a kind of Metaverse that developed its own economy, art and sharing practices. We discussed various issues in 2D with our avatars in discussion forums on the web. Now we will switch to a more 3D experience. At this point, the next generation architecture and experiences will become our focus. Just like how we used to play 2D Super Mario, and today we experience games with graphics that we cannot distinguish from the real thing. In short, forms and aesthetics will change in the metaverse, and so will our internet experience.

**What is possible here? What should we imagine as artists, as art lovers?**

It used to be that an artist needed galleries to showcase their work, and now I feel that social media, with comments and quotes, is more a place that is open to discussions and development than a gallery. Thanks to social media, we can connect with communities, institutions, artists, and curators all around the world. We can create virtual exhibitions. We can reach a larger audience. Yes, there are professional artists who won't like this answer, but the conversion is for everyone. I think the positive and negative situations will be analyzed and the cases stuck between the boundaries and definitions will diminish.

**5) Finally, is there anything else you would like to add?**

In this process, we are all both experimenter, consumer, and producer. It is useful to focus on the potential, and away from hasty reactions.