



UCL



AI for People & Planet

Art Futures

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External Participants: Mr Jake Elwes (Artist); Mr Graham Hitchen (UK Research and Innovation); Mr Wayne McGregor CBE (Studio Wayne McGregor); Dr Chris Michaels (National Gallery); Ms Tonya Nelson (Arts Council England); Ms Caroline Norbury MBE (Creative Industries Federation); Ms Karen Palmer (Artist); and Mr Ben Vickers (Serpentine).

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Executive Summary

The **Artificial Intelligence (AI) for Art Futures** discussion was organised as part of the UCL roundtable series '[AI for People and Planet](#)'. The aim of this roundtable was to bring together the leading minds of the UK's art industry to identify mechanisms for leveraging the UK's creative strength via AI's transformational effect on society. The purpose of this document is to inform contributors to the arts sector of the challenges and opportunities that AI presents to current creators and to highlight the opportunities and possible actions of integrating arts, practice, methodologies and processes into AI domains.

The roundtable distilled critical themes that have not otherwise been recognised or addressed and that need to be considered by the calibre of multi-disciplinary industry leaders that attended the panel. The key themes and recommendations included:

- 1) Academic institutions such as UCL should play a role in providing resources - both in terms of funding and expertise - as well as in facilitating the bridge between an arts education and an arts career.
- 2) Opportunities are needed to facilitate the exchange of ideas between (amongst others) software programmers, potential artists, corporations and higher education institutions.
- 3) Capacity building is needed to ensure artists have a sufficient level of understanding of AI and technology.
- 4) Effective partnerships can be built between large private corporations and the arts sector. Creative Industries in the UK would benefit immensely from collaboration with domestic technology companies.

- 5) More long-term and sustainable funding is needed to support individual artists. The UK should fund PhD studentships as a way to reduce the cost of exploring potential routes for collaboration between AI research and the creative industries.
- 6) Artistic platforms could be used as environments in which to identify and address issues in new technology and introduce these to wider audiences.

These themes are presented in more detail below:

Discussion 1: What are the key values and bold ambitions for a dynamic, sustainable and equitable creative and cultural sector and how can AI enable this?

Arts Council England (ACE) recently published their new 10-year strategy, '[Let's Create](#)'. Developmental goals include broadening access to creative experiences, specifically to those in culturally deprived areas; fostering resilient and cohesive cultural communities; and making sure the UK can maintain its reputation for high quality, innovative arts and culture. AI can facilitate the achievement of these goals. To support the adoption of AI, ACE aims to provide programmes and platforms for artists to experiment with the technology as well as understand the impact of AI and other technologies on existing intellectual property laws and advocate for changes where needed. Broadly, three main contributions are to be expected from AI to the arts sector: data processing; accessibility of art; and artist productivity.

In order for ACE to achieve the goals outlined in 'Let's Create,' **academic institutions such as UCL, as well as commercial enterprises, need to provide resources - both in terms of funding and expertise.** While there are programmes and grants designed to give young creators the necessary tools to understand AI and produce art based on it, **more sustainable and long-term funding is needed.** At the time of the roundtable, the Government had not yet announced its [£1.57 billion investment](#) to protect Britain's cultural, arts and heritage institutions. While this recent announcement will be a vital lifeline to the sector, many [jobs will still be unprotected](#).

Until recently, the role of AI and augmented reality (AR) in the arts sector has been underexplored, which has led to low commercial viability of such projects at present. This is further compounded by the COVID-19 pandemic and the resulting worldwide recession. As the UK begins to reopen its arts and cultural sectors, instead of innovating, museums and other arts institutions may feel compelled to engage in proven and profitable strategies to survive the crisis instead of pursuing more innovative models. However, this risks stifling the integration of AI into the arts.

Furthermore, progress has to be made on **facilitating the bridge between an arts education and an arts career**, as there is often no clear pathway for emerging artists. This could be done through allowing for an **easier exchange of ideas between software programmers, potential artists, corporations and higher education institutions**, so that young creators can develop research questions and projects that could then elevate them into the professional artists' community. Universities are well placed to facilitate such exchanges. **Efforts would be needed to ensure forums took place across the UK (to avoid London-centrism) and at frequent intervals to establish a reliable solution.**

Capacity building is also needed to ensure artists have a sufficient level of understanding of AI and technology to enable them to navigate the industry. Resources and courses that are offered should strive for content to be accessible and not overly technical or full of academic jargon. While some tech giants, such as [Adobe](#) and [Facebook](#) have artist-in-residency programmes, such opportunities are limited in number. More transparent and accessible routes are needed to enable artists to access information and courses about how to build links with the tech industry.

Discussion 2: Where are we now and how can we leverage the radical changes in the uptake of technology to progress effectively and use the benefits of AI for the creative sector? Case study: Living Archive, a collaboration between Wayne McGregor and Google Arts and Culture

[Living Archive](#) is a collaborative experiment between [Studio Wayne McGregor](#) and [Google Arts and Culture](#). The Living Archive is a tool that has used thousands of pieces of archived dance footage to create a machine learning technology that can learn and recreate the particular style of a dancer. The combination of creative and technological expertise working to create a cross-disciplinary project serves as an example for similar collaborations. The collaboration arose organically - a Programme Manager from Google Arts and Culture who had previously worked with Wayne McGregor invited the studio to meet with the Director of Google Arts and Culture and the Lab in Paris. The crucial link was having someone in the tech institution who had experience in the Arts and could curate artists, as well as having a project that was of mutual interest and pushed the boundaries of both partner organisations. Living Archive offers a valuable case study of how **effective partnerships can be built between a large private corporation and the arts sector.**

Challenges to cross-industry partnerships include sustainability and that some international companies overlook UK artists due to geographical distance. Currently, many artists, such as [Karen Palmer](#), are left to establish these partnerships on their own, which requires considerable time and resources. Therefore, **Creative Industries**

in the UK would benefit immensely from collaboration with domestic technology companies. UK Research and Innovation (UKRI) can help the arts sector broker such relationships and act as an intermediary to strengthen connections. [UCL Innovation & Enterprise](#) offers one model for such assistance through providing partnership support at the interface of academia and industry, facilitating introductions and developing long-term, multi-disciplinary strategic partnerships. Conversely, AI developers, especially those still at university, could benefit immensely from partnerships between creators and academic institutions.

Our roundtable discussion echoed recommendations from Nesta's report on '[The Art in the Artificial](#),' which recommended that the **UK should fund PhD studentships as a way to reduce the cost of exploring potential routes for collaboration between AI research and the creative industries.** Nesta notes that 'building on the work of the Digital Catapult and the Createch initiative, this would allow what is technically, artistically and commercially possible to be discovered more quickly and easily, enabling the UK to reach its full potential in this area.' AI & Art Futures, CreaTech and AI would benefit from long term Innovation funding and investment as well as Research Council support for PhDs and Doctoral Training Centres.

Discussion 3: What are the ethics, business and policy implications for equitable AI and Art Futures?

Ethics and equity are major concerns for the application of AI. Even the most advanced machine learning algorithms are designed by humans. Individual biases, preconceptions and assumptions will be amplified by algorithms. For example, COMPAS is a risk assessment software that the US courts use to forecast an individual's likelihood of reoffending. [Investigations](#) have found that the software is twice as likely to predict that a black offender will reoffend compared to a white offender. In January 2020, London's Metropolitan Police Service's began [use of live facial recognition software](#). Civil liberties groups have [condemned this decision](#) as an obstruction of civil and privacy rights, as well as a move that will further marginalise minority ethnic groups due to racially biased algorithms.

The arts, CreaTech and Creative Industries need to be aware of the problems associated with AI. Furthermore, **artists can use the platforms available to them to introduce such issues to the wider audience.** For example, Karen Palmer's '[Perception.io](#)' immersive experience places participants 'in the shoes' of a police officer during a confrontation with a potential suspect. The actions taken by the participants, as well as involuntary reactions, such as eye movement, are recorded and reproduced to form a comprehensive picture of one's intuitive preconceptions.

Artistic platforms could be used as environments in which to identify and address issues in new technology. The large audiences visiting museums and galleries provide perfect conditions for verifying theories related to human interaction with machine learning or other software.

Conclusion

AI & Art Futures and its wider community is uniquely positioned to have a pivotal role in helping the sector innovate and thrive. Roundtable discussions are a unique opportunity for experts from multiple disciplines to exchange ideas and experiences and develop solutions to emerging issues. The 'AI & Art Futures' conversation has revealed some incredibly important questions, including:

- How do we establish lasting partnerships between artists, technology companies, government entities and higher education institutions to ensure continued development of AI in the creative sector?
- Is there a way to maintain a sustainable pool of funding, beyond emergency funding, for AI and art initiatives, even in the face of the global recession?
- How can an artist's path from education to a career involving AI be facilitated?

The art industry plays a crucial role as a communicator, demystifying AI and portraying the challenges and opportunities it creates to a wider audience. Challenges remain regarding ways to incorporate AI in creative work and avenues for artists to engage with tech companies. However, provided that open discussions such as this roundtable can continue to take place and generate ideas, we can remain hopeful that innovative solutions will be developed.

AI & Art Futures

UCL Art Futures is an interdisciplinary programme focused on innovating with and through technologies.

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