

CHAPTERS FROM THE HISTORY OF HUNGARIAN ELECTROGRAPHIC ART

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***Abstract:** Art and digital technology crosses each other's paths in innumerable ways and cover a vast area of human culture; thus, they in themselves deserve a philosophical analysis. Furthermore, theorizing about the relationship between art and digital technology is by no means an easy task because even the debates about art in the last millennia are not over. At the same time, among many other phenomena, new levels of computers and their artistic use have entered the range of issues to be explored. Examining the history of the Hungarian avant-garde movement, the complex connections between digital media and contemporary art are revealed. In the background of the art of the 1960s, the rise of digital technologies can be compared to the rise of the media. Reviewing the history of Hungarian digital art, the real roots of the art trends of the time can be explored and understood, which I hope will encourage today's artists to unleash their experimental creativity.*

Keywords: *digital art, contemporary art, electrographic art*

INTRODUCTION

Development engineers and programmers created the first digital works of art. Since the 1970s, but especially in the 1990s, the most innovative artists have systematically adapted technological processes with a common technical basis for reproduction and its process. Huge technological advances and opportunities in graphics and design have opened up new perspectives for capturing and manipulating images. With this came the time for the interaction of technologies that had been linked from the outset: electrography and computers. Béla Julesz developed the random-point stereogram in 1959, where image pairs of computer-generated random points create the illusion of a three-dimensional image under a stereoscope. Vera Molnar is also one of the earliest pioneers in computer art, although she created her first generative knife series without a computer. Electronic graphics, polaroid photographs, video graphics, photograms, creative photocopies, electronic publications were born. All of these form an extensive creative panorama of the spaces for artistic creation, and their common technical origin is that they are all electrographic. Their impact on contemporary art is as important as the philosophical illumination of their essence and meaning, their exploration of their artistic and technological significance, and not only for ordinary people but also for art professionals and critics.

Despite the fact that many critics have dealt with this topic in a specialized way since the 1960s, none of them has managed to transcend the conceptual limits of the international circle of professionals and contemporary critics. On the other hand, computer graphics are often criticized by traditional artists "because it looks like" would have been made with a computer. It's like they're criticizing ceramics because they look like they're made of clay. Nowadays, the same argument can be made for computer software, when the constant introduction of new products and developments makes it impossible for individuals to learn some of them. In

contrast, the influx of technology — particularly affecting artists inspired by the medium itself — gives the impression that a computer artist can be a “device-driven” creator in traditional art worlds. An artist working with a computer must consider issues to which art historians, theorists, and aesthetics pay little critical attention. The most important questions are about the chameleon-like nature of computer art. Moving from technique and technology to mere content, we return to the traditional question of “what is art?” when we are in front of or immersed in a work of art. If we are in front of a computer-generated work, it is worth unfolding the question, is this digital art? ", " is it based on an artistic idea? " or " is digital technology necessary for its existence? ". It cannot be said that this separation is possible in all cases, since often, if not always, we must also take into account the historical and cultural contexts surrounding the works analyzed: "what is the artist trying to express?" In 2016, an Amsterdam branch of an advertising company worked with Microsoft to develop a neural network-based system to create a new work: a painting in the style of Rembrandt, a Dutch master. [1] The question rightly arises: what is the message we should take home from these works? Does it happen? Perhaps it is to admire the technology that has made these results possible. There is a risk that this kind of endeavor will be detrimental to digital art, which will distract from the real, significant support that digital technology can provide to contemporary artists.

TECHNOLOGICAL PROCESSES IN ART

At the time of the emergence of photography, the rift between perceptual and conceptual theories began: the model of painting so far, as an independent form for the complete depiction of the appearance of nature, was the pictorial tradition. An infinite number of possibilities and processes have been revealed - which have been shaping people's attitudes and worlds ever since - at the moment of preparing for the automation of perception with the innovation of artificial vision by delegating the assessment of objective reality to the machine. Perhaps the most significant evolution in 1980 was the advent of laser copiers, that is, the use of laser beam technology, which allowed electrical signals to be converted back to light and then directed to an intermediate surface and a copy to be made by the usual process. Digital technology and the ability to split a color copy into four colors with color copiers increased the ability to play creatively as many image and color modification features became available, allowing them to be used to their full potential, which was hitherto sporadic in design, reproduction graphics, and in the field of printing. The unique computing tools now available to artists, such as image processing, visualization, simulation, and network communication, are tools for change, movement, and transformation, not capture. From the prototype used by Joseph Kadar to the generative systems created by the most advanced technologies, electrography explores this potential field from its parameters, affecting all image interpretation problems in contemporary culture. As for the strict analogy between knowledge and skills, the task of grasping representation includes the ability to see something hidden that is still available.

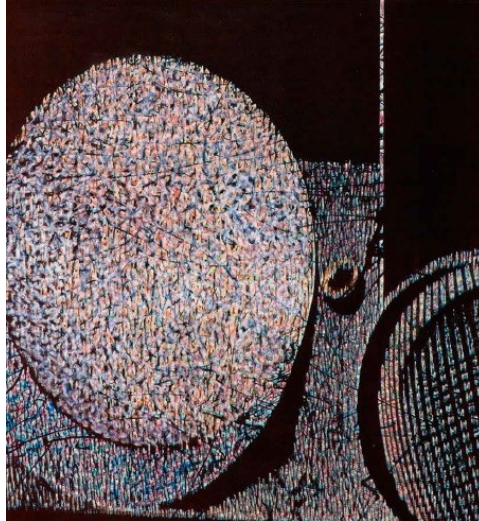


Figure 1: Kádár Joseph, Le Dualisme, xerox art 1989.

According to Polanyi, this should be seen in the context of an attempt by a skilled person to solve problems. [2] As Kelecsényi, who has been dealing with electrography since 2000, and more seriously since 2010, explains: “I mainly take photo-based electrography. I often use a found photo or my handmade work to generate a new pictorial world. I also create digital designs for my paintings, textiles or collages, as a supporting process in finding and selecting the optimal solution. In this way, I supplement and combine creative thinking with the possibilities provided by computer technology. Hand-made creations are still my main occupation, but I use the computer pre-design process. My independent digital works have a repercussion on my paintings, embroidery and paperwork, so the two techniques interact with each other during my work, and a digital overview of my old work also inspires me to create new works.”[3]



Figure 2: Csilla Kelecsényi, Our memories that we carried with us, textile collage, machine embroidery, 2015.

Xerography as an expressive technique

Xerography is derived from the Greek words xeros (= dry) and graphene (= writing), meaning a direct photocopy of an object or image. Differences in light intensity, **image media, and paper quality** can cause a difference between the work to be copied and the finished work. The general way to use works created with a photocopier is based on graphic results, which can be obtained by exaggerating **minor** errors in dark areas of the printout. Ágnes HAász also created his electrographic works with a Xerox copier from the beginning, in whose works the process imaging layers are made up of single and serial variations.



Figure 3: Ágnes HAász, The Age of Anxiety, giclée print, 2001

Evelin Sós creates a poetic synthesis of photo – letter – object – fragment of text – music in her works: she leads the viewer to marginal landscapes. It reveals playful and imaginative forms to our eyes while asking, answering, arguing, that is, communicating in the language of visuality, introducing the viewer to the mystery of everyday life. From photocopiers to graphics software, Péter Herendi also uses various tools; for him, the essence of the creative process is finding a complete vision. [4]



Figure 4: Evelin Sós, After the Ice Dance, xerox art, 2002.

Electrographic art as a reference point

The concept of electrographic art as a reference point presupposes the development of a wide range of relative tools, thanks to the operational plus, to which other processes, factors, or intermediaries contribute. We include creative activities that view photocopying as a sketch, reference image, or just an element in another method in which photocopying is only one part of a broader concept. In this way, Ede Hallbauer's self-copying technique is also complex, including photography, graphics, experimental film, painting, auto-therapy, diary, and ars poetica. In Beaty Czető's works, the flashing body images also float into blurry layers of dimensions.



Figure 5: Ede Hallbauer, Self-Exploration, 40., offset print, 1992



Figure 6: Czető Beaty, Identity, c-print, 2007

According to Csízy, the essential functions already well-proven in the world of technology and science represent systems of proportions that are deeply embedded in our instinctive consciousness through our daily experience. These systems of proportions are well utilized in the visual arts. László Csízy experimented with computers from the mid-1970s when he created his earliest works.[5]

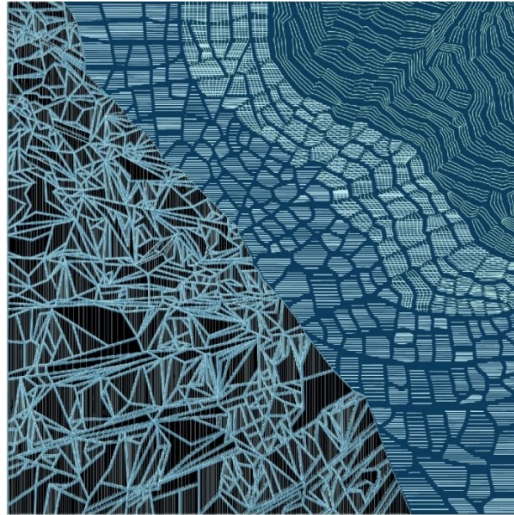


Figure 7: László Csízy: *Rules*, Computer Graphics, 2020

The majority of jr. Károly Koffán 's works are made up of illustrations and computer graphics created with 3D modeling. Edit Sándor brings invisible movements and processes to life digitally with the expansive possibilities of the electronic workflow.[6]

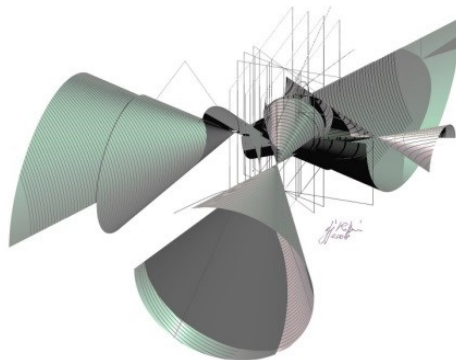


Figure 8: jr. Károly Koffán: *Design I.*, Computer Graphics, 2008

Art publications and art movement in Hungarian electrographic art

Some of the concepts often used for electrographic art, such as copy, media signal, witness communication, are closely related to historically conceptual and ideological positions. The first "rose action," a happening and a series of actions entitled "Artificial Respiration" were held at the Rózsa Presszó, Budapest, on March 7, 1976, its participants included Orsolya Drozdik and Zsigmond Károlyi, whose photographic works and exhibitions the use of xerox copies of text played an important role. The contemporary activities of György Galántai, who

has been using the photocopying technique regularly since 1979 in the Artpool Art Research Center he founded, deserve special attention. In 1981, Artpool organized the first Hungarian mail-art exhibition. On the floor of the exhibition space, there were xerox copies of the Hungarian avant-garde from the '70s, and artistic postcards, mail-art works were presented in foil strips hanging in the space, and Róbert Šwierkiewicz's pages of the assembly of George's "Textile without Textile". It should be noted here that a modern version of mail art, e-mail art, has also been released. Tibor Vass has been publishing a new call every year since 2001, and the Arnolfini Archive launched its international e-mail project in 2004.[7] In May 1962, the avant-garde literary, critical and artistic magazine Magyar Műhely was published in Paris, founded by young artists forced to the West after 1956 - Pál Nagy, Tibor Papp - but also by writers living in Hungary from the very beginning.[8] The Hungarian Electrographic Art Association has primarily formed by the artists of the group the Shadow weavers with 19 founding members on August 17, 2001, in the Bartók 32 Gallery in Budapest.

MUTATIONS IN 21ST CENTURY ART COMMUNICATION

Today, we can see a real revolution in computing, not just on a commercial or technological level, but above all on a social level. Collaborative processes are ubiquitous in our society. In the field of communication, digital networks have facilitated collaborative activities, especially the phenomenon of virtual communities and social networks. Today's field of work is strongly characterized by the production and exchange of knowledge, communication, and, above all, effective "investment," where we find a strong need for collaborative networks, including virtual connections between artists around the world. Thinking in the distance, in real-time, in physical space has thus become obsolete. The developments of new technologies, and their inevitable manifestations in the field of art, suggest that we must constantly rethink our conception of reality, its physical and virtual concepts, its boundaries, and its certainties. It is precisely this wide-ranging capacity that secures the future of electrographic art, which we suspect will inevitably move forward. At the same time, it noticeably increases the potential tools that can be used in the creative work of artists.

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