

SYNERGY, TECHNOLOGY AND IDENTITY IN ART, FACING THE CHALLENGE OF ARTIFICIAL INTELLIGENCE

Salvatore Lorusso

Editor-in-Chief, Foreign Member of the Russian Academy of Natural Sciences, Russia

Mauro Mantovani

Prefect Vatican Library, Vatican City, Italy

1. Encounter and dialogue of the humanities and experimental sciences

In addition to creating opportunities outside consolidated and sometimes restrictive stereotypes, exchanges between cultures can also create conditions to overcome that fragility which often relates to a poor interpretation of identity based on narrow-mindedness and rejection. Coexisting in an "ample space" is what has allowed civilizations to grow in value and may even be considered a condition for a cultural life. A limited cultural background is a barrier that can create gaps, generate misunderstandings and conflicts, and above all, prevent planning for the future using interpretative keys suited to understanding the complexity of living with science. Discussion opens people's minds to a solid culture, and allow prejudices and artificial notions that hinder knowledge to be removed: scientific progress has happened also, or even especially, thanks to cultural exchanges. Culture sustains us in our ability to imagine a new future, offering evaluation criteria that are now universal. The challenge is also characterized by knowing how to make the values of the "founding pacts" of today's institutions migrate to the computer architecture which designs and influences our institutions in a decisive way. The expression "complementing each other" in the field of research is extremely significant for the "unity of diversity", inspired by a vision that knows how to look forward, without flattering or stumbling on barriers that may have been created in this regard: acquiring real awareness may even prevail over currently convenient or functional narratives of contrasts or coexistential crises. Recalling an aphorism taken from the comedy written in Latin, "The Self-Tormentor" by the Roman playwright Terence, who lived in the second century B.C.: "Homo sum, humani nihil a me alienum puto" (I am human, and I consider nothing human is alien to me), he points out that the attitude towards culture produced by people and artists can only relate to openness, curiosity, knowledge, and comparison, even though genuinely critical. Progress is born from openness, not from prejudice or ignorance: the cultural context is the product of a transformation, sometimes dialectical or discontinuous. Culture, moreover, rejects any convenient categorization and aspires to offer itself as a means of comparison by merging and evolving with other cultures, but also shunning homologation and conformism; in other words, what we are unconsciously or culpably subjected to because of mental laziness or opportunism.

Thus, it is transdisciplinarity or crossdisciplinarity - the result of mutual enrichment and interaction, of knowledge and experience, and on which are based the theories and methodologies of the humanities and experimental sciences – that weaves the connective tissue that surrounds us. In this regard, transdisciplinarity or crossdisciplinarity is different from simple multidisciplinary or “weak” interdisciplinarity. In fact, multidisciplinary is a simple sum and juxtaposition of disciplines which usually remains anchored to individuality in content or meaning. On the other hand, “weak” interdisciplinarity only interacts with other disciplines in a mutual need for completion. It is at a later stage that transdisciplinarity and crossdisciplinarity aim to enrich knowledge and is the result of a methodology that implies a connection between theories and methods and, consequently, between scientific principles, the basis for the humanities and the experimental sciences: each discipline continues to exist in its own right but each one is enriched by interaction and dialogue.

This is the basis of study and research in the field of art which, in representing the spirit of the time and the autobiography of a people or of a country, is its cultural autobiography. Scientific truth is fundamental and is based on a communion of intents and synergy of skills, so that a result may be achieved that is reliable and shared.

2. The scientific revolution in art

In his book, "The Fourth Revolution", the Oxford University philosopher Luciano Floridi points out how the last three scientific revolutions have had a great impact on the way we think about ourselves, since they have changed our understanding of the external world, and as a result, the understanding of ourselves.

Following the Copernican revolution, heliocentric cosmology *removed* the earth from its central position, and consequently, humanity's position at the centre of the universe. The Darwinian revolution showed that living species had evolved from common ancestors through natural selection and so *removed* humanity from the purely biological world. The Industrial Revolution then *removed* humans from many production processes to increase automation. Nowadays, the digital revolution is also profoundly transforming every aspect of our lives, and is seen in education and entertainment, communication and commerce, love and hate, politics and conflict, culture and health. Many more can be added, all of them transformed by technology whose main function is to record, distribute and process information. Since the 1950s, the computer and digital technologies have started to change the concept of who we are. In fact, we have discovered that we are not isolated entities, but rather interconnected informational agents and engineering artefacts that share a global environment with other biological and artificial entities ultimately consisting of information. Floridi not surprisingly defines this common environment "infosphere" and names Alan Turing as the progenitor of the fourth revolution, the father of computer science. The fourth revolution thus offers an opportunity to rethink our intelligent behaviour that must now include artificial artefacts that adapt more and more effectively to the "infosphere". In this regard, it should be noted that digital technologies are not only tools limited to changing the way we interact with the world, as in the case of the wheel or the engine. Advances made in information technology give us the possibility to shape ("form" and "format") the infosphere, increasingly influencing the way we understand the world and how we relate to it, as well as the way we think about ourselves and interact with each other. In other words, they are "ontologizing" systems able to modify the intrinsic nature (ontology) of what they touch. It follows, therefore, that our behaviour must be confronted with the predictability and possible manipulability of our choices, as well as with the development of an artificial

autonomy. Having examined the specific peculiarities of these technologies that interact with reality, and examined and reviewed them in depth, there is no doubt that our behaviour is extremely important, and must be seen not only as an attitude, but also as vitally interacting with these technologies. In the face of these scenarios, a question arises: should there be a supine acceptance of everything at once, or a gradual and critical acceptance?

It is important to continue debating the topic that is already changing our lives and will probably change our future: Artificial Intelligence (AI). However, it is not easy to find a common definition of AI from among the numerous general or purely technical notions. Of course, the immensely exciting opportunities related to this technology are clear, as well as the existence of three different levels of risk to our individual and social life: limited, serious, and unacceptable. One example is the real-time biometric identification of people in public spaces, or their categorization according to sensitive characteristics, social scoring, and behavioural manipulation. For this reason, there is no shortage of catastrophists (doomers), who fear the unpredictable consequences of an uncontrolled and savage development of AI for humanity; they are contraposed to boomers, who, on the other hand, believe that thanks to AI, scientific progress can "explode" and will be able to solve the many present-day crises, starting from the environmental issue.

It is worth noting that the European Union has been working on an agreement to regulate the use of artificial intelligence (EU AI Act). Pope Francis, in his message "Artificial Intelligence and Peace" for the 57th World Day of Peace (January 1st, 2024), launched an appeal for the control of new digital technologies to become a shared asset, pinpointing the need for an internationally binding treaty to "regulate the development and use of artificial intelligence in its many forms". So, what can be done?

Time is important and is not synonymous with weakness. In fact, time is the ancillary condition to understand what was accepted and codified in the past, and in the event, discuss and demonstrate what is claimed here. We are not only referring to the subsequent revision and completion of the already existing regulation framework, but also to what today is being imposed by the digital revolution and social networks. Many factors come into play when a discussion starts: there is non-acceptance and the will to resist with one's theory without allowing oneself to be overpowered, even when one is faced with a system that is globally recognized as a decision-maker. The journey for each new idea and theory takes time, because we ourselves are part of that time. The topic is particularly interesting if we transfer what has been said to the specific case of art evaluation, made not only from a historical, artistic, aesthetic, and iconographic point of view, i.e. through subjective evaluation, but also through objective evaluation using new technologies. And it is the objective evaluation that gives a concrete meaning to transdisciplinarity and crossdisciplinarity which, by witnessing the meeting, listening, comparison and resolution of the specific issues, provides a scientific contribution deriving from the humanities, as well as from the digital, diagnostic, and experimental sciences. This is in reference to both the historical-humanistic, philological-philosophical-social disciplines and technical-economic-managerial, and legal-identity disciplines, which are all involved in the peculiarities that distinguish an artwork and its holistic value. The approach to uphold must be, not to accept what in the past - with a "reductionist perspective" - determined, and even today continues to determine, doubts and/or second thoughts. In the art market, the attribution and authentication of artwork is an emblematic case and has been the subject of many a heated debate by experts from various institutions, universities, and research centres. It has been argued for years that an artwork can be authenticated only by evaluating it subjectively, even if carried out by art historians with great experience and competence. It is, however, just as essential to

support and/or refute the latter with an objective evaluation made by technicians, thus arriving at a unique, but complete scientific truth, which includes a corresponding economic evaluation. In this case, art and science combine also with respect to the aforementioned transdisciplinary or crossdisciplinary approach, i.e. a common theory and methodology on whose principles the humanistic and experimental sciences are based, thus acquiring a unique value and definitive result. But it is also equally important to underline the fundamental contribution of the other previously mentioned disciplines for the characterization of artworks: the economic-managerial and legal-identity areas. Considering the importance of time as a necessary condition for understanding and accepting what one believes is right, it is worth noting how the advent of the digital revolution and social media has aggravated the situation, giving the impression that everything happens immediately, and that it must be immediately commented, reposted, and amplified. The past conditions our choices, actions and decisions, our acceptance of what we have already accepted. At the same time, the future pushes us to change, react, desire, and want new things. As for the digital revolution, it should be noted that most major historical events are much more nuanced and far too complex to describe in a simple post or tweet, in some cases, certain situations, positions, specious questions sound like "acts of violence". Ultimately, to better understand and listen well, we have to rethink the concept of "supine acceptance" in some cases and "everything at once" in others; not only is our autonomy at stake our very humanity is. Thus, philosophical thinking is fundamental as it helps to offer a deeper meaning to these considerations bringing with them pedagogical repercussions. Defending what you believe in, is not a sign of arrogance or bad faith if proven to be valid, nor is it a weakness or a "waste of time". To really understand things, it is important to measure time: one must not be dominated by pre-established decisions, theories, opinions or a series of instantaneously posted images, but be like the strings of a bow stretched between the past and future, knowing that the truth unfolds and is reached with the passing of time.

3. The case of reproduced artwork

The above subject matter takes us to deal with issues in the field of art, in which there is a clear albeit problematic distinction between an authentic work and a different - intended as reproduced - artwork. In fact, among the different terms that distinguish the origin of a work of art in the context of its attribution (authentic, original, replica, copy, attributed to, signed by, school of, follower, forgery), there is also the term "reproduced", which refers to art created through reconstruction and digital reproduction. A well-established example is the oil painting on canvas "The Wedding at Cana" by Paolo Veronese, produced in 2007, which represented something totally new at the time, but was followed by many other reproduced works in successive years. Thus, through computerization it is possible to obtain a work identical to the original one, in which shape, colours and, even, "materiality" are identical. Therefore, it is not easily distinguishable without both a subjective and objective evaluation, which must also take into account the cultural identity of the artwork and its economic value. A question follows: "Can ethics be applied to a reproduced work of art?"

The impressive development of information technology raises the question of whether we have any moral obligation toward those instruments that are so sophisticated they sometimes perform better than humans. In the case of art, it allows works to be reproduced that are identical to the original. It is not only a question of respecting the competence of the operator, or the scientific ability with which the instruments have been developed, but of respecting their ability to learn from mistakes and to find new

problems to solve - here, it is the duplication or reproduction of a specific artwork. This is true even if the very machines we have created seem to have a "life" of their own, despite the fact they have no self-awareness or feelings. In this regard, how can one not link the basic difference that exists between an "authentic" and a "reproduced" work of art, to the difference between a "discoverer" and an "inventor"?

One of the first Greek philosophers and the first cartographer in history, Anaximander, who lived between 610 and 546 BC defined "discovering" as seeing something that is there but that no one sees. The *identikit* of the modern inventor, as outlined by Maurizio Ferraris, philosopher and academic at the University of Turin, who the art critic Vincenzo Trione mentioned in an article which deals with several aspects and considerations related to the theme of the difference between "authentic/reproduced".

"Unlike the discoverer, the modern inventor is like a mechanic who has a spark of imagination: they recover already existing materials, study what they have, try to use their ability to bring out similarities between different phenomena, together with their talent for separating contiguous notions, ranging from the discovery of the new and inventory of the old". This is to highlight the fact that conceptually the author of an artwork is to be considered a "discoverer", while the person who reproduces it is an "inventor". The same happens for those who work with AI, and virtual and augmented reality applied to artistic and architectural fields. The consequence is that nowadays research centres, journals, and cultural institutions have started to address and discuss these issues, developing studies, reflections, and criticisms. It is not our intention to side with technophobes or techno-enthusiasts, adopting the attitudes of negationists or neopositivists. It is, however, important to consider that working with such technologies means establishing boundaries between traditional and new techniques, between what is natural and artificial, between analogue and digital, between morality and ethics, and between human and non-human. At the same time, by using computer technologies, the "operator-inventor" reveals and detects knowledge that comes from a world of observation that exists online and in the web.

4. On the possibility of judging a reproduced work to be legitimate

However, it is not the wish of artists who use computer media and advanced technologies to lead us towards a futuristic place with respect to the present, they do not want to predict what will happen there, their aim is to highlight and disseminate the findings of what exists in the present: using technological instruments they can reveal hidden aspects by seeing and participating in events that are prohibitive for our "normal" condition. The setting of the reproduced images also helps in this process, as they are presented in a continuum of space and time and are open to concrete possibilities and interactions. This is even more evident and engaging for untitled artworks. In this regard, Vincenzo Trione pointed out that for centuries there have been works with "mimetic" titles that confirmed the subject they represented: an emblematic example is the painting *Primavera* by Sandro Botticelli. In the twentieth century, many artists used descriptive titles to help the public better understand the cryptic representations they painted: one example of this is Paul Klee's *Main Street and Secondary Streets*. Other artists chose to experiment with sophisticated connections between the motifs they depicted and the titles they chose, eliminating any immediate relationship between words and icons: Magritte's *Ceci n'est pas une pipe* is one such example, the title denying what is depicted in the picture. In the period that followed, many works were untitled, and it became a fashion, involving artists from different generations and backgrounds; they included portraits, landscapes, still life, installations, *happenings*, and

performances, but also films and novels. What is the meaning of such a decision?

Among the various hypotheses and/or motivations, it is worth mentioning one elaborated by the versatile writer, Umberto Eco who said that through their untitled works, artists invite viewers to free themselves from any superficial referentiality. By ignoring interpretations in accordance with the titles, and not abandoning oneself to a passive and contemplative attitude, one is emancipated, and thus engages in a deeper relationship with the artwork. This is how computer technologies and the reproduction of artworks, particularly untitled ones, can give rise to further applications and meanings, and so enhance the interaction between the reproduced image and the user. In conclusion, to answer the question about if, or why, a reproduced work of art should be controlled rather than prohibited, one might consider it legitimate if it is clearly indicated. Besides, if the same question is asked in the evaluation of a reproduced artwork comparing it with the original, it is essential to carry out a serious and scientifically accurate analysis, integrating the subjective with the objective evaluation. As previously underlined, this is possible only with the scientific collaboration of art historians and technicians, a collaborative process which, in a broad sense, results in dimensions and limits ranging from the real to the virtual. Virtuality and reality: two dimensions, two connected worlds that can explain things about each other and open themselves to multiple interpretations.

5. Conclusion

Tracing a path made of deep awareness, art is at the centre of a responsible transformation of society. To start a change, it is necessary to actively involve researchers, historical and technical operators, and users in real practices. We are forced to proceed each day along our life path, moving forward towards a goal. We must understand how to find again a balance, and this is what one wishes would happen in the processes that involve "*I + You = We*". The *we* that needs to be responsible for this mutual meeting and need so that history and technology can share a sustainable balance. Sustainability is made up of continuous regeneration. The question is: "Has the concept of beauty also changed?"

In truth, it has not changed: what is beautiful can be dangerously diabolical if there is no balance between emotion and reason. Balance is not fixed but dynamic, and the relationship has meaning in that it moves forward. You should never stop after having achieved something, but always have faith in the next step you are going to take. A breakthrough in research is something to believe in and gives impetus to the dynamics of thinking and acting. To effectively bring together historians and technicians, in the interest of present and future generations, it is essential to open a renewed chapter in the evaluation of artworks, whose aim is to remove obstacles that limit freedom, equality, the evaluator's development and participation, and to share common purposes, in order to resolve issues. Faced with proliferating algorithms and "cybernetic engines", for digital technologies to become freedom-friendly, they need to be used prudently and productively, which means it will be necessary to reinvest in... human intelligence! In fact, these technologies are interfering in an increasingly rooted way on the human faculty of thinking, individually and collectively. Hence, it is essential to act now to maintain the relationship between intellect and spirit, alive and plural. If this does not happen, the great opportunities offered by the digital revolution may even turn out to be harmful. For this reason, a clear and timely analysis of the risks and opportunities involved in the use of AI is becoming increasingly necessary. Today, not only is the face of communications, public administration, education, and consumption changing, interaction between people (including cultural orientation and choices) is changing too. What is needed is "sapiential discernment" that provides the necessary tools for the social and

ethical implications of AI, enlightened by the fundamental criterion on which scientific and technological progress is based, to the extent that – if and only if – it contributes to advancing human society, to increasing freedom and fraternity, and to a better human-kind and change in the world. We are therefore dealing with topical issues and decisive challenges concerning ethics, education, teaching methods, international law, etc., and for this reason, the exercise of critical thinking and the ability to discern about the use of data, is of vital importance. In this regard, Pope Francis, in his Message "Artificial Intelligence and Peace", expresses the hope that the "immense growth and spread of technology are accompanied by adequate training in how to behave responsibly in its development; this is because our current technocratic and efficiency-driven mentality leads us to overlook an aspect which is decisive in personal and social development: the "sense of limit". With our obsession of controlling everything, we are losing control of ourselves, and in our search for absolute freedom, we risk falling into the spiral of a technological dictatorship. Instead, it is necessary to ensure that progress in the development of forms of artificial intelligence ultimately serves the cause of human fraternity and peace. It is not the responsibility of a few, but of the whole of humankind. Peace is the fruit of relationships that recognize and welcome others in their inalienable dignity, and of cooperation and commitment in seeking the integral development of all individuals and peoples". It is important to note that the problem arising from AI and generative digital technologies is the ownership, processing, and destination of the enormous amount of data and information available. Without data, the capabilities of generative AI instantly disappear, while interesting results can be obtained only with huge-sized high-quality databases. The quality of generative AI output is also closely linked to the quality of the information available. The consequent problem of author copyright, in the long term, is therefore inevitable, and can lead to charges of systematic data theft. There are various ways to steal and take possession of other peoples' property. Among them, generative AI is simply the most technological and effective, with the possibility that some algorithms may result in false or non-existent information, damage to public image, false truths, and as such, thoughtless and/or appropriately hidden. In discussing this first aspect, relating to ownership of the information used by algorithms, others come into play, such as its treatment and end use: web pages for patents maintained with public funds, international results of important ongoing scientific research, and Wiki web pages that survive thanks to collective donations, all products of the human intellect used free of charge to support the lucrative activity of generative algorithms. A case in point is the large number of "bloggers" globally who take advantage of algorithms for their posts and so provide a significant economic return for the companies that have developed them. Until recently, laws regulated private property only in the case of physical and intellectual objects, since money represented the main medium for the exchange of these goods. The advent of the web and the diffusion of digital technologies has disrupted this scenario, spreading information about the intellectual products developed by the many who have worked hard to achieve these results with tenacity, commitment, creativity, and originality. We are still not fully aware of the value related to these results when they become digital - a vast resource of data which represents the foundations of the ongoing digital revolution and generative artificial intelligence. Ultimately, in today's digitalized world, problems related to ownership, such as how data and information are managed, need to be addressed, so that the benefits of this revolution reach the highest number of people without reducing global well-being or causing damage. Consequently, we have to resist the fascination of all things digital because if it has some form of intelligence, it is nothing more than the result of the intellectual property on which social relations/values/interaction are based and often not exploited to the full.