

C&M: Culture and Museums International Tech Forum 2023
Cultural ecosystems in the digital age. Towards the reflective and
critical use of digital technologies.

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Summary of conclusions

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A problem field doesn't exist *per se*. It only comes into existence when a set of questions demarcates it and consolidates it as such. As such, there is nothing more critical than the ability to ask the right questions with which to delimit a major problem field.

1. Interdefinability and complex ecosystems

Throughout the two days of work at C&M 2023, we asked ourselves how cultural ecosystems are configured, function and transform in the digital age. By adopting the concept of cultural ecosystems as a focus of reflection, our aim this year was to transcend the notion of a museum or cultural entity. Our intention was to explore (or problematise) a more wide-ranging scope in which museums and cultural institutions are part a network of multiple relationships that, in addition to what is culture itself, involve the physical-biological environment, the production sector, social organisations, the economy and, of course, technology. Indeed, if this forum has reaffirmed anything, it is that the traditional categorical divisions between humans, machines, the biological, the cultural and the natural are diluted in an assembly of intertwined entities coexisting in symbiotic relationships and interconnected systems. In this renewed ontology, technology is presented to us as the thread that binds and intertwines the diversity of the entities comprising it in a mesh of relationships. Therefore, only based on the conceptual frameworks that provide us with complexity theories and through a post-anthropocentric approach can the challenges, problems and opportunities the area of culture faces in an era marked by growing hyper-technification and ultra-digitality be addressed.

Thinking in terms of complex ecosystems implies placing some fundamental concepts at the centre of the debate, such as non-linearity, indeterminacy and emergence. However, in these conclusions – brief due to necessity - I would like to highlight one of them. I'm referring to the concept of interdefinability, which has been implicitly hovering over the thoughts on this forum.

As Rolando García (2006) pointed out a long time ago, the complexity of systems – be they cultural or of any other type – lies neither in the heterogeneity of the entities comprising it nor in the multiple relationships they establish among themselves. Complexity arises from "the mutual dependence of the functions performed by the elements within the system and the capacity, therefore, to affect each other". Acknowledging that interdefinability is an inherent property of complex systems implies considering at least two important issues.

First of all, it means that, in a scenario marked by the exponential growth of the processes of

technification, digitalisation and computerisation, cultural institutions need to carry out an exercise of decentralisation - or in other words, leave the encapsulation of self-reflection and self-referentiality - to understand the transformations that these processes are operating in every dimension of the system: social, cultural, artistic, political, economic, productive... and ask how they are redefined or repositioned in co-evolution with these transformations. There is a clear example in the transformations that artistic production has been experiencing for some time. As Christiane Paul explained so well in her speech, digital art is reshaping the concepts of exhibition, acquisition and collection, creating a mixed reality for the existence of art that affects not only the structures and practices taking place in museums, but the very definition of what an art museum is - or could be - in the 21st century. Hence, the question on the identity of museums, asked in a dynamic and changing context, becomes a topological question: what characteristics remain unchanged when the cultural morphology in force up to now changes and what is the new form acquired by museum entities in this process?

Secondly, interdefinability presupposes caring for others as a fundamental parameter in the articulation of the system, as others are no longer "others" that are foreign to me, but are an essential part of my own definition, status or position. Consequently, interdefinability entails the assumption of an ethics of care, understood in a broad sense as the responsibility and duty we all have to care for each other and protect what we regard as valuable. At this point, it is worth recalling a capital issue: "the" digital age doesn't exist in the singular. Instead, what exists is a multiplicity of digital "ages," each with its own times and speeds, problems, interests and priorities, although all interrelated – affected - by each other. We can't avoid the fact that technodiversity - with its corresponding imbalances - is also part of the complexity of cultural ecosystems. This is why the debates held at this forum placed a special emphasis on the need to establish solidarity structures based on the mutualisation of knowledge and resources, and the imperative need to move towards a model of technological innovation that distances itself from the rentier logics. This model needs to be turned into a key tool to achieve non-exclusive, horizontal, equitable, sociocultural and economic development that is beneficial for all and in which everyone can participate. In other words, we have opted for a model of technological innovation, sponsored by the cultural sphere, guaranteeing progress in terms of social justice and helping us reduce the numerous digital gaps that still persist and on which we will need to continue working intensively in the next few years.

2. Critical and ethical assemblage

Given that technologies are neither neutral nor innocuous, my conclusions last year stated that museums and cultural institutions, as the constitutively critical entities they are, could not limit themselves to making inertial, complacent or uncritical use of technologies. On the contrary, I argued that museums and cultural institutions should assume responsibility for rendering the processes of cultural technomediation and hypertechnification an area for discussion and critical action. In line with this premise, we wanted to delve deeper into this issue this year and asked ourselves what the reflective and critical use of digital and computational technologies in the context of complex cultural ecosystems means.

On the one hand, there seems to be a consensus that the critical and reflective use of technologies implies, at a minimum, guaranteeing that the technological systems we use are inclusive, reliable, accurate, transparent and duly credited. Consequently, it seems that there is also agreement on the fact that reflective and critical use inevitably entails an ethical commitment.

On the other, we have ascertained that a reflective and critical approach implies striking a balance between theoretical-critical reflection itself and a proposal for specific actions that have - or could have - an effective impact on the configuration of our technological world. For cultural entities to exert real change and become instruments of emancipation, critical disarticulation in itself is insufficient; action needs to be taken. However, acting not only entails making use of what we already have, but involves reinventing it, appropriating what we have to transform it, and thereby moving towards the future to which we aspire. In other words, cultural institutions need to assert their capacity for critical and ethical assemblage through production and technological reinvention. Notable examples in this regard were brilliantly set forth by Hilary Knight in her presentation. Likewise, both Michael John Gorman and Sabine Himmelbasch used their respective interventions to show us how technology can help us achieve sustainable coexistence between humans and biological ecosystems through a deeper understanding of their mutual interrelationships.

In addition to these examples—and others that I am unable to specify here—I would like to point out the following relevant issues. Firstly, critical and ethical assemblage is not restricted to the use of dominant or mainstream technologies (AI, IoT, big data, etc.), it also means – and above all – thinking and acting in the margins of hegemonic paradigms with the aim of configuring differentiated technological worldviews. This approach implies acting with another order of questions in mind. Take, for example, data, which has once again become one of the central topics of this forum. Big data technologies are, without a doubt, invaluable. Data analytics helps us, among other things, to optimise the internal management of museums, to increase our knowledge of audiences and to expand the forms of access and ways of valorising collections. Now, instead of thinking about data in the usual manner, that is, as the fuel that drives AI and machine learning computer systems, whose operational logic is based on the extraction, accumulation and exploitation - of data - why not use the biological metaphor and think of data as the sap that runs through different communities, connecting them through shared practices of collection, fermentation and interpretation? From a strictly technical point of view, computer processing is the same, but the underlying conceptions in each case generate significantly different effects on the way in which we understand our relationship with technology.

Secondly, critical and ethical assemblage entails turning museums into strongholds where certain conditions we still regard as valuable for human beings can subsist - or resist. Hence, in an age governed by exponentiality and ultra-speed, it is worth asking why we shouldn't turn museums places where the slow-moving time required by thought, reflection, aesthetic contemplation and deep relationships is possible; where self-absorption, in the Ortegian sense of the term, can take place in the face of change. And I am not referring to removing technology from the equation—which would be the easy way, although absurd due to being outdated. What I propose is to imagine a form of technological use that also favours a slow temporality—which as human beings we need - and not only the accelerated temporality that governs the world we live in.

In third place, given that every cultural ecosystem is based - as Pierre Bourdieu explained so well – on a shared set of beliefs, knowledge, values and ideas; critical and ethical assemblage implies asking how today's emerging technologies will affect our understanding of culture in the medium and long term. In other words, in addition to exploring what we can do here and now with current technology, it is also crucial to think about the profound changes these technologies will have on our belief and value systems, on our ways of understanding. For example, we could ask ourselves how AI – with its automation – will impact our understanding of what a museum is as an organisation of decision-making human beings. Or how AI generation models will influence the concepts of creativity and artistic work. Or how the blockchain and its encryption technologies will transform the concept of value and, in particular, the concept of aesthetic value. We could also ask ourselves what other values are going to emerge and, therefore, what we will regard as worth preserving in the future. This reflection is far from trivial, as, to the extent the use of these technologies increases in the cultural sphere, we will be contributing to these profound changes in our systems of beliefs and values.

In fourth place, and given the capacity of cultural manifestations to create narratives that connect us in shared worldviews and collective goals, critical and ethical assemblage also needs to be projected in the elaboration of accounts of contemporary problems and of the value/function technology acquires in the articulation of these problems. This issue becomes particularly relevant now that AI generation models can now compose their own stories. Indeed, one of the narratives we need to develop most urgently is the one that helps us demystify AI, so we can avoid the polarisations between the techno-utopian and apocalyptic visions that have occurred in recent times and that merely help cloud the field of problems we need to address most. In this regard, I maintain that the most urgent problem to be addressed is not to elucidate whether AI will raise us to superhuman levels or whether it will eradicate our species. The question we really need to ask ourselves is how we can establish processes of collaboration and human-machine co-creation that enrich and expand our imagination rather than diminishing or impoverishing it.

Finally, in ecosystems characterised by interdefinability, critical and ethical assemblage has to be exercised with and through the people with which we interact; it cannot be undertaken from individual positions. In this sense, and as the discussions in this forum have shown, technological reinvention will only be possible within the framework of a transdisciplinary inquiry that combines artistic experimentation, scientific-technical research and theoretical-critical reflection.

3. The ambivalence of technology

This year we have once again asked ourselves how digital and computer technologies are transforming the cultural experience and how they influence the processes of participation, creation, cooperation and learning. It is unquestionable that digital and computer technologies have enormous potential to shed new light on artistic production and cultural history in general, and to bring to light dimensions inaccessible to the cognitive capacities of human beings, which are limited. We have seen this once again in the various interventions at this forum. However, we have also ascertained that certain problems persist and threaten to take root if urgent strategies are not implemented to mitigate them. I am referring to problems such as those related to the digital underrepresentation of certain cultural heritages, inequalities with regard to access, disparities in project financing and issues between regulatory frameworks for rights and the logics of circulation and use specific to the digital environment, among others.

However, and due to the fact that these problems - which reappear time and time again - are important, I would like to use these conclusions to highlight two aspects that, in my opinion, require thorough reflection on the part of cultural institutions.

Several presentations at this forum enabled us to confirm that technology can function as a large magnifying glass and provide us with a blown-up vision of artistic production and our cultural heritage. Technology seems to have enabled us to see and understand more and more clearly. Technology amplifies the dimensions of reality, opens our eyes to things that are impossible to perceive with the human eye and provides us with augmented experiences. That's a fact. However, we should remember that magnifying glasses also distort and some diffract. Therefore, in addition to the value we recognise in technology as an instrument of amplification and illumination, we need to ask ourselves: what is irreducible to computing and digitalisation? What is it that can't be valued, interpreted, understood or known digitally and computationally? What do digital and computer strategies obscure? In other words, we need to remain in a state of constant tension between what computer and digital technologies light up and what they obscure; between what they expand and what remains irreducible to computing and digitalisation. The museum, as a critical assemblage regarding contemporary technological development, cannot only be a space in which to explore the potential and capabilities of technology – undoubtedly many – it must also become a space for reflection on the limits and limitations thereof. Within the context of a society that seems to be heading – at least in advanced economies – towards total digitality, I believe that this is one of the best services the cultural field can offer us.

Hence, when we are confronted with the use of digital and computer technologies in the cultural sphere, instead of thinking that these technologies help us see more and more clearly - a thought that ends up putting us in a dangerous place of subalternity with regard to technological developments - I find it more interesting to think that these technologies help us see differently and that, in addition, we are capable and responsible for deciding what we want to see in a different manner, what is meaningful to see differently. In my opinion, it is precisely in this ability to freely decide what we want to see differently and where, that a large part of the heuristic, transformative and emancipatory potential of digital and computer technologies lies.

The second issue I would like to address is related to the concept of bonds, a concept I find more interesting than connections or interactions as it involves a sense of belonging and commitment. If one of the fundamental objectives of museums and cultural institutions is to establish meaningful relationships with audiences, then we need to ask ourselves very seriously what type of bonds we are establishing between communities, cultural heritage and institutions through the technologies we use. Do these technologies help establish long-lasting bonds, with the capacity to affect us, transform us, promote reflection or drive us to action? Or, on the contrary, are they part of the logic of the ultra-fast, of epidermal emotionality, of the passing wow effect? I believe that this reflection is crucial, because if we are unable to establish these bonds that affect and transform us, we will be imperceptibly contributing to the critical and aesthetic depotentialisation of the cultural field and to the dissolution of spectators – the general public, audiences, visitors - not only as a critical and aesthetic subject, but as a subject as such.

Indeed, recognising oneself as part of a symbiotic system, which functions as an articulated totality, implies focusing on the value of the collective and, therefore, promoting and establishing mechanisms and common spaces of co-creation, collaboration and participation, spaces in which a collective intelligence can be developed based on the integration of different knowledge,

experiences and expertise - both in scope and nature - without the subject losing its individuality. In this regard, we must honestly ask ourselves if we are really building horizontal and non-hierarchical spaces, or in other words, if we are really sharing the capacity for action and decision-making with the communities; if we are turning the public sphere generated by a museum in the technosphere into a space of shared meaning and collective action, where the individual is visible and acquires a voice, or if, on the contrary, we are simply creating users for the technologies (interactive devices, transmedia interfaces, etc.) with which we compete in a global market of digital resources.

4. The Spanish agenda

At this forum we have also asked ourselves about the specific problems the Spanish cultural ecosystem has to deal with in the digital transformation process and in achieving the goals of the 2030 Agenda. This perspective of reflection has been essential for two reasons. On the one hand, if we accept that we need to think in terms of technodiversity, it seems obvious that technological issues need be addressed taking the particularities of each specific context into account. However, and despite the fact that this premise, stated in this way, seems to be fundamental, the importance placed on processes of internationalisation and externalisation can sometimes lead people to neglect their own problems. In this regard, and without foregoing the definition of international synergies, a direct focus must be placed on the generation of local structures of cooperation and reflection.

On the other hand, this perspective of analysis has provided us with the opportunity to think in terms of translocality. Unlike the traditional global-local binomial, which postulates a vertical relationship of integration in which the local is absorbed by the global, the translocal approach conceives the system as a network configured by multiple spread out local instances in continuous interrelation. This change of focus is relevant due to the fact it entails a redefinition of the horizon of problems. When we adopt a translocal perspective, the question no longer lies in resolving how we can xxx ourselves from local xxx to global xxx – a kind of abstract concept – but in how we relate particularly and specifically with others and how we can create a horizontal space of common coexistence together.

Well, in this context of reflection, a number of important ideas have arisen and deserve to be reviewed. Firstly, we have noted the need to strike a balance between the differentiation and individuation corresponding to situated cultural practices and the identification of common problems that can serve as a framework for the creation of large-scale strong alliances.

Secondly, we have ascertained that the commitment to sustainability - the common problem that concerns us all - must go beyond the implementation of specific actions, such as improving ecological footprints and energy savings at organisations, as sustainability entails a change of mentality, a cultural change that affects the way in which we understand our relationship with nature and our way of inhabiting the planet. Therefore, in addition to the responsibility of implementing sustainable actions that can be exemplary for society, museums must also undertake responsibility for creating shared awareness-raising narratives that contribute to this much-needed cultural transformation.

In third place, we have noticed that contradictions and conflicts exist between the digital transformation process and the 2030 Agenda. In this regard, we need to remember that the digital transformation process itself involves significant energy consumption, the emission of large amounts of CO₂ and resource extraction practices, among other controversial issues. Moreover,

we mustn't overlook the fact that communications, and the storage and transfer of data and information, or in other words, everything that makes the digital society possible, do not occur in gaseous clouds, but require "highly material" infrastructure that changes and modifies ecosystems as well. How to reconcile digital transformation with progress in sustainability measures is one of the main challenges we face in the short and medium term.

In fourth place, we have reflected on the importance of planning in a scaled manner, which means focusing on activities that can actually be carried out, avoiding becoming bogged down in unrealisable expectations that will merely give rise to a feeling of frustration and failure. Scaled planning requires a deep understanding of organisations, their capabilities, and the circumstances of the environment in which they operate.

Finally, we have ascertained that, although every agenda involves a delimitation of objectives and a regulatory framework, this circumstance does not nullify the confrontation that frequently occurs between what is desirable - what we aspire to - and the sociopolitical and economic conditions that actually shape the reality in which we act. Consequently, we have also reaffirmed something we already knew: that compliance with the goals of the 2030 Agenda requires a commitment from every player involved. This commitment entails creating and sustaining the mechanisms that promote progress towards the goals in question, establishing certification processes to support the actions undertaken, designing and executing appropriate public policies, planning and making healthy economic investments, among other measures. And all of this needs to be carried out in an environment of dialogue and joint debate, thereby ensuring we all feel jointly responsible and participate in decision-making.

5. The future

In last year's conclusions, I appealed to the central role cultural entities could or should play in shaping our technological future. In fact, I proposed inverting the question on the future and urged participants, rather than trying to imagine what the museums of the future might look like, to ask themselves how museums and cultural institutions could make an active contribution to creating and shaping our future, a more humane, equitable, fairer and rebalanced future. Jorge Carrión's closing presentation, in which he outlined the key factors that will define museums of the future, has given me the opportunity to go back to the idea of the future again and to place it at the centre of the discussion and critical action.

I acknowledge that focusing on the future does not represent a particularly original question. Thinking about and imagining the future, attempting to foresee what might happen in the next few decades, constitutes one of the main aspects of the philosophical, critical, artistic, scientific and technological reflection of our time. The word 'future' has become ubiquitous; it appears everywhere. However, given that the idea of the future is not neutral, we cannot simply accept the regulatory models established by government agencies or the visions promoted by technology corporations and their universalist and hegemonic vocation. Nor can we limit the idea of the future to the spectrum of individual imaginations or the horizon of particular expectations. As an ethical-political construction, the idea of the future also needs to be problematised and thought about collectively. Therefore, it is urgent to appropriate the idea of the future in order to develop it from alternative positions that benefit us all.

In this context, I propose using the future as a hermeneutic tool and critical instrument to gain a better understanding of our present, but also to imagine the humanity we would like/should aspire to in a horizon of increasing technologisation. Moreover, I propose exploring it using speculative methodologies, or in other words, methodologies that combine comprehensive scientific-technical knowledge with the creative activity of the imagination, because if we agree that we live in complex cultural systems, or what is the same, in ecosystems found in continuous transformation, which are unpredictable, ambiguous and uncertain in their future, then the best - perhaps the only - way we have to approach the future is speculatively, that is, taking its multiple possibilities and indeterminations into account.

Hence, in this era of technical reason, marked by the prevalence of rationality, quantification, precision and predictability, I invoke the critical imagination of Marina Garcés (2022) and the aesthetic reason of Chantal Maillard (2017) as foundations for the deployment of an action that is critical, investigative, creative and experimental at the same time. An action that helps us to consolidate new realities, new arrangements, new ways of being and living; that facilitates the discovery of alternative technological forms of life to those that we consider alienating or based on human subalternity.

Ortega (1939) said that "only at an entity where intelligence functions at the service of an imagination, not technical, but creator of VITAL PROJECTS, can technical capacity be established". This, in my opinion, is the major responsibility the cultural field has to undertake in the coming years.

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