

The Impact of Technology on the Modern Art

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Abstract. Over the last thirty years, the art enters into a new era of artistic mass production caused by two major developments. The first is the raise of the digital technologies for production of images and objects, while the second is a change in the understanding of what is art, changing the rules by which something is recognized as art or not. Digital technology reshaped completely the way we design and perceive artistic works.

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1 Symbiosis between technology and art

The emergence of the digital technologies revealed a whole new universe in front of the modern artist what is art and how we create it. Today, the art and technology are connected more than ever to each other to form a symbiotic fusion. Merging these two worlds is definitely underlined in the speech of 21st century, it also gives birth of a new paradigm of perception. Almost everyone creates art in our connected world and almost everyone is involved in the Internet's virtual reality. Digital technologies play a huge role in the modern art and the way they are used in the creation or presentation. They are an essential part of the practice and alter the way we use to perceive the various aspects of its creation, in life in general, raising new questions, new searches and meanings [3].

The artists present new alternative and provocative ways of expressing the relationship between the world and themselves by means assisted by the digital technology [1].

Many consider that the digital art, unlike traditional analogue art, is easier to create. I support this statement to a certain degree. It is true that the digital technology enables modern authors to focus on contemplation, creativity and development of innovative ideas, such as minimizing the required time spent to complete their artistic piece of works. The editing process is fast and accurate; the process of reproduction or copying is easier then ever. Storing an image permit to return separate phases of work and numerous adjustments or duplicate forms in real time.

The broad array of options now available to artists through new technologies may have a negative effect also. Their power in terms of expressivity and speed is possible to cause a powerful collision between the person and an expanded technological reality. This collusion may confuse the artist as an author and drag him in the endless pos-

sibilities of the virtual reality and non-artistic technicalities. One of the challenges here is the management of this rich and intense amount of features and tools in the notional non-physical reality. This process affects comprehensive and in-depth knowledge of every detail of the necessary tools and their capabilities, which the artists successfully display their imaginations and creativity using the fastest and shortest possible way.

2 The impact of technology on the artists

The aim of the modern artist who chooses to create art with new technologies should no be based only on a technological platform and the opportunities that it provides as the basis for new and bold directions. The creator of modern times is facing ever more exciting and at the same time complex challenges of possibility to present and express in the face of many technological advances that continually diversify into the art world. More and more artists getting out of traditional approach, looking for new aspects in their work. A growing number of artists working on the creation of new methods that promote human experience by means of technology. All that changed our lives, our view of the world and even ourselves. The main challenge in using technological options for artists is to be able to preserve the creative imagination, in consequence of which define new meanings that will change the way we think and feel - today and in the future.

One of the interesting examples of balance between analogue and digital art installation is “Behaviors of light” in the gallery space of Winnipeg Art Gallery in Canada (Figure 1). “Behaviors of Light” is an interactive installation created by Kyle Yantsen and Chris Burke - designers and artists who find inspiration for their work in the changing relationship between the physical environment and digital technology. With this interesting and successful project two designers explore light and surface spatial experience by mixing and convergence of digital projection and analog designs.



Fig. 1. “Behaviors of light” by Kyle Yantsen and Chris Burke

Contemporary art is a definitely influenced by the rapid development of digital technology options and the amazing progression in introduction of new and more attractive materials with which artists can express themselves. Both innovations broaden the horizons of creativity and open new artistic perceptions. Opportunities that technological innovation provide undoubtedly change the relationship between artistic practice and the world – art no longer look the same. We live in days of active change that transforms the way we create and experience the familiar traditional art forms such as printing, graphics, painting, photography, sculpture and music. Art ceases to be static, assuming many new and different systems for creating and perception. For example, printing digitally created sculptures in 3D programs and non-physical reality or existence in a virtual reality, virtual galleries, expanded reality and whatnot [2]. There are entirely new art forms such as net art, software art, digital systems and virtual realities, recognized by most world museums as artistic practices, which creates new paradigms with more powerful meanings.

Another interesting example in the field of architectural art, a giant wall “Arabesque” by architects Michael Haynsmayer and Benjamin Dilenbarger (Figure 2).



Fig. 2. Fragment of Arabesque wall by Michael Haynsmayer and Benjamin Dilenbarger

This two architects created a new kind of architectural expression using mathematical algorithmic design and 3D printing in the context of postmodern architectural art. New methods and materials for production lead to radical changes in architectural design. Today, this added value is a revolution in the production and Arabesque wall testifies to this.

“Our days are the time of transition from traditional analogue art to postmodern digital art, that is, to an art grounded in codes rather than images” write Professor Kuspit in his book “The Cult of the Avant-Garde Artist” [5]. Status and importance of art transform into postmodern digital art because they already have a characteristic of “material epiphenomenon” led by the code. Code that becomes the main source of creativity.

Until now, the creation of objects and material images was the main goal of the visual arts, and the code that manages the process was excepted as secondary. Today creation acquires a broader sense, because the concept of code occurs primarily in the creative process. Thus, the product does not exist by itself, a consequence in the visible code.

Visual art which prompted a similar perception, or anything we see in some work corresponds to what we see in the real world will never be the same. This fundamental change in the process of creating and adopting marks a new era with new principles in the world of work and all processes associated with it. According to Professor Kuspit, the most important aspect of digital art is transforming the creative process on the creation, which happens for the first time in the history of art.

It is interesting how major art movements of the last century still exist in contemporary art in surprising combinations. A good example of this is the work of artist Casey Rees, who in the last fifteen years has emerged as one of the leading artists in the field of software art. His work explores ideas through the lens of modern software.

Riis was influenced by the period of post-war modernism and constructivism in combination with kinetic ideologies in the early 20th century. He managed to create a computer program that allows the construction of digital compositions or simple geometric elements representing a series of movements, whose interaction creates unpredictable and constantly changing forms over time.

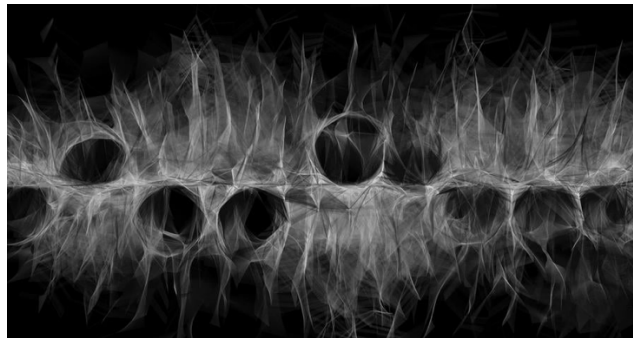


Fig. 3. An example of digital composition

The artist creates software to learn contingent systems as an art form. Images that are part of a global collections, arise from short text sentences. In his work he uses natural language, machine code, computer simulations and static images. By determining the resulting combinations, he found a unique area of the visual experience built and based on experimental animation and painting (Figure 3) [7, 8, 9].

Modern creativity theory argues that the creative process is as much an intellectual and social process as an emotional and individual process and "... involves the participation of chance processes both in the origination of new ideas and in the social acceptance of these ideas by others".

So digital technology is method to reverse these random processes obviously personal, which literally can be seen in "Solid vibrations" project. The "Solid Vibration"

project is an ongoing collaboration between Eindhoven and industrial designer Olivier van Herpt, who built a custom ceramic printer where the extruding clay is influenced by vibrations emitting from a speaker. Van Herpt's printer translates low, rumbling frequencies into textural patterns that resemble weaving. There's a lot of room for experimentation here and we are curious to see how something like full musical albums could be applied to the printing process, and what “solidified sound” emerges.

“While 3D printing has many advantages it also limits you. The technology is meant to be quick, repeatable and precise. The forms may differ but each time the machine repeats the same action, extruding layer after layer (Figure 4).

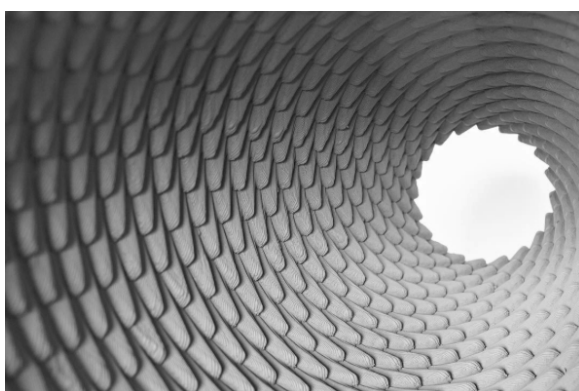


Fig. 4. “Solid Vibrations” by Eindhoven and Olivier van Herpt

Repeating itself until an idea becomes a thing. Random factors are excluded. When making a 3D printer or developing a 3D printing process, increasing the level of repeatability and precision is key. But this also means that 3D printing sometimes feels rather “kill.”

Similar project to van Herpt's one is project called “Cylinder”, created by Andy Huntington and Drew Allan. They invent a way for capturing and mapping sound waves in frequencies and time. The result creates the possibility of producing cylindrical forms representing the specific spatial characteristics of sound. Furthermore, by processing the mapped info digitally as STL-files in 3D-programs the sounds become visible. With new 3D-printing techniques, the sound becomes printable, using a method known as stereolithography. “This design is based on analogue sounds and aims to visualize sounds with a physical expression through digital tools. Moreover, the experiment is a translation of natural sounds; from the analogically auditory to digital physical shapes, using software as well as hardware.”

There are so many opportunities for creating art with technologies. The challenge to invent a new way of express yourself is the best way to deal with the time we live in. Thinking of technology and art one of the best examples with Bulgarian artists is project “The Floating Piers”, created by Christo Javacheff in 2016. The Italy Lake Iseo was reimagined with 100,000 square meters of shimmering yellow-orange fabric, carried by a modular floating dock system of 220,000 high-density polyethylene cubes, undulated with the movement of the waves as The Floating Piers rose just above

the surface of the water (figure 5). Visitors were able experience this work of art by walking on it from Sulzano to Monte Isola and to the island of San Paolo, which was framed by The Floating Piers. The mountains surrounding the lake offered a bird's-eye view of The Floating Piers, exposing unnoticed angles and altering perspectives.



Fig. 5. “The Floating Piers” and Christo

Lake Iseo is located 100 kilometers east of Milan and 200 kilometers west of Venice. “Like all of our projects, The Floating Piers were absolutely free and open to the public. “There were no tickets, no openings, no reservations and no owners. The Floating Piers were an extension of the street and belonged to everyone. Those who experienced The Floating Piers felt like they were walking on water – or perhaps the back of a whale. The light and water transformed the bright yellow-orange fabric to shades of red and gold throughout the sixteen days”, said Christo.

This is how technology and art connects, connecting people with nature and gives freedom to do the “impossible” – walk on water. This genius project shows that everything is possible, when there is a free mind and good will. “The Floating Piers” confirms that art is for everybody, no matter the age or gender!

3 Conclusion

I create art for more than fifteen years. As a young artist I always search for new challenges and innovation into my work (Figure 6). For me it is really important to successfully recreate my own visions, which can now be digitally realized and stored in virtual galleries. By using new technologies my art has no limitations in its expressivity and translated messages. The technology made possible parallel operation on a work, efficient recreation of derivatives form, quick form modifications and selection of different materials.



Fig. 6. An example of author's work

The advance of the technology revolution marks the start of a new era in the plastic arts. Creators reproduce faster than ever images. The available means of expression and their combinations allow for unlimited possibilities in communicating new ideas. The creation of art has never been easier and faster. Hence, we should note a new challenge for every artist – the information overload, where countless streams of signals compete for a piece of our attention. This lead to a dramatic psychological changes in our society and perceptions what is art and how we think in the modern new environment. Still, I am sure that the technology can change our lives, but will never affect the elementary principles of nature beauty and the way it is used by the human beings [4, 6].

From the perspective of the author, accept the present as a time when most of us face the mirror of infinite virtual opportunities and lend a hand themselves while Zeitgeist quietly “watch”.

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