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Digital creation: possible (and achievable) futures

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Abstract

During the last year, science and technology have been playing an indispensable role in a difficult and complex context. All areas of our lives have been forced to adapt to digital processes at an accelerated pace.

Faced with an obvious economic and social transformation, we want to consider the state of culture and creation, one of the sectors hardest hit by the crisis. Specifically, we are interested in focusing on the particular situation of digital creation, devastated especially by the lack of protection and funding, by the closure of galleries and specialised spaces.

It is not a question of starting from scratch. Future possibilities must be presented as opportunities. First, by analysing what has been learned, experienced and discussed so far before and during the pandemic. From there, we must identify, on the one hand, the direct consequences of the pandemic, and on the other, the problems arising from the acceleration of the digital transformation. Especially in those aspects that allow us to relaunch and promote new lines of work, heterogeneous initiatives, or new methodologies while always bearing in

mind that this knowledge and experience has to settle and survive under the rules of the digital economy. Both the creation and consumption of content requires new digital, communication, entrepreneurial and commercial skills.

Let us look for new perspectives, let us face the transversality that the hybridisation between art, science and technology can offer. Let us analyse and share with all those involved in all the creative processes and avoid going back into a loop. We are facing a complicated and risky, but exciting project. It is more necessary than ever to learn from mistakes, and to extract the value of certain experiences related to digital art. And, above all, let us not forget two of the most important components: to value the creators, to recover the public, and to attract those who have never felt attracted by these types of artistic practices. Let us look for and share the way to encourage and promote new contents and scenarios.

Keywords

futures, possibles, digital art, creativity, art, culture, technology, pandemia, postpandemia

Creación digital: futuros posibles (y alcanzables)

Resumen

Durante el último año, la ciencia y la tecnología están jugando un papel indispensable frente a un contexto difícil y complejo. Todos los ámbitos de nuestra vida se han visto forzados a adaptarse a procesos digitales a un ritmo acelerado.

Ante una evidente transformación económica y social, queremos plantearnos el estado en el que se encuentra la cultura y la creación, uno de los sectores más castigados por la crisis de la COVID-19. En concreto, nos interesa centrarnos en la situación específica de la creación digital, devastada especialmente por la falta de protección y financiación, por el cierre de galerías y de espacios especializados.

No se trata de empezar de cero. Se deben presentar las posibilidades futuras como oportunidades. Primero, analizando lo aprendido, experimentado y debatido hasta el momento. Antes y durante la crisis pandémica. A partir de ahí, hemos de identificar, por una parte, las consecuencias directas de la pandemia y, por otra, los problemas derivados de la aceleración en la transformación digital. Especialmente en aquellos aspectos que permitan relanzar e impulsar nuevas líneas de trabajo, iniciativas heterogéneas, o nuevas metodologías. Siempre teniendo en cuenta que ese conocimiento y experiencia ha de asentarse y sobrevivir bajo las reglas de la economía digital. Tanto la creación y el consumo de contenido exige nuevas habilidades digitales, de comunicación, emprendedoras y comerciales.

Busquemos nuevas miradas, afrontemos la transversalidad y la hibridación entre arte, ciencia y tecnología y calibremos qué puede ofrecer. Analicemos y compartamos con todos los implicados en todos los procesos de creación, evitando entrar de nuevo en bucle. Nos encontramos ante un proyecto complicado y arriesgado, pero apasionante. Es más necesario que nunca aprender de los errores, y extraer el valor de ciertas experiencias relacionadas con el arte digital. Y, sobre todo, no olvidemos dos de los componentes más importantes: valorar a los creadores, recuperar público, y atraer al que nunca se sintió atraído por este tipo de prácticas artísticas. Busquemos y compartamos la manera de fomentar y promover nuevos contenidos y escenarios.

Palabras clave

futuro, posibles, arte digital, creación, arte, cultura, tecnología, postpandemia

Introduction. facing a new context

During the last year we, the citizens of the world, have radically changed our way of living, feeling and communicating. In the spring of 2021, we are still uncertain about the real extent of the health, economic and democratic effects of the pandemic.

While exceptional measures are still in force in some countries of the world, the state of alarm has ended in our country. In recent weeks, thanks to vaccination campaigns, some countries have been relaxing security measures against the spread of the virus. We have witnessed the broadcasting of a sort of New Year's Eve party in many parts of the world. Images of groups drinking, singing and celebrating

the end of the state of alarm look like an updated version of the representation of hell in the triptych of Bosch's Garden of Earthly Delights. The images that were relayed to our screens looked like the definitive end of the pandemic. Everything was joy and emotion. As it happens in the central table, a deceptive, but suggestive Paradise invites us to develop all that is forbidden (Silva 2016). Between music, drink and many selfies the pace quickens. There are no more masks and, above all, it seems that the protagonists can now embrace and touch each other without fear. The safety distance has vanished.

After the broadcast of each of these images, the comments in the newspapers, on social networks and on television were unanimous: the pandemic was still there. Scientists continue to remind us of this. It is enough to consult the data provided by sources such as the Coronavirus Resource Center of the Johns Hopkins University to realise that it is not over yet and that there is still a long way to go (Johns Hopkins Coronavirus Resource Center 2021). Pandemic fatigue has played a trick on us. For months now, we have been watching our screens, listening and scrutinising data that we do not know how to translate. We seemed to have it all under control as we waited for the precise moment to be able to go out for the first time, the first encounters, the first glimpses of "normality".

We have spent so many hours scrutinising unintelligible data on the evolution of the pandemic, on its effects inside and outside our borders, and on possible solutions. A pretence of transparency that has nullified all kinds of distances and has led to a lack of sense of information (Han 2018, 32).

We are in a time of crisis and uncertainty, in which it is clear that science and technology are playing a leading role. The economic and social transformation, in what state has creation been left? Specifically, with regard to digital art, what can we do to begin to promote it in the face of a new post-pandemic context?

Possible futures: understanding the new paradigms

Since 2019, we have lived in fear. That fear that according to Virilio is sustained "by the incredible diffusion of information technologies that act "in real time", basically those of information and communication (Virilio 2012, 18) The forced digitalisation due to social isolation has propitiated that technological contact has accelerated that feeling. It has also forced us to stay in front of our screens, as if they were windows to the outside world. It is paradoxical: we have snooped, but we have also exposed our privacy to a superlative degree. Apps have invaded our lives and changed the way we

organise ourselves, the way we feel and think. Technopower has imposed itself in all areas of our existence. It has managed to stealthily impose itself in the few areas where it seemed "more discreet". Even the most private spaces, as it happens in *Life: A User's Manual*, have been exposed and analysed:

It is a bright and sumptuous room, impeccably ordered, without offering in any way the usual disorder of a painter's studio: no paintings turned to face the walls, no stacked frames (...), but a cushioned door of black leather, tall houseplants, which (...) climb to the assault of the skylight, and white enameled walls, bare, except for a long panel (...) on which are fixed three posters (...) (Perec 2015, 212).

In the name of the coronavirus, a globalised experiment on our digital life has been constituted, which will continue to be present in our society in the coming years (Ong 2021). We have learned to perform many activities at a distance: classes, meetings or face-to-face exercise have been some of those that have needed to find new ways of doing things.

In these months, moreover, the norms of what sociologist Shoshana Zuboff has defined as surveillance capitalism in which companies investigate how new business models have been reinforced (Zuboff 2020). Other authors such as Morozov already warned of the disappearance of the revolutionary spirit and freedom on the Internet of the nineties (Morozov 2012); or of the dangers of standardisation on the network (Morozov 2014). We live immersed in a new digital paradigm that makes us expectant about the latest news about the technological revolution and scientific advances. We have been becoming familiar with terms such as blockchain, algorithms or Artificial Intelligence (AI). But we remain unaware of their implications and consequences.

The adaptability of the majority has led to the forced immersion in the digital environment of a good part of it. The truth is that not everyone was technologically prepared, nor did they understand the processes in which we have been forced to act. In Spain, for example, the percentage of households without Internet connection has dropped from 40% to 5%, according to the *Survey on equipment and use of information and communication technologies in households 2020*, published by the National Institute of Statistics (INE 2021). Regarding the second digital divide, as the skills of use and understanding of technologies are called: almost 35% of citizens do not know how to contact Public Administrations. Approximately one third do not know how to shop online (Castillo 2020). The protagonist of *I, Daniel Blake* (Loach 2016) - a carpenter looking for a job, but unable to access the employment office website because he is digitally illiterate-, is a good example to illustrate a reality that affects citizens in many parts of the planet. Paradoxically, the pandemic has accelerated digitisation, but has aggravated the digital divide and economic and social exclusion¹.

1. In 2016, the World Bank already warned that, among other things, digitalisation was already giving rise to power politics in which the control of information was associated with certain monopolies. 60% of the world's population does not have access to the internet (World Bank 2016).

The creative and cultural field has been one of the hardest hit in this crisis. Vulnerability and precariousness existed in this field before COVID-19. If we talk about digital culture in particular, artists, art centres, collectors and/or academics had been complaining for some time that the situation was out of step with the digital reality of the 21st century. The future, therefore, was already here. It is enough to realise how the audiovisual and music sectors have been able to adapt to new realities and innovate. It is true that not all the experience acquired can be extrapolated to the entire field of creation, but some experiences can certainly be applied. For example, the characteristics of new formats and fields must be taken into account in order to be able to assess their adaptation in other contexts. The analysis must be carried out with a transdisciplinary vision, and the answers must be measurable and achievable by all those involved.

So far, education, information and strategies to promote technological skills have failed. In a society in which digital technologies and devices have been promoted, certain challenges have yet to be addressed in the face of uncertainty and paradigm change. It is time, therefore, to reconsider the bases to definitively establish a creative field that we have been discussing for decades.

Something is not working. Let us take stock, let us improve, let us change measures to obtain optimal results. Among some nuances, it is important to take into account and question aspects such as:

- Big data has been one of the big bets to know and fight the virus (although it failed to predict it). It has also been used to create cultural statistics, but we cannot project future changes with statistics, we have to analyse and disseminate the data in an effective way (Kabanda 2016). Let's study the exceptions, let's look for common spaces between traditional and digital creation, between the material and the immaterial.
- Apart from the data, it must be considered that cultural analytics is situated within a new global paradigm in which everything that standardises the study patterns, leaving aside samples that do not meet the standards. In digital creation the classification of certain pieces clashes on many occasions with this detail. Lev Manovich discusses this dilemma at length in his latest book: *Cultural analytics*. In it he advocates "experimenting, discovering and communicating" the result of the comparison of cultural artefacts, periods, authors, genres, movements, themes, techniques, and topics" (Manovich 2020, 254).

Let us analyse previous processes and those developed during the pandemic. Let us study how the connection and coordination systems have changed during the last months, for example: we are aware that despite the psychological consequences of so many hours of meetings in front of the screen (known as "Zoom fatigue" (Bailenson

2021)). We must also emphasise the positive consequences of technology during the pandemic: we have managed to establish debates, meetings, or listen to conferences of great interest from creators and specialists in digital art. It is not necessary to saturate the screens again, but it is true that it has facilitated meetings between people or groups living at great distances. It has even been possible to develop connections unimaginable in pre-pandemic: think, for example, of the Ars Electronica 2020 format. More specifically in the proposal In Kepler's Gardens: a proposal on the binomials, Autonomy vs. Democracy, Ecology vs. Technology, Uncertainty and Humanity. From Linz, the programme was expanded to 120 locations around the world. It is essential to take up again the concept of hybridisation that was already proposed in projects such as *Good Morning, Mr. Orwell* (Paik 1984). Heterogeneous artists and musicians developed new ways of creating and relating to a spectator who had little or nothing to do with technology and experimentation. Let us insist, therefore, on projecting possible futures in which experimentation and innovation are basic but let us not forget that to achieve this it is essential to generate links. In a world as specialised as today's, it is essential to share and complement knowledge to evolve in such a complex interdisciplinary field.

- Let's give the value they deserve to the policies of design, management and archiving in creation. Since the beginning of the pandemic, huge amounts of digital content have been generated: pieces, debates, seminars? How is it organised so that it can be properly analysed and valued? Among other things, it is urgent to update typologies and make a definitive commitment to the preservation and transfer of this material, as it is often left to the potential of its creators and/or promoters to disseminate it.
- Let us reflect on the role of education. Let us stop calling, for example, as "new technologies" those that are decades old. Let us reveal their origins - so closely linked to the evolution of science and technology - their precursors and, above all, the context in which they developed. Let us show fundamental works to avoid "plagiarism due to lack of knowledge". Let's avoid the current reductionist vision and advocate for the proper dissemination of evolution, successes and mistakes to creators, curators, critics and visitors.
- Let's learn about algorithms, artificial intelligence or robotics. Let us work with experts on the subject. Let's be attentive to its evolution in order to successfully make visible projects, alternatives, spaces or collaborations. It is very difficult to fight against what is already imposed by multinationals and assumed by society. Let's learn their rules and keep a high-level critical spirit. Let's play with them, experiment and create (and protect) new spaces of freedom: both for creators and for the restless public, fed up with certain conventionalisms.

We have to move forward little by little looking for clear solutions and without losing sight of one of the most important problems of culture in general and digital art in particular. While debates about its future are taking place, political and economic interests are acting without contemplation. The economy of data is what rules the decisions: the technical, the economic and the political merge at the time of acting. In many cases, those acts advertised as “innovative” are actually conceived as deliberately utilitarian acts that benefit the limited circle of power associated with the institutions. See as a disturbing example in the pandemic context the inexplicable change of course of an institution of the prestige of Medialab Prado Madrid. Winner, among other awards, of the Princess Margaret of Holland of the European Cultural Foundation for advising international organisations on the implementation of programmes related to Citizen Laboratories (S. P. Mendoza 2021). Throughout its trajectory, it has established itself as an accredited centre for “production, research and dissemination of cultural projects” that explores collaboration and learning above all “arising from digital networks” (Remacha 2016). Its director since 2014, Marcos García, has been dismissed, and the space has been disbanded. The transfer of the project to Matadero Madrid -where there are already two others- and the lack of transparency in decision-making regarding an uncertain future of a structure that generated exchanges of ideas within and beyond our borders.

It is true that there are centres that have taken risky and critical alternatives regarding digital art, AKsioma Institute for Contemporary Art (Ljubljana) or Drugo More (Croatia), are a good example of spaces focused on the dissemination of media art. But above all they have been able to connect and generate reflection and criticism, linking art and technology to current issues such as: gender, environment, or sustainability. From scientific spaces such as CERN, the Arts at CERN programme has been promoting dialogue between multidisciplinary artists and physicists at the centre since 2011, creating bridges between cultures (Arts At CERN 2021). Many of the initiatives of these (and other centres) have been able to combine new digital interactions with the essence of the “relational” procedures described by Bourriard. From those experiences of the nineties, it is important to highlight the relevance of experimentation, sociability and communication. Without losing, however, the personal style of each author (Bourriard 2008).

In any case, let us take on the new challenges in a calm manner. Since the feeling of permanent change will not disappear.

Conclusions. Possible and necessary futures

The future is already here - it's just not very evenly distributed.
William Gibson

“The epidemic is a mixture of natural, economic and cultural processes” (Žižek 2020, 123). We were supposed to emerge stronger and renewed, but everything points to the fact that uncertainty and distrust have taken over our daily lives.

The proposal that science and technology should be the catalysts of a new global productive model cannot leave culture and creation aside. Moreover, these must be endowed with strategies that help empower a sector in transformation that has not yet been able to connect the physical and digital worlds to their full extent. We have to create new metaverses and, above all, we have to fight against the fragility of each and every one of the elements that make up the sector (artists, galleries, institutions, associations, etc.). Globally and locally.

The data before the pandemic were positive. As pointed out by GESAC (European Grouping of Societies of Authors and Composers) in the report *Rebuilding Europe. The cultural and creative economy before and after the COVID-19 crisis*, prepared by the consulting firm Ernst & Young. It shows that the cultural industries accounted for 4.4% of the EU's GDP in pre-pandemic years. They employed more than 7.6 million people. But the crisis has meant a loss of 31% in turnover in the entire sector, except in video games, which gains 9% (Ernst & Young (EY) 2021, 4). It is recommended to finance, train and enhance the creative sector as a revitaliser of the economic and social paradigm shift.

The future, therefore, should address some of the lines of work set out, among others, by Paglen:

(...) it would be a greater contribution if we rethink, on the one hand, from where and how images are appearing, and on the other, if we attend with greater concern to the debates that are taking place in politics regarding the scope of technology. It is there where interests are at stake, and it is there where quite interesting positions can be constructed (A. Mendoza 2018)

Creative work has succumbed to the laws of the market. A creator, a producer or a cultural mediator has to understand the rules of the digital market. Among other things, he or she must understand how the algorithms function on the social networks in which they have to make their work and their person visible. The academic Brooke Erin Duffy, from Cornell University, has recently studied this phenomenon in “Algorithmic Precarity in the Cultural Market”. In the text she warns about the instability of the sector in a world ruled by platforms and social networks (Duffy 2020). Let's start, therefore, from an established reality: the processes and methods of work in digital artistic praxes must be impregnated with new ways of doing in order to empower and survive. However, we must fight to avoid the homogenisation of the proposals, and promote the visibility of simple and complex works, making room for both small and large format works.

We have been missing opportunities in not so distant times. Now is the time to fight. Across the board. We need to collaborate

to learn from our mistakes and give impetus to initiatives that will help in the short, medium and long term to promote new lines of research and work. We must build strong bridges between creation and digital technology, without limiting ourselves only to the audiovisual field. Let us try, for example, to innovate through collective collaboration. Many cultural products have been financed thanks to crowdfunding. Kevin Kelly analyses this phenomenon with respect to some publishing or music success stories in *The inevitable: understanding the 12 technological forces that will shape our future* (Kelly 2017). Perhaps, it would be interesting to promote the knowledge of what digital creation is, in order to promote investment in truly innovative creations. To do so, we could investigate and promote, for example, new art and design experiences related to interaction. Taking into account that there are more and more devices with which we act, and that in the coming decades will improve and amplify the sensors and senses that intervene in our intimacy and will facilitate the immersion in new spaces through augmented reality and virtual reality.

Let's take advantage of the synergies that are sometimes established by chance. The debates on the NFT (non-fungible token), besides giving rise to changes of impression about their possible impact on the digital art market and, again, the questioning about the uniqueness of the pieces -a question that Benjamin already exposed a hundred years ago- should be used to promote knowledge about other aspects of digital creation. Collecting, curatorship, evolution of digital creation, on the one hand. Lines of work such as artificial life, bio art or speculative design, in media where the arts or design do not usually have a place. At the same time, let's promote reflection on ethics and transparency.

As a colleague of mine that I admire said in a social network recently²: we have been teaching digital art for years, isn't it time to see and enjoy great museum proposals? We must look for spaces that take risks and wager on it. Let's open new windows that help to know new praxes and to recognise the work of both iconic creators and newcomers.

Authors and, above all, the public, need new stimuli to help them regain confidence in the future. Digital creation, but not only that which is consumed individually on a screen, can help and empower all citizens. Let's start to value it, to pamper it whatever its format. It is a commitment to which we must dedicate time and continuous effort. We cannot constantly depend on short-sighted political and economic plans. There are many sectors involved that would be delighted to embark on realistic projects that do not remain on paper. This is the only way to generate positive (and productive) reflections on the interrelationships between science, technology and art, and their contributions to society. In this sense,

ISEA 2022, to be held in Barcelona under the title POSSIBLES, has the opportunity to become a driving force and transformer of the state of art, design, science and technology and society. Its hybrid nature will help to bring together institutional and intergenerational positions, both in the national and international contexts. If their contributions in previous editions have been relevant, currently, they can contribute to reducing the degree of uncertainty.

Let us not lose sight of what must be one of the main objectives: to reach the audience -rescuing those from before the pandemic and attracting new audiences. If not, we will have definitively lost the battle.

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2. Carles Sora was referring to Barcelona in particular. Let's extend the proposal to as many places in the world as possible.

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CV

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A teacher and researcher, she has developed and implemented new development methodologies in creative and educational interactive projects, both for private companies and public organisations. Always integrating her training and experience in technology, design, arts and communication.

She is a lecturer at the UOC's Faculty of Computer Science, Multimedia and Telecommunications, and teaches Audiovisual Culture at BAU (University Design Centre), and Experimental Languages on the Bachelor's Degree in Arts at the Escola Massana. She is a member of the GREDITS research group (Research Group on Design and Social Transformation).

Her thesis "Prácticas artísticas digitales y tecnologías del control y vigilancia (2001-2010)" (UB) shows her interest in the evolution of digital creation, interaction and power relationships established through technology. Since 2007, she has published the blog specialised in media art, surveillance and privacy *Uncovering Ctrl*, which forms part of the Spanish Media Art Archive AEMA/SAOMA.

She has participated in events related to digital culture such as Interface Politics Conference (2016/2018), *bodies_perceptions_design* (2018), or the International Congress NODOS del Conocimiento 2020 (2020); in conferences, congresses and symposiums in LABoral Centro de Arte y Creación Industrial, Museu del Disseny de Barcelona, the University of Málaga, or the Universidad Autónoma de Diseño de Morelos (Mexico).

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