



Presidency of Italy
Council of Europe
November 2021 - May 2022
Présidence de l'Italie
Conseil de l'Europe
Novembre 2021 - Mai 2022

COUNCIL OF EUROPE



CONSEIL DE L'EUROPE

Creating our future: creativity and cultural heritage as strategic resources for a diverse and democratic Europe

Council of Europe Conference of Ministers of Culture,
Strasbourg, 1 April 2022

Background paper by:

- **Gerfried STOCKER**, Artistic Director of the Ars Electronica Center

Digital Transformation, culture and creativity – a global
challenge and a European perspective.
A wake-up call and an encouragement

Digital Transformation, culture and creativity – a global challenge and a European perspective.

A wake-up call and an encouragement

The need for ensuring a higher level of political, economic and technological sovereignty in Europe has gained much attention in recent times in the ranks of policy makers and industry leaders as well as the broader public. Supply-chain troubles of the “corona-years”, massive reliance on technology, including computer chips, produced outside Europe, influence on public opinion via social media and the so-called “Big Tech platforms”, the growing and unpleasant realisation that we are no longer masters of our data and our privacy: these are all too real problems calling for substantial changes.

In the discourse of culture, science, the art world we notice growing attention towards new concepts of autonomy, self-determination, independence, decentralisation. Contradictory concepts and positions emerge, while we notice that our traditional notions are being rewritten by the changing circumstances and dynamics of our present reality.

How does this affect the cultural sector and how can the cultural sector contribute to the common perspectives?

After a period of general hesitation in Europe, the Council of Europe laid important foundations for the recognition and understanding of the human rights, democracy and rule of law implications as well as cultural and societal impacts of new technologies and Artificial Intelligence¹. The European Union, for its part, settled quite convincingly into a much needed active role and got behind the steering wheel of our course into the “digital age”. Although it remains to be seen how successful these attempts will be, big steps have been taken, and awareness of the crucial importance of a strong European digital sovereignty has been established – among policy makers but also the key players of the European economy.

While now finally taking a stand against the Big Tech platforms, gaining a good amount of self-confidence in a “European Way” into the digital age, and realising that we in fact might have a good chance to stand up against a “digital colonialization” of Europe, we have to recognise that we are still lagging far behind current developments.

Among the main issues:

- The brain-drain from our excellent education- and university system to the US Tech Giants who don't even pay their due taxes in Europe is, in particular in crucial fields like machine learning and artificial intelligence, giving rise to great concern.
- Our almost total dependence on semiconductors and computer chips produced outside Europe will be very difficult to overcome.
- The continuous weakening of public service media organisations and critical journalism has left us very vulnerable against anti-democratic campaigning, hate speech, fake news and disinformation in the social media.
- The cherished dreams of an unregulated financial market of blockchains, where we all can be our own bankers and stock gamblers – as questionable as it is – has gathered incredible capital and almost cult-like following around it. It fuels visions of a decentralised autonomous society and of independence from governments as well as from the platforms of the “Big-Tech-Corporations”, which accumulated much more potential than governments to steer our future developments. Many sensible critics are calling it a new digital gold rush and, as always happens in the exhilarated state of rush and intoxication, reason and foresight fall by the wayside.
- We are facing the risk that some of the potentially quite useful applications of blockchains, such as securing provenance of data and IP or even the possibility of additional sources of income for libraries, archives as well as digital creators will be compromised if such developments are left only up to the free and unregulated market forces. There is a need to focus on the role of public and governmental responsibilities for the cultural sector, instead of hoping that crypto-currencies and blockchains might solve problems. Existing structures of funding for art and culture, the role of collecting societies, royalties and license management, mechanisms of distribution of

¹ Council of Europe Ad-hoc Committee on Artificial Intelligence (CAHAI), <https://www.coe.int/en/web/artificial-intelligence/cahai>; Council of Europe and Artificial Intelligence, <https://www.coe.int/en/web/artificial-intelligence/home>

money generated by using artistic, cultural and creative content should be re-considered in order to ensure that the value creation chain has a sufficient feedback into the eco-systems of creativity. Re-consider does not mean dismissing what is in place, but adapting and making it fit for the very new circumstances of global digital markets. Some progress was made in the EU with recent updates to intellectual property and copyright directives, but the most important issue is still avoiding the sell-out of art and culture. Technology will not do the job for us, it can only provide tools that we have to use in meaningful ways.

- The presently largest and technologically most important sub-field of the digital transformation is machine learning (which is often equated to artificial intelligence). Its rapidly advancing achievements and its growing range of real life, commercially profitable applications are not only a treasure trove of possibilities for art, content production and cultural heritage – in all its areas of research, preservation, documentation. They also send another barrage of hazards into the battlegrounds of IP and copyrights, fair-pay in art and culture, open source and public domain versus big publishing houses, and of the many, often discussed yet still unsolved, problems related to privacy and surveillance. All of these are culture-shaping matters that are just crying out for sensible regulatory approaches – not in order to prevent developments, but to let such developments unfold in meaningful and fair ways.²

The fourth wave of “immigration into the digital world”

This is happening at a time that we could provocatively describe as the fourth wave of immigration into the digital world. While in the beginning it was the technicians and engineers, inventors and developers, soon after came the early adopters who recognised the economic potential of the digital realm. However, these were still relatively small groups who liked to call themselves the pioneers of the digital world and who, through their deep knowledge and far-sightedness, gained key positions, influence and power in this “new world”; based on their ideas and views, they thus determined the rules of the game and opportunities for those who were to follow. And followers came in droves, when devices and services finally became so easy to use that all you had to do was swipe your finger over the colourful images: the number of people who roamed the Internet, sharing their lives on the social media platforms – and, with them, business – exploded.

Growth, exponential growth became the sign and hallmark of the digital future.

The fourth wave came with the lockdowns of the COVID 19 pandemic: it was no longer just people coming out of enthusiasm for the technology or for the pleasure of it. This wave consisted of people who had no choice but to deal with the hassle of poorly designed video-conferencing systems and all other hardships that come with our present-day digital devices and services.

Thus, the distance, the gap between digital wizards and all people who just happen to be depending on technology is rising to a serious threat in terms of social and economic equity and of the ability to participate in public discourse and decision making, that are the basics of democracy.

² Some references on digital transformation and democracy:

- Francesca Bria, Dec 2021: Digitalisation: Big Democracy to overcome Big Tech and Big State, <https://progressivepost.eu/digitalisation-big-democracy-to-overcome-big-tech-and-big-state/>
 - Brewster Kahle, Oct 2021: Will There Be Libraries in 25 Years? <https://time.com/6108581/internet-archive-future-books/>
 - Podcasts by the Electronic Frontier Foundation – EFF: <https://www.eff.org/how-to-fix-the-internet-podcast>
- Some references on Web3, crypto-hype,
- Douglas Rushkoff, Jan 21: How Lulz Took Down Wall Street, <https://onezero.medium.com/how-lulz-took-down-wall-street-4b7e2bc457f1>
 - Moxie Marlinspike, the signal app creator on Web3 and decentralization, <https://moxie.org/2022/01/07/web3-first-impressions.html>

What began as a technical infrastructure for the transmission and processing of data became a social space in which being able to act competently is a basic prerequisite for successful participation in life. What began with the fun of exchanging cat-photos has indeed become the dominant business model of our time.

Now that “we” all arrived in this world, whether we wanted it or not, the crucial question is, **Who owns this digital world? Who determines the rules of the game?**

As this is no longer just a technical infrastructure, nor just the trading place for digital business, this world can no longer be left in the hands of the technical and commercial landlords and their capricious visions for our future.

While it may appear that this discussion is just about technology and business, **we are already neck-deep in relevant questions about culture, cultural policy and the ecosystems of art and creativity.** Since what we are really talking about is mind-sets, world-views, concepts of how society should and can work, concepts of fairness and equality, respect and diversity, the ability to reach consensus – on a global scale – about how we want our world to be.

This could be easily labelled as a philosophical matter: instead, what might have wrongly been considered so far a luxury to discuss and dream of, has become the single most important challenge, as no individual country, no matter how powerful, will be able to deal with the task of the global climate change on its own. Challenges related to averting a climate catastrophe and dealing with the impactful consequences of the necessary measures will in fact not only require every human resource available but any technology that can be developed. At the same time, such challenges will require the full potential that only culture can unleash in order to achieve global awareness and mutual respect and to reach global quality communication and collaboration. **An educated and sophisticated entanglement and integration of technology and culture is needed, something that is now often referred to as Digital Humanism, as a European responsibility** – not as yet another European way of “knowing better”. We can already see many areas where art and culture lead the way!

Culture is for everyone

The idea of culture as a global public good remains a big challenge, as it also unmistakably addresses the question of global re-distribution.

The call from countries and peoples whose precious cultural assets are in the possession of western museums is getting louder and louder and ignoring it is getting harder and harder – no matter whether this treasures are in “our” museums because “our” archaeologists discovered and unearthed them or whether they were just taken away by powerful emperors or rich collectors.

The digital world provides powerful means to create an ecosystem of culture where the possession of an artefact is as important and valuable as the public access to its educational potential. In order to achieve this, we should not preclude such a development by privileging only profit-oriented schemes.

Currently there is a great hype about non-fungible tokens (NFTs) and blockchain in the arts and culture sector. Although there are also solid reasons for scepticism, these developments show that a new understanding of the values of the original and of the copy is possible, as is a new way of dealing with the differences between original and digital copy.³

Writing and telling the true stories of our time

In a world where everyone has easy and instantaneous possibilities to tell and widely distribute any kind of story, where realities cannot only be easily faked up but also manufactured on an industrial scale, we need to re-establish points of trust and reliability. However, truth cannot be protected as securing money in a safe. Museums and other cultural institutions have to change from gatekeepers to gate-openers, not just safeguarding their assets, but guiding people with their pristine knowledge, inviting and helping them to go through the Gates of Knowledge and Culture. This would be of crucial importance in order to fight the disease of fake news, toxic misinformation and conspiracy theories.

To achieve this goal, cultural experts and institutions should not only be more or less reluctant users of the given technology. Instead, building on their outstanding knowledge and experience of “presentation as communication”, tapping into the sheer endless resources of our cultural histories and the inspiring power of their diversities, **cultural institutions and professionals should become experts in the application of technological possibilities and outspoken challengers of technology, who inspire the developers and demand that technology is following the real needs of people.**

Cultural experts do not need to know how to code and compile, they own a much more precious knowledge – connecting to people and to the stories of their lives – a knowledge that in the abundance and ease-of-use of digital technologies is becoming a crucial and highly valuable expertise.

A new epoch of global cultural wisdom - Cultural Heritage and AI/Machine Learning

Both in the scientific work with cultural heritage and archives and in their dissemination and accessibility, we have recently seen significant improvements with and increasing engagement with digital technologies – finally. A young generation of archaeologists, archivists, art historians, cultural researchers are no longer afraid of digital technologies and do not see them anymore as a danger to the good old ways of doing things. Fortunately, with their reasonable and informed enthusiasm, they are also dragging along many from the “old” generation, and they have convinced decision makers in ministries and foundations to embark on the digital journey.

This might still sound rather optimistic, but **there is growing evidence that we find ourselves in an environment where the “pillars of culture” have meanwhile become driving forces and initiators of a promising co-existence of real-space experience and digital representation.** This is not only important for the “digital-fitness” of the cultural sector at large, it is much more so for all areas of society, because only a sufficiently high share of culture and cultural content as self-evident and highly visible part of the digital world can provide the kind of qualities that we still miss there but definitely need.

³ Some references on non-fungible tokens - NFTs and the art market:

Sceptical:

- <https://the-crypto-syllabus.com/brian-eno-on-nfts-and-automatism/>
- <https://www.rightclicksave.com/article/making-sense-of-the-40b-nft-market>

Favourable:

- <https://www.artnome.com/news/2019/4/08/autoglyphs-generative-art-born-on-the-blockchain>
- [Matt DesLauriers, On crypto art and NFTs, https://mirror.xyz/mattdesl.eth/eUrK8MrRfKFJYVKTwi5F4mCIBJEBOYkZ1qaAiDNblls](https://mirror.xyz/mattdesl.eth/eUrK8MrRfKFJYVKTwi5F4mCIBJEBOYkZ1qaAiDNblls)
- [Nathaniel Stern, Custodianship, Copyright, and Provenance: on the non-monetary value of NFTs, https://nathanielstem.com/text/2021/custodianship-copyright-and-provenance-on-the-non-monetary-value-of-nfts](https://nathanielstem.com/text/2021/custodianship-copyright-and-provenance-on-the-non-monetary-value-of-nfts)

Negative:

- Geraldine Juárez: The Ghostchain.(Or taking things for what they are) <https://paletten.net/artiklar/the-ghostchain>

When it comes to digitally available cultural content (from digitised heritage to digital born), we are in a sort of Cambrian explosion. This exponentially increasing amount of valuable data is now meeting the equally exponentially growing possibilities of machine-learning based data mining. It is unavoidable getting excited about the amount of new findings that is to be expected once we will use the powerful algorithms of present day AI to correlate the information and knowledge that until now is so often isolated and hidden in the cultural archives of the world.

This can actually be the dawn of a new epoch of global cultural wisdom of humankind. However, it could also just be the next level of commercial exploitation and superficial entertainment – it is up to us to promote positive developments, instead of undermining them by leaving the lead to the tech-companies and their investors.

Art prototypes the future

Artists and creators are increasingly exploring in their practice the use of AI-tools, whose capabilities are currently subject to a stunning acceleration: progress in this field is breath-taking and promising, despite unavoidable exaggerations and occasional misunderstandings.

The history of art and technology shows in a very impressive way that **art has always been a most reliable way of prototyping the future, of exploring our visions, ideas and concerns**. For example, conceptual art from the 20th century was prototyping the translation of matter into information, and the influence on today's digital culture of the work of artists such as Sol Le Witt, John Cage, Marcel Duchamp, Jenny Holzer, Marina Abramovic, Yoko Ono, cannot be valued enough.

The Iliac Suite by Lejaren Hiller was already in 1956 the forerunner of computer assisted musical composition; AARON, the first computer programme able to autonomously paint artworks representing plants and people, was created by Harold Cohen as early as 1974.

The dream of inventing machines able to create on their own is probably as old as the human ability to conceive and build machines. We can find evidence of it from Ancient Greece to the old history of China, from the Golden Age of Islam in Baghdad to European Renaissance, down to the self-playing music-automata of the saloons of the 19th century. It could be speculated that such machines have always just been imitating or simulating the process of creation, or even faking it out. Similarly, it could be argued that works produced by the activation of some parameters in powerful pattern-recognition computer systems, previously instructed through millions of texts, images, melodies, rather than original creativity, is just fake-creativity. Yet, isn't a similar process happening when humans study art history and learn from masters and teachers?

Appreciation of creativity and the value of art-works has been and will always be a temporary agreement in a given society. Such conventions can be superficial and short-lived fashions, but also become sophisticated and mind-changing philosophies: suddenly we recognise that an ordinary urinal or a tomato soup tin-can turn out to be real game-changers.

The question whether so-called AI can be creative is actually a rather reductive question, as it just refers to possible technological capabilities and advancements. **What really is a crucial question with regard to the development and application of technology is not just what "it" could or can do, but rather what "we" want to do with it and what "we" should avoid doing.**

An example is provided by the commercial application of recommendation systems, that is already altering the behaviors of art consumers, in particular in the music market. The need to respond to such changes, as well as the persistent demand by popular streaming services, in turn prompts artists to corresponding changes and adjustments in their work. We can see a self-amplifying spiral, bringing us to the question of **how the growing presence of autonomous digital systems will change our appreciation of art**, how it will change the kind of aesthetics we are going to favour in the future. It is easily understandable that this kind of influence on our choices in the field of art and entertainment is just an early forerunner of what is yet to come and affect other fields as well.

Beyond revenues by streaming services, there are very good reasons why so much investment goes into the research and development of recommendation systems.

Even if we are still far away from self-conscious AI-systems, advanced enough to be able to enjoy art and aesthetics as we humans do, **we have already begun to create content according to the “taste” of automatic recommendation systems which, as it turns out, are nowadays just the most productive method to earn money.** The answer to the question whether artificial creativity is possible, is simply yes, it is. The moment we appreciate as art what machines create, it becomes art. The reassuring aspect of this is that it will always be us humans having the final say. Nevertheless, this position involves responsibilities we have to assume.

Do we really wish that all ideas, efforts and computing power that is being invested is only useful to produce recommendation systems telling people what they should like, choose and pay for? Is this worth all the human power going into their development and all the huge amount of energy needed to operate them?

AI, as the presently most advanced achievement of human ingenuity and culture, should not be limited to the idea of developing “better” machines: it should be there to make us humans more capable, more powerful and ultimately more human. It is high time to emancipate ourselves and art and culture are the best guiding stars that we could possibly have on this way.^{4,5}

Growth vs Ecosystems

Finally, let's briefly address the most pressing issue of the coming decade: the need to establish a new and profoundly different way of living and acting on this planet.

The radical paradigm shift that will be necessary to achieve the breakthrough goes far beyond the technological and economic questions. Ecosystems of art and creativity are great models to look at in order to reconsider the common notion of growth, the importance of sustainable use of resources.

In fact, that is exactly the nature of creativity as a resource, it cannot just be exploited, it always has to be nurtured, even when you don't yet know how it will develop, what profit it might return.

Creativity is not only a product and it is not only the vital basis for innovation, it is the absolutely indispensable precondition for all the new, not yet considered ideas that we desperately need in order to be able to cope with the challenges ahead of us.

⁴ Some references on art, creativity and AI

- Naked AI: What happens when Artificial Intelligence and Human Creativity meet? <https://naked-ai.com>
- Lev Manovich, Emanuele Arielli, Nov 2021: Artificial Aesthetics, a critical guide to AI media and design, <https://manovich.net>
- AI-Generated Art Scene Explodes ... <https://www.vice.com/en/article/n7bqj7/ai-generated-art-scene-explodes-as-hackers-create-groundbreaking-new-tools>

⁵ Some examples of Art & Science from Ars Electronica to enjoy and experience:

- Robert Hodgkin, generative art from 2D data visualizations to immersive 3D terrain simulation <https://roberthodgin.com>
- Pianographique - piano music meets digital images, <https://pianographique.wordpress.com/AIxMusic/>
- Ali Nikrang, Ricercar, an interactive AI-based music composition system, <https://youtu.be/3x6A6onLBHE>
- Ali Nikrang, AI composed music, performed by humans, <https://youtu.be/BTLONBQIYFs>
- Yamaha, Dear Glenn, Artificial Intelligence piano system capable of playing any piece of music in the style of late legendary pianist Glenn Gould https://www.yamaha.com/en/news_release/2019/19102301/
- AI-Art meets NFT-Hype: Mario Klingemann - Botto, <https://botto.com>. Anyone who holds the Botto token can help train an AI (clip/VQgan neural net) make better and better art through a voting system. Each week the result of this hivemind/machine learning collaborative effort is auctioned off on SuperRare.

We certainly need art for its harmony and beauty as well as for its disturbing and unsettling power, but, possibly, even more **we need art as the sandbox in which prototyping the future of humankind**. We need it as the “second opinion” to get an informed, elaborated and sophisticated perspective on the fabric of our reality as the quintessential basis for sovereignty, self-determination and the ability to take over the responsibilities we have for our time and for the future of the generations to come.⁶

Policy makers from the present time, both from culture and other sectors, have the extraordinary opportunity to steer this radical digital transformation towards the common good and a better and more human future.

Some simple recommendations embracing both the arts and AI:

- 1. Creativity is an ecosystem and needs to be nurtured to be able to deliver**
 - Fund creative education and education to creativity
 - Fund the artists, their creative work and innovation potential
 - Defend their rights and their freedom of artistic expression
- 2. Art and the artists should be heard and taken seriously**
 - Involve them to use their expertise, their creative energy, their sensitivity, their critical approach.
 - Work with them to come up with the right questions and answers for the future of society.
- 3. Access to cultural heritage is key to unleash its potential**
 - The value and power of cultural heritage depends on its accessibility – in the digital age this entails putting serious efforts into large-scale digitisation of cultural heritage and into making it accessible online.

⁶ On Digital Transformation and Sustainability: Branch Magazine, <https://branch.climateaction.tech> - A sustainable Internet for All