

# New Art Forms and Process Management Strategy in an Era of Mass Digitalization

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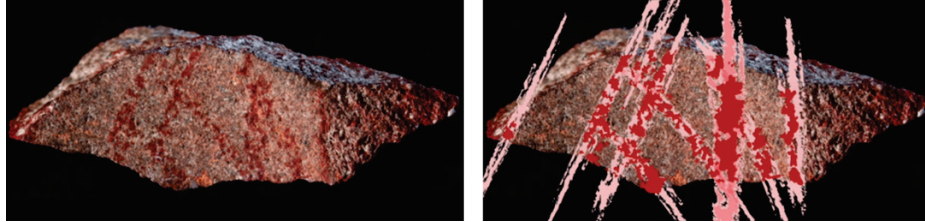
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**Abstract.** In ancient times it took centuries before a genre of art was adopted as cultural development (like painting, sculpture etc.), while with the bursting expansion of modern audiovisual forms this process occurs much more frequently, and the need for publicly recognized criteria for evaluating these new media becomes more apparent.

**Keywords:** Augmented Reality, 3D Objects, Audiovisual Forms, Digital Art, E-Culture Criteria Training.

## 1 Introduction

Traditional arts originated thousands of years ago. We will hardly ever be able to fully reconstruct the process and the complete cycle of creation, but in all probability many centuries separate the first appearance of primitive art forms such as rock paintings or roughly modeled stone, clay or wooden figures from the perceived spiritual need for creating and consuming artistic products. Undoubtedly that phenomenon had somewhat to do with the first crafts, but it soon grew into something much more powerful and different. Probably the real cultural revolution lays in the recognition of the fact by the ancestors of the modern Homo Sapiens that creativity develops in sync with the spirituality and that the real art is the one that satisfies not only the necessities of life such as providing clothing, food and shelter. It is difficult to imagine what caused the first ancient artist to grab the chalk (Fig.1), but probably the interest in creativity increased in parallel with the upsurge of skills in practitioners and although it took thousands of years to reach the level of Renaissance paintings, the motivation to create has probably become an unconscious part of the human nature. Of course, this does not only apply only to the art of painting, in one form or another similar was the fate of the sculpture, the music and the dance. What all these arts have in common has been the process of gradual transformation from the man who perceives images, movements and sounds, through the man who finds ways to interpret them to the final phase of the creator who generates them, often without even seeing physical likenesses in front of him, only using the power of his creative imagination.



**Fig. 1.** Stone flake marked with ochre, Blombos Cave, S. Africa, dated ~73,000 years, (Blakemore, 2018)

In any case, these processes took many years - people had enough time to perceive and create different systems and cultural styles, to develop criteria for quality art, to trace and direct the evolution of these spiritual forms of expression in the preferred direction, as well as to be able to reach a relative consensus in the ways in which this art is perceived by the general public. Of course, there have always been elite types of art, not well understood by the average citizen (for example, if you attend unprepared to an exhibition involving abstract expressionism (Fig.2), the chance to perceive it as a cultural value is similar to finding a glacier in the Sahara desert), or fashion has changed significantly over the years, periodically reviving the popularity of one style or another.



**Fig. 2.** "Autumn Rhythm", Jackson Pollock, The Metropolitan Museum of Art/Art Resource/Scala, Florence © The Pollock-Krasner Foundation ARS, (Toteva, 2016).

However, with the development of the technology, the evolutionary processes have been dramatically accelerated. Since the Renaissance, various scientific and technological discoveries and, above all, the possibility of faster and more efficient exchange of information between people, cities, countries and continents have led to a critical accumulation of knowledge and skills that change the pace of human development. Steam engines, electricity, railways, skyscrapers, cinema, airplanes, nuclear power plants and spacecraft appear... It is only a matter of time before all the dynamics is transferred to the field of art. In relatively short period a lot of art-related content appeared in the form of multimedia digital libraries (Paneva-Marinova, Goynov, & Luchev, 2017).

## 2 The Digital Revolution and the New Art Forms

The advent of mobile phones and the Internet has given an even greater impetus to civilization. The digital revolution is literally overturning the notions of what we consider “normal”, and the economic life is exploding, changing in a matter of days what has taken decades in the past. It is enough to see how the labour market is changing rapidly to be convinced that we are nowadays facing a totally different reality. The development of big data processing technologies and applications of artificial intelligence are the basis of modern civilizational changes (Kouzov, 2018), and they far affect not only the economy but also all the aspects of social life, incl. the art. And if to some extent we can take for granted that economic changes are somehow natural (more efficient production, lower costs, higher quality, safer products, etc.), then the changes in the field of art are much more spontaneous and unintentional, simply because technology is evolving too fast and its impact on spirituality and culture often catches us unprepared. Moreover, this lack of readiness concerns not just the way of creating the respective avant-garde art form, but also the way of its perception - i.e. how exactly should we consume this cultural product and recognize it as a true art. A process, which fundament should be set at school age, with the support of teachers who encourage critical thinking (Kouzov, 2019).

If the transition from Louis Daguerre's photography (1839) to the Lumiere brothers' cinema (late 19th century) took about half a century, it took almost the same time for the television (during World War II) and the digital broadcasting (end of the 20th century) to emerge, while the modern audiovisual forms, combined with the Internet, literally every 3-4 years blow up the public space with technical innovations, most of them having the potential to be the next game-changer in the entertainment industry. We are already witnessing very realistic 3D simulations and holographic images (Fig.3), thanks to augmented reality technology and stereo glasses it is difficult for us to distinguish the real from the virtual world, and there are already thousands of high-quality 360-degree panoramas, available on YouTube.

Apart from the purely visual and acoustic ones, other technologies show up that gradually cover the rest of the senses, incl. touch and smell. The emergence of 3D, 4D (Wikipedia, 2018) and 5D cinemas equipped with complex systems of hydraulic machines and sensors is just the beginning of the process, which in its later stages will probably allow the viewer to experience the movie on behalf of the main character or even to change the scenario in real time, taking one decision or another.



**Fig. 3.** 3D holographic animals perform circus tricks / Circus Roncalli - (Knaggs, 2019)

Naturally, most of these new art forms will require a qualitatively new approach not only to the creating and directing, but also to the perception by the audience. As already mentioned, before the digital revolution, man had available almost a lifetime to adapt himself and build criteria for each of the audiovisual innovations (photography, cinema, television...), while now modern generations no longer have such abundance of time and new technologies are pouring upon us like rain drops. This in turn gives rise to the need for a super-fast adaptation to the proper perception of each new type of art. At the same time our communication channels are also growing in numbers so the citizens of the 21st century are literally besieged by technology gadgets such as smartphones, tablets, 3D TVs, self-directing cameras, personal drones, voice assistants, home robots, game consoles, smart watches and all this at some point becomes internet-connected as part of our constant surrounding life ecosystem. Logically, all this leads to the need for a qualitatively new behaviour of the individual and, in addition to the new life skills related to the physical survival, in the obsessive techno-reality at some point every citizen finds himself at a crossroad also in the realm of spirituality.

### **3 How to Perceive the Digital Culture**

It is an empirical fact that the modern teenagers no longer read books. Apart from the fact that the rich audiovisual information is already flooding them from everywhere, they are also much more limited in time, as they constantly have to adapt to the rapidly changing world. Although they are currently obsessed (literally) with the screens of their smartphones and tablets, and the stereo headphones have become part of their daily vision, it is likely that soon these forms of interactivity will give way to completely new devices and technologies, already acting directly at the level of brain waves. From the Renaissance until almost the end of the last century, it was not so difficult for music and painting teachers to tell their students about art history or to introduce them to different styles and schools in their subject areas, while nowadays it is practically impossible for the educators to be in line with all the innovations in the field of digital-

ization (Fig.4) and very often their students are confronted with the new art forms before the teachers. This, in addition to undermining the authority of the teachers, often creates a feeling of distrust and insecurity in the students, because at some point they realize that many of the basic things, they are taught, do not give them the necessary practical experience, but in niches where they are most in need of support, they are left alone.



**Fig. 4.** Experiential digital-art gallery, Washington, D.C, (Weslaner, 2019)

And because in many aspects the art topics are not perceived by the society as critical to the prosperity and survival of the citizens, the need for key reforms in this area and new curricula somehow remain in the background. Of course, with an active interaction of citizens, institutions and cultural well-known figures, the necessary changes could happen rather fast, but this requires a conscious need and understanding of the essence of the problem, because it is the art and the culture that complement our personality and make us useful and satisfied citizens.

#### **4 The Art as a Way of Life**

In many ways, contemporary audiovisual arts reflect our way of life. They are dynamic, interactive, carry the spirit of modernity and change in themselves and are closely dependent on technology. We could not say that their means of expression are inferior to the traditional arts, on the contrary, and the most gifted digital artists will probably be treated with the same respect in the future as we currently honour Raphael, Mozart or Michelangelo. However, in order to be adequate to the needs of the time, we must systematically begin to study new types of art in the classroom, discuss all the innovations in the digital culture, be biased, defend different points of view, experiment and learn how to work with the digital tools and materials in the same way as in the classical school we were taught to draw with crayons or pencils. In this way, modern students will gain both the experience and the self-confidence of artists, being empathetic to the pulse of time and adapting their spirituality to the new technological reality. Of course, this process must be supported at all levels - teachers, parents and society, but in the end they can all be convinced in the name of the ultimate goal, which is to create capable, competitive and adequate to their epoch citizens.

## 5 Conclusions

The need to change the way the art is perceived and to bring it closer to the contemporary digital reality is quite urgent and even somewhat belated. An increasing number of classical types of artists (artists, sculptors, musicians) seek the help of digital technologies because they are the way for their artworks to continue their presence in time and to enrich the millennial human history of art with new ones, more exciting and influential means of expression. The need to start these processes at school is obvious precisely because through this step the society will give a clear message that the art is an essential part of life and its evolution actually illustrates and gives meaning to the human development.

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Received: June 03, 2021

Reviewed: July 05, 2021

Finally Accepted: July 15, 2021