

**Response to the UK Intellectual Property Office
consultation on Artificial Intelligence and
Intellectual Property**

January 2022

Executive Summary

DACS is grateful for the opportunity to partake in this important consultation on the future of intellectual property law in light of a growth in AI industries in the UK. DACS represents the rights of visual artists and is pleased to share evidence from artists themselves on both the opportunities and concerns surrounding AI, appended to this consultation response.

Visual artists can be quick adopters of technology, intrepidly exploring the utility of AI tools at their disposal. However artists also believe that copyright is a vital way for them to be remunerated and involved in the decision making process over uses of their work. Artists have displayed a strong preference that AI developers and users should license the use of their works, rather than expanding the text and data mining exception in copyright law any further.

DACS has a long track record of acting as a trusted broker to over 180,000 artists worldwide, providing a suite of services that remunerate artists for the use of their works. Royalty payments are immensely beneficial to artists, allowing them to sustain their practice and meet the costs involved in making their work available for display. Copyright licensing also gives artists the autonomy to decide how their work is used and in what context. In the context of AI, this means being able to collaborate with AI developers and users rather than being left out of the equation.

Expanding the copyright exception for text and data mining would remove a potential revenue stream to artists at a time, post-pandemic, when they need it the most. As technology evolves, government must ensure that all players in the marketplace are able to benefit. Licensing the use of works to AI technology companies and AI users achieves this by enabling companies to innovate whilst remunerating the creators whose works are used. It also keeps a level playing field between businesses who have adopted AI technology and those who have not, and who license the manual use of copyright-protected works.

AI industries operating in the UK can grow innovation and skills. However, providing carve-outs in copyright law causes serious problems and potentially damages the foundation of the UK's sizeable creative industries, worth over £111 billion to the economy pre-pandemic¹. AI developers and users are often making commercial products with the intention of financial gain, whilst using copyright-protected works. Licensing these works is a flexible, agile way to bring economic benefit to creators and copyright holders, which does not hamper the development of AI products. For government to keep the creative industries thriving creators must be supported in commercial opportunities like AI.

DACS makes the following recommendations to government to:

- Make no legislative change to the text and data mining exception. Expanding the exception would mean the UK misses out on economic incentives to license works and have revenue flowing back to those who create them;
- Work with existing licensing bodies to improve the licensing framework for AI. DACS has already started working with AI developers and is in a strong position to develop further licensing opportunities for visual creators;
- Play a role in facilitating educational initiatives and bring creators into the fold;
- Work cross-departmentally to consider other ways of aiding AI industries in the UK, e.g. through tax relief;
- Consider ethical issues in AI when making policy decisions.

¹ <https://www.gov.uk/government/news/uks-creative-industries-contributes-almost-13-million-to-the-uk-economy-every-hour>



About DACS

Established by artists for artists, DACS is a not-for-profit visual artists' rights management organisation. Passionate about transforming the financial landscape for visual artists through innovative new products and services, DACS acts as a trusted broker for 180,000 artists worldwide.

Founded in 1984, DACS is a flagship organisation that campaigns for artists' rights, championing their sustained and vital contribution to the creative economy. DACS collects and distributes royalties to visual artists and their estates through Payback, Artist's Resale Right, Copyright Licensing and Artimage. In 2020, we paid [REDACTED] in royalties to 72,000 artists and estates.

Responding to this consultation

In preparation for this consultation response, DACS sourced evidence from artists who participated in a 'town hall' style stakeholder session held on 2 December 2021. Participants heard a keynote presentation from AI expert Andrew Burgess, were briefed on copyright and the current consultation, and invited into breakout rooms to provide insight and testimony. The report of this event is appended to this response, and will be referred to regularly throughout with page numbers in brackets.

DACS is a member of the British Copyright Council and the Alliance for Intellectual Property and supports their submissions. DACS is also one of four members of the Copyright Licensing Agency and supports their submission to this consultation. DACS is responding in relation to questions on copyright, and does not comment on questions relating to patents.

Copyright – text and data mining (TDM)

Note: page numbers in brackets refer to the appended report, Stakeholder session on AI and copyright

Examples of AI in the art world

Artists have been quick adopters of AI, as they have with other types of technology. Artists participating in the stakeholder session explained how AI presents them with new opportunities and tools to explore in their practice (p.17). Keynote speaker Andrew Burgess covered some well-known uses of AI artworks, including the portrait of ‘Edmond de Belamy’: a painting created by Paris-based collective Obvious in 2018. This work sold at auction house Christie’s for \$432,500 – the first portrait using AI technology to be sold at auction².

The AI that created Edmond de Belamy is an example of a Generative Adversarial Network (GAN) where two algorithms work in tandem – a generator and discriminator. As explained in the stakeholder session (p.8) a discriminator is trained on data to make a judgement on whether the generator’s output fits the intended task. In the case of Edmond de Belamy, the discriminator was trained on 15,000 images of works by real artists, some of which were still in copyright.

Whilst the sale of the Edmond de Belamy portrait brought significant income to its creators, the authors of the copyright-protected work would receive no income without licensing. It is clear there is a significant financial incentive for individuals and companies to use and develop AI: Snowpixel is an example of an application that charges users to utilise its AI tool. The sale of Edmond de Belamy at auction also demonstrated a proper economic market for AI art works, but it is imperative that those whose intellectual creations form part of the process of developing AI and its outputs also receive fair remuneration and recognition.

In the stakeholder session, artists who used AI in their work demonstrated an understanding of shifts in AI development, and an enthusiasm to acquire skills to utilise AI. They noted a large marketplace for AI art work, often work that was sold on the blockchain as non-fungible tokens. The knowledge and curiosity demonstrated by these artists supported the important role licensing can play in AI: to create mutual benefit and collaboration.

Licensing art works for AI

Some artists were sceptical of AI and felt that AI developers advocated for a rights-free environment. Artists questioned why AI developers should receive special treatment compared with traditional users of copyright, such as print and broadcast media, where copyright-protected works are licensed (p.20). Trust was a key theme, as some artists felt that AI and other technologies created a ‘wild west’ of non-authorised uses. These artists advocated for DACS to provide trust and assurance through licensing (p.22), noting that they had specifically joined DACS for this purpose.

DACS has been approached by artists using AI and AI developers to use images of artists’ works for machine learning or other AI related purposes. Whilst there is not a specific text and data mining licence currently offered by DACS, there is evidence that this will be a growing commercial area, and one that artists want to take part in. DACS can act as a broker between artists and AI users and develop relevant licences that serve both parties mutually, as DACS has done for over

² <https://www.christies.com/features/A-collaboration-between-two-artists-one-human-one-a-machine-9332-1.aspx>

thirty years in other industries. Importantly, through licensing, artists are given the opportunity to collaborate in AI projects, and have an involvement in the output. An AI developer who approached DACS considered this to be a benefit to their projects.

A robust licensing environment also means understanding the choices made by rightsholders. Artists who have mandated their copyright to DACS have done so by exercising their choice – a key tenet of the Collective Rights Management Regulations. Establishing mandatory licensing for AI – for example using creative commons or creating a new licensing scheme that does not involve existing licensing bodies – would derail the principles of autonomy, freedom and choice that comes with licensing in a commercial market, including the freedom and choice *not* to license. Artists demonstrated a concern over not just a loss of opportunity to be remunerated for their works used by AI, but also the right to object to the use of their work or a loss of control (p.22).

Role of government

In agreement with other contributors to this consultation (including the CLA and the Alliance for IP), DACS considers government should work together with existing licensing bodies to improve licensing for text and data mining, or indeed any other related AI use. Licensing is a key commercial benefit to artists, providing them with remuneration that they can invest into their work, which underpins the UK's successful creative industries. Furthermore, licensing is flexible, negotiable and a commercial endeavour that many other industries take part in on a regular basis.

Artists were alive to other issues that arose from AI, such as educational, ethical and environmental concerns. Artists discussed how AI should form a part of arts education to equip graduates with the right skillset to enter the marketplace and there was also consensus for established creators to understand more about the nexus of AI and copyright. Government can play a role in creating more educational resources that would aid individual creators and AI developers to navigate both copyright and AI, enabling better mutual understanding and fostering collaboration.

To support AI development in the UK, government can look elsewhere than copyright law. Tax incentives will encourage AI businesses to develop in the UK, as well as other business support for small and medium sized enterprises and educational grants. Some AI developers work closely with higher education and research institutions, therefore educational funding into relevant programmes could also help AI industries flourish. DACS recommends the IPO plays a role in education, facilitating licensing and aiding cross-departmental conversations on how AI can be supported for the benefit of both AI industries and IP rightsholders.

Negative impacts of extending the TDM exception

Allowing AI developers use of copyright-protected works under an extended exception has the effect of creating an industry-related carve out in the law. In the creative industries, businesses already license the use of copyright-protected content for a wide variety of uses, both analogue and digital. Although AI industries are emerging in the art world, other creative industries have a track record of licensing for AI uses, demonstrating value in the AI licensing marketplace. In some ways, copyright licensing is akin to supplying services or selling goods – demand for a certain product leads to a negotiation for that product and a transfer of value. Extending the TDM exception will disrupt an important value chain, and would also create an imbalance where AI industries get free access to value that others pay for.

AI algorithms require data for training. The better the data, the better the outcome. In the stakeholder session there were two examples of AI outputs that had responded to the data used, but with flawed results. Botto, an art collective, used a discriminator algorithm trained on all of the internet, which meant its output reflected more negative aspects of information available online, from simple inaccuracies to demonstrating bias including racism (p.11). Equally, a database of real human faces used for training discriminators did not represent society more widely (p.24) giving rise to concerns that this incomplete data will impact how the AI discriminator makes decisions on real world scenarios.

Ethical issues arise often from bad quality data. This can be minimised through the licensing process because there is more certainty and transparency around the constituent data which is used to form works. As an example, DACS' image bank Artimage is an example of works of art that contains accurate metadata and descriptions. Licensing works via Artimage is a way of ensuring good quality data, and licensing revenues can also be reinvested to maintain the cleanliness and quality of the data.

Preference of options for the text and data mining (TDM) exception

DACS strongly believes that there is no need to widen the scope of the TDM exception and that doing so would have a negative economic impact on creators and the creative industries. Artists attending the stakeholder session demonstrated a strong preference for licensing the use of their works in AI, with 66% choosing the government option 1 when polled.

DACS suggests the following order of preference:

- Options 0 and 1: DACS does not believe these options to be mutually exclusive, as no changes to the law are needed to improve licensing for AI. DACS has licensed artistic works to a variety of industries for over thirty years, and takes part in collective licensing schemes operated by the Copyright Licensing Agency (CLA). Artists have made clear that licensing can build trust between creators and AI industries, enable artists to participate in AI developments and most importantly provide them with remuneration. AI should be treated no differently to other industries that also license copyright-protected works.
- Options 2 and 3: Some artists were concerned that their work is already being used by AI without their permission, and that simply by having their work available online means it can be used in ways they had not anticipated when it was first published. The notion of an 'opt-out' was attractive to some artists, with 13% of artists choosing option 3 when polled (p.28). These artists considered opt-outs to be a safeguard around their work, however we support the positions of the Alliance for IP and the CLA in this regard. DACS considers an 'opt out' provision in this context prejudices the interests of the rightsholder and risks subverting the position of copyright law by effectively requiring artists to 'opt in' to copyright protection. This is especially the case due to how AI machine learning works in using large quantities of data at once. It is hard to envisage how a mechanism for opt outs will work efficiently in practice, as it would require an accurate database showing up to date records of every rightsholder and every work they are opting out.
- Option 4: When polled, no artists supported option 4 (p.28). DACS supports the views of the Alliance for IP, the British Copyright Council and the CLA in this respect. DACS is not aware of any deficiencies in access to copyright-protected works that licensing cannot resolve. Broadening exceptions without recognising the available solutions, or investing in improving these solutions, undermines the licensing infrastructure and risks destroying revenue streams to creators and the creative industries. Option 4 would, in effect, give creativity away for free – creativity which is the output of UK workers as part of the UK creative industries, and for which they deserve to be recognised and remunerated.

Copyright – computer generated works (CGW)

DACS considers that the current copyright framework allows sufficient protection for AI developed works within s. 9(3) of the Copyright Designs and Patents Act (CDPA) 1988, and therefore that no legislative change is required (option 0).

Artists considered the notion of whether a work, created independently by AI, should benefit from copyright protection itself, however responses were varied. When polled (stakeholder report, p.27), 47% agreed there should be copyright protection for work created independently by AI, whereas the remaining 53% were either unsure, or did not think AI should benefit from separate copyright protection (24%). In discussions, some artists posed more philosophical questions on what we consider to be 'art', the process or the product, and ideas around human and AI engagement. These questions, whilst pertinent, cannot necessarily be answered by a change in copyright legislation for computer generated works.

Authorship in copyright is also subject to provisions under s.11 CDPA, where copyright in a work can be owned by an employer as first owner if the work was created under employment. DACS considers this provision to be relevant to copyright ownership in AI works, and should be considered in tandem with s.9(3) CDPA on computer generated works.

Other considerations

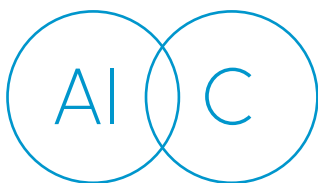
In discussions during the stakeholder session, artists raised concerns about education, the environment and ethics. Artists considered that AI should form part of arts education to enable a new generation of artists to explore technological changes. Artists were also concerned about ethical issues in AI, from bias to deception. Popular examples of mimicry, such as @deeptomcruise (p. 25) and AI that imitates politicians, create unease and mistrust in society. Furthermore, there are potential copyright and moral rights issues that could arise from unethical uses of AI to create art works falsely attributed to a human artist. When polled, all artists considered ethical issues should be taken into account when the government consults on AI and copyright. It is clear that the lines of distinction between copyright and social, ethical and educational issues are not drawn as clearly by creators.

DACS recommends that the Intellectual Property Office plays a role in aiding copyright education in AI industries and facilitating learning across the AI industry and creator sector. The IPO can also work cross-departmentally to offer insight into the position of copyright holders and supporting other policy levers such as tax relief, educational grants and business support to foster AI industries in the UK.

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Stakeholder session on Artificial Intelligence (AI) and copyright law in response to the UK Government consultation on AI and intellectual property



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Executive Summary

To assist in responding to the UK Government consultation on AI and intellectual property, DACS invited visual artists to join a stakeholder session – a virtual ‘town hall’ meeting where they could share their experiences and thoughts on AI and their practice. This report details the stakeholder session held on 2 December 2021. It sets out the information shared by keynote speaker, AI expert Andrew Burgess, together with details of two breakout sessions where artists were invited to speak candidly.

The exercise was fruitful in gathering insight and testimony. Some artists exhibited a deep understanding of AI and how it could improve their work. They posed questions that probed, philosophically, what it means to be a creator and whether the machinations of an algorithm is an artwork in itself. Simultaneously, other artists warned that AI, in the context of immense technological revolution – including blockchain and non-fungible tokens – can have negative implications on the rights of the individual creator. Some felt apprehensive of the speed of developments in AI, whereas some felt AI had not developed enough for the government to consult on changing the law.

In the main, artists considered that licensing their work is vital as it provides not only autonomy over the use of the work and remuneration, but it also builds trust. Trust was a repeated theme, with some artists feeling that the output of AI (rather than machine learning) is opaque.

Artists also compared AI industries with traditional industries. Why, one artist asked, should AI be any different to someone making a poster of my work?

Discussing AI highlighted related considerations: ethical, environmental and educational. All participants agreed that the government should consider ethical issues when consulting on AI. Artists considered AI together with blockchain where vast resources are used in minting and mining, leading to strong sustainability concerns. Artists recommended that AI is used in education, to ensure that the younger generation of artists have the understanding to harness the tools AI can provide.

AI has already transformed the lives of many people, but it also has a vast creative potential. Artists want to be involved, to collaborate and to benefit from new technologies. Licensing is a way of keeping artists in the frame, and fairly remunerated.

Background

The IPO is consulting on the relationship between Artificial Intelligence (AI) and Intellectual Property in more detail after a prior consultation in 2021. The government has a long-term plan to boost AI as part of national AI strategy and the AI sector deal. The government wants to ensure there are the right conditions for businesses to innovate. DACS has worked with its artist and artist estate members to offer a submission to the Intellectual Property Office to provide evidence and understanding on how the government's plans will affect these stakeholders.

DACS hosted a meeting on 2 December 2021 to understand the views of visual artists on AI as it relates to copyright. Thirty (30) people participated in the event.

Attendees were asked to interact in the session to share their views through polling and taking part in a breakout session to provide their perspective on aspects of AI and copyright.

About DACS

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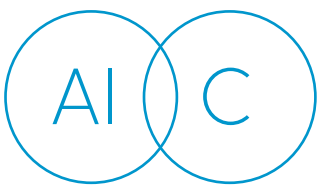
Founded over 30 years ago, DACS is a flagship organisation that campaigns for artists' rights, championing their sustained and vital contribution to the creative economy. DACS collects and distributes royalties to visual artists and their estates through Payback, Artist's Resale Right, Copyright Licensing and Artimage. In 2020, we paid [REDACTED] in royalties to 72,000 artists and estates.

About Andrew Burgess

A management consultant, author and speaker with over 25 years' experience, Andrew is considered an authority on innovative and disruptive technologies including Artificial Intelligence and Robotic Process Automation, and is regularly invited to speak at conferences on these subjects. He is the author of 'The Executive Guide to Artificial Intelligence (Palgrave MacMillan, 2018), Visiting Senior Fellow in AI and RPA at Loughborough University and Expert-in-Residence for AI at Imperial College's Enterprise Lab. He is a prolific writer on the 'future of work', and is frequently published in industry magazines and blogs.

Part One

**Keynote presentation on
Artificial Intelligence and art,
delivered by Andrew Burgess**



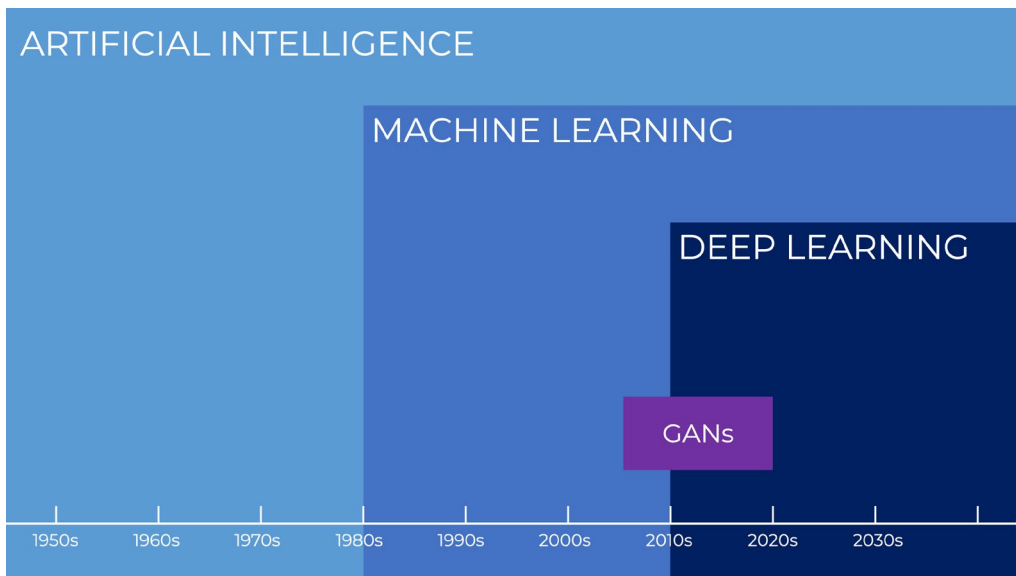
Edmond de Belamy

'Edmond de Belamy' is the name of a portrait painting constructed in 2018 by Paris-based arts collective Obvious. The work is unique for being the first artwork created using artificial intelligence auctioned by Christie's auction house, where it fetched \$432,500 in 2018.



Using Edmond de Belamy as an example, we can explore how AI is used in the art world, and how the effect of this portrait was achieved using AI technology.

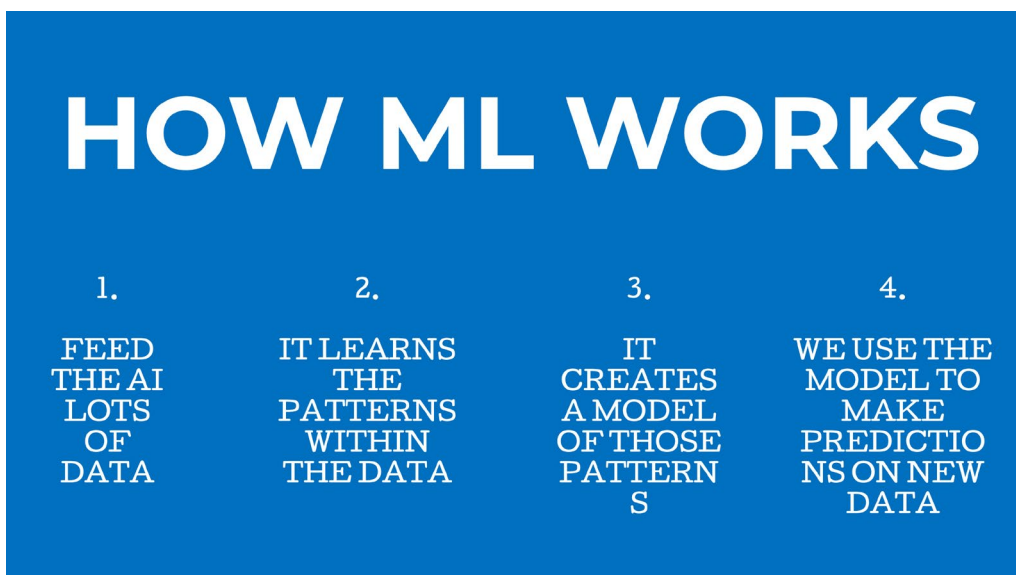
Artificial intelligence has been around since the 1950s in some form or another, and now exists in our lives as chatbots or predictive analytics. Since the 1980s onwards, machine learning emerged as a subset of AI. Machine learning is where a computer creates a model based on certain data, and then uses this data to make predictions or decisions.



Deep learning is a subset of machine learning which is more complex, using neural networks that mimic the structure of brain.

Machine learning

This is an example of how machine learning works. The first step is feeding data to the AI, which is an algorithm. The data could be structured, such as a database, or unstructured data like images.



The AI then learns patterns from this data, for example pixels in a photograph. Next, which is the key to machine learning, the AI creates a model of these patterns. Finally it uses this model to make predictions on new data.

Machine learning models are used in real life to create predictions.

A housing association can predict, using machine learning models, the likelihood of a person going into rent arrears. Based on the person's demographic, rent arrears history and the state or nature of the property they are in, machine learning tools can assist housing associations to identify these people before they fall into arrears and allow them to take preventative action.

Reinforcement learning

An example of reinforcement learning is found in AI developed by DeepMind, which is owned by Google. DeepMind trained AI to play the classic arcade game Space Invaders, but without teaching AI the rules of the game. Instead, the AI was given a target to achieve as many score points as possible, and the AI learned by trial and error how to achieve this. First it may stay still, and get shot at by the space invaders, but eventually it will try the options available in the game – moving, dodging, then shooting – to achieve the high score.

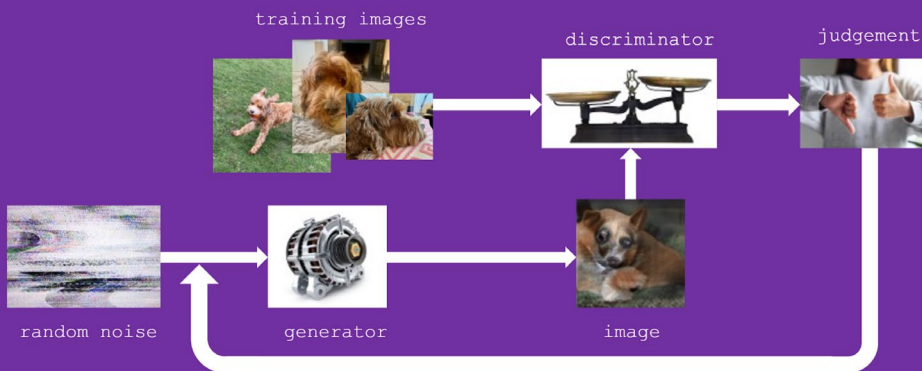


This reinforcement learning was applied to another, more complex, game called Go. Go is played on 19x19 board, which means there are more possible moves on a Go board than there are atoms in the universe. DeepMind trained the AI Alpha Go on games people had played. Alpha Go played against itself and got better, then played Lee Sedol, the top Go player in the world, and beat him.

Generative Adversarial Networks (GANs) – a subset of AI

The AI that created Edmond de Belamy is an example of a GAN. They work by use of a generator and discriminator.

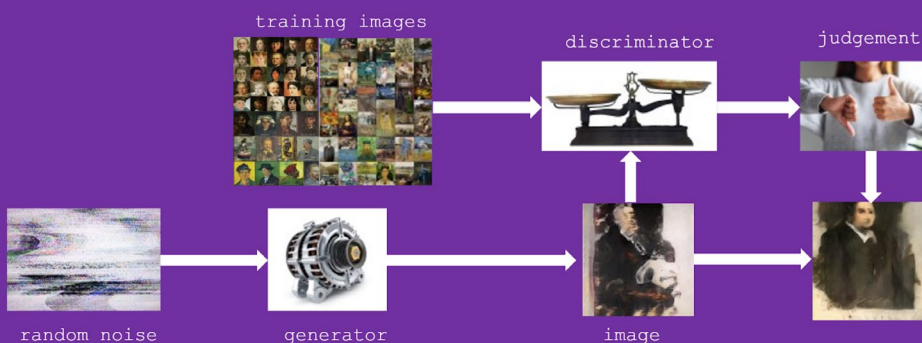
HOW GANs WORK



In this example, the generator is tasked with creating an image of a dog. The discriminator has been trained with real pictures of dogs, and can then provide a judgement. If the image the generator created is not enough like a dog, the discriminator will reject this. The generator will then create another image, and keep doing so, until the discriminator considers it to look sufficiently like a dog.

In the case of the GAN creating Edmond de Belamy, the generator creates lots of versions of the portrait. The discriminator was trained with 15,000 portraits by real artists up to the 20th century, some of which will be in copyright.

HOW GANs WORK



AI creating art: Botto

A collective called [Botto](#) have created new works using GANs. Botto used a number of algorithms, including the VQGAN (Vector Quantized Generative Adversarial Network) and CLIP (Contrastive Language–Image Pre-training) to create images. VQGAN fed randomly generated words or sentences from which the algorithm created images. CLIP acted as the discriminator to judge whether the image created matched the text. CLIP then also creates a title of the image. A final algorithm, [GPT-3](#), created a description for the image as abstract poetic wording. The creations from Botto showed the need to have humans involved in the process to both sanitise descriptions and judge the quality of the images being produced. The algorithms produce over 2000 images, and Botto collective selected 350 to use and sell as non-fungible tokens on the blockchain.

GPT-3 can also create natural sounding text. A human gives GPT-3 a sentence to start it off, and the algorithm then creates a narrative. GPT-3 was trained on all of the information on the internet, and so it can also reflect the biases of the internet – misogyny, racism and so on.

AI creating design: DALL-E

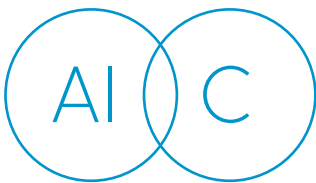
[DALL-E](#) is an algorithm that creates new designs, for example it can produce multiple designs for an 'avocado chair' if that's what was needed. This demonstrates how AI can be used as a tool to start the creative process. A human furniture designer may have 'avocado chair' as a brief, and these fabricated designs could be then developed into a final piece.



A final example using the game Go demonstrates how AI can arguably be creative where there is no human training. DeepMind developed another algorithm called AlphaGo Zero which was trained only using itself. Initially it played the game very badly but steadily improved to beat the world champion at the time. Fascinatingly, AlphaGo Zero played moves humans had not seen before and would not have contemplated playing. That was because it was unencumbered by human thought that follows known routes. Arguably, AI is creating something novel without human training.

Part Two

Overview of copyright law and the UK Government's proposals



This copyright overview looked at the aspects of copyright law relevant to the Government consultation on AI and copyright.

Copyright is protection of original literary, dramatic, musical or artistic work. The focus of this session is on artistic work under the definition of section 4 of the Copyright Designs and Patents Act 1988. These are 2D and 3D works, including works of artistic craftsmanship.

'Originality' is a relatively low threshold under UK law. Established case law provides qualities such as showing 'labour, skill and judgement' or for the work to be the 'author's own intellectual creation', as the requirement exists in the EU. Regardless of the specific definition, these qualities for displaying originality are all human qualities. The faculties we have as humans are therefore intrinsic to achieving copyright protection under this part of the law.

Economic and personal benefits

Copyright is an exclusive right that provides to creators both economic and personal benefits. As copyright can be licensed, the creator or rightsholder can receive economic reward, but another part of the copyright package is moral rights that are concerned more with the reputation of the creator (even where copyright has been assigned elsewhere).

Moral rights have to be asserted, either as part of a contract or on the work itself. Moral rights can be waived, which may also be a requirement under a contract. Certain moral rights that may arise through an AI using copyright protected work include the right to object to derogatory treatment, and the right against false attribution. In the latter, we can imagine that AI trained solely on the artistic work of a specific artist could create a work that could be attributed falsely to that artist, potentially as a forgery.

Computer generated works (CGWs)

Copyright law in the UK is somewhat advanced in also providing a right of protection for computer generated works (CGW). This is a shorter term of protection, being 50 years from the date of creation rather than life of the creator plus 70 years after their death, as is the case with copyright. For the purpose of the CGW right, the author is considered to be the person by whom the arrangements necessary for the creation of the work are undertaken. Examples of existing CGWs are found in computer games.

Exceptions to copyright

To balance the exclusive rights provided by copyright, the law also contains exceptions. Examples include use of works for criticism and review, which promotes important societal values like free speech.

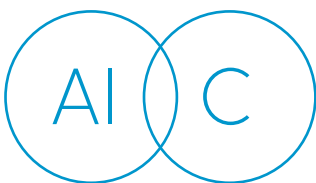
Text and data mining exception

Text and data mining can currently be performed under an exception, and therefore without the need for permission from the rightsholder, if certain conditions are met: the text and data mining is done for non-commercial research; lawful access to the text and data has been acquired; rightsholders are acknowledged where possible; the network in which the data mining takes place is made secure where possible.

Applying Andrew's examples from his presentation, AI is already carrying out text and data mining on a large scale. For example, Botto was trained on all of the internet. Once the algorithm has used the data for machine learning, the output of the data may be for a commercial purpose (in the case of Botto, artworks being sold to the public).

Part Three

Summary of Breakout room discussions



Breakout room A:

“I’m using AI in my practice or I’m interested in doing so”

Participants were asked to join this breakout room if they already use AI in their artistic practice or have an intention to do so. They were asked what opportunities AI gives them, what works well and what challenges they face. They explored topics around AI from education and access to AI tools, to the sustainability issues in AI and developing technologies.

Key points and quotes:

AI is an opportunity for some artists

AI and technology presents opportunities to collaborate more with others. The results from working with AI can be surprising. AI and technology can speed up certain processes and enable creativity with unlimited potential.

“The opportunities for me were huge as an artist. As a photographer, when I discovered AI three months ago, it was a revelation. I was immediately very interested. I started to study VqGAN+CLIP and then discovered Snowpixel. I’m still learning, but I love it. I have already created some NFTs and already sold them on OpenSea.”

“For me, AI provides the ability to play around with ideas quickly, but it is also worth noting, it does not always work first time.”

Artists can adapt to new technologies well

Artists are good at exploring new technologies and are usually some of the first to adopt changing technologies. AI is not a sudden change to this process, more a reiteration of what has happened before. The market for AI art is flooded, there is an infinite amount of art being produced.

“I’m working with some colleagues who are AI academic specialists to develop an AI “interlocutor” to generate dialogue for performance. What I want to do is really extend what I’ve already been doing with instructional works and improvised performance.”

“As an artist, I want to experiment more to see the potential before I put paint to canvas, AI is just another tool for artists to try out and see what a potential artwork is. But this is new technology, like when we started putting paint in tubes was a revolution for the art world, AI could do the same for artists.”

“Many traditional artists ... consider [AI] cheap art and “not worthy” but I do I not agree. The art market is already flooded with AI images, but the quality of the works is very different. There are works and some works are fantastic, whereas some are garbage.”

Education and skills are crucial

AI technology is still at early stages, and this affects how we can work with it in our practice and what we can expect from it. There is a potential loss of skills and knowledge in the arts and education sectors where AI and technology supersedes more traditional artistic creativity and work. Participants also had concerns about young artists and students being locked out of AI and technology learning without educational investment. The government should enable a route to arts education and ensure that technology is part of the arts curriculum.

“I think it can be pretty difficult for someone to start using AI technology. It took me several hours practicing to understand how to use programmes such as Snowpixel. But because of this, many artists have not yet adopted the models which need to be more user-friendly for wider uptake.”

“Tools for using technology are more aimed at artists who can’t code. This is happening but it’s normally more expensive to access.”

“Nobody taught me how to use AI technology in my practice, I was just curious and started to search and read about the possibilities online.”

Copyright and other issues must be addressed

There needs to be a system to protect artists and their works. It should be transparent when artists’ works are required to be used by AI or if copyright is infringed. Some participants felt there was more to explore about how AI sits philosophically within

our understanding of creation and originality, which should be explored. There are environmental issues with AI and other technology that works alongside it like blockchain that should be discussed with creators.

“Sustainability is an issue. The energy and electricity to create works with AI and technology must come from somewhere. To engage in NFT authentication implicitly gives tacit support to an accelerationist model of unsustainable economic growth which is a political and moral issue.”

“AI and new technology does not make me nervous. I am a creator by nature... However, I also have concerns that if I don’t use AI I could fall behind and be disadvantaged.”

“One could argue that the algorithm/programme is the artwork not the various images it produces, which makes us users, consumers or an audience rather than ‘artists’.”

Breakout room B:

“My work may be used by AI”

Participants in this group were asked how they felt about their works being used for AI purposes, such as machine learning. They were asked if they would want AI developers to seek their permission to use their work or if they were happy for this to be done under an exception.

Key points and quotes:

Artists’ permission must be sought for AI use

Participants felt strongly that they should have a say in whether or not their works are used for or by AI. Some participants expressed that AI was no different to other industries, and that if other industries license works, so should AI.

“If I am the creator of a work and I have the right to get recognised for that and have the right to get remunerated. What makes the AI sector any different that they should be given different sets of permission?... I don’t object particularly to AI using my work, but I don’t see the difference over whether the use is for a print, poster, TV advert or for AI and machine learning.”

Fostering AI in the UK should not come at the expense of creators

Participants questioned where the benefit to individual creators is if AI developers are allowed to use artistic works without permission or payment. One participant felt that the government’s aim to bring more investment into AI in the UK was being done rapidly and without consideration to the rights of creators.

“I am apprehensive of the intention of AI and... I am not reassured by what I am seeing in the crypto-space and with data collection at the moment... What this sounds like is a conflict of interest over IP and the use of it for this investment venture.”

AI should be considered in tandem with other technological development, which can be an ecosystem where infringements are rife

Participants considered technological developments as a whole to create a network of concerns. Blockchain, non-fungible tokens and rapid online infringement of copyright, together with increasing development of AI, created a feeling of a 'wild west' that disadvantages creators.

"It's a wild west at the moment with blockchain technology transforming data and rights."

"It's already difficult to enforce rights unless you're aware of the infringement happening in the first place."

"I've already been in a situation of coming across an image incorrectly attributed to the artist I represent and I've had to highlight this to DACS, but to track down those sorts of discrepancies is a full time job of trawling through the internet."

Trust and transparency is crucial

The theme of trust arose repeatedly. Participants said that if their works were used for machine learning they still may not know what the final output of the AI will be. They compared machine learning for AI with text and data mining for analogue research, and they did not feel this was the same.

"It's just the fear that AI can sample all this stuff at a great speed. It's the speed that frightens people."

"I would not consider machine learning the same as [research] for education."

"The output and the use of the output is very different to machine learning. If we are not being asked about what the output is, then why not?"

Licensing can create trust and transparency

Participants felt that licensing is a way of creating trust, and giving the creator the autonomy to say no to a certain use. It is also a

way for artists to engage in the process and be appropriately remunerated.

“There should not be a loss of the opportunity to be recompensed. Nor should it be, ‘you will be recompensed, therefore you lose the control to have your works used’.”

“[AI licensing] could create an opportunity for a human interaction by the artist or archivist to either give permission or not. It would demand a certain amount of organisation. DACS could be the trusted body.”

“I wouldn’t be happy for AI to use my work. I would want any AI to put a request through DACS, if at all.”

Consulting on copyright is too rushed as AI is still in development

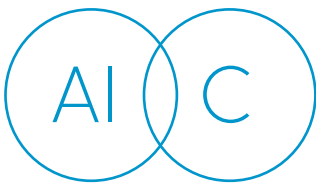
The group’s participants were concerned by the rapid development of technologies and felt the knee-jerk reaction was to erode the rights of individuals in favour of big tech. Participants felt the consultation by government is rushed, as they had little insight into how AI is operating and no evidence of why change to copyright is needed. They sought reassurance and trust-building from government, and said more conversations and participation from creators is needed.

“The main issue is that this is happening too fast to grasp the challenges, and there is no clear intention on what the ultimate aim of AI learning is.”

“There is a lack of examples of how it’s going to work.”

Part Four

Artificial Intelligence and Ethics with Andrew Burgess



The final part of the session looked at the main risks and challenges with AI.

Black box phenomenon

The black box phenomenon describes the situation where algorithms doing the learning using data are opaque. As an example, applying for a loan that uses an algorithm to determine your suitability is not transparent. If you are rejected for the loan the bank and its employees will be unable to explain why, relying on the algorithm's outputs. This is a challenge in regulated industries, and the more complex the algorithm, the more opaque it is.

Bias

An example of data bias is a specific database that uses people's faces to train algorithms. This database contains 13,000 faces and is used by commercial companies for training algorithms. However, the database itself is not representative of society. Of the faces in the database, 83% of people are white and 78% are of men. Therefore the algorithm created from this data is less accurate at distinguishing a non-white female.

Naivety

AI is simply clever maths, but it can be anthropomorphized and given credit. AI recognises a dog as a dog by matching patterns of pixels against other pictures of dogs. It does not understand what a dog is, or that it's a pet. If you make a mistake with your data and call it an elephant, AI will think an image of a dog is an image of an elephant

Over-promising

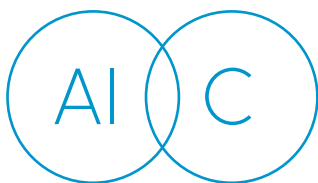
Ideas to use facial recognition in public places is an example of where AI is considered more sophisticated than it is. AI can be used well in closed environments, but the use of AI for policing creates serious problems as it is not up to complex tasks expected.

Deception

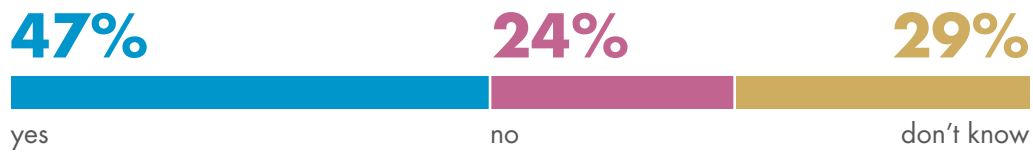
This could be malicious deception or deception for fun. AI is very good at creating pictures of realistic looking humans, but these humans do not exist. An uncanny example is @deeptomcruise where AI assimilates Tom Cruise's face onto that of an actor, so the viewer thinks they are watching Tom Cruise but in fact they are not.

Part Five

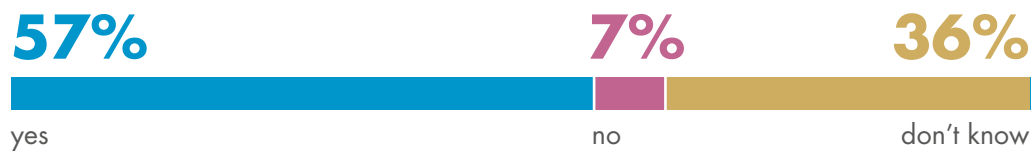
Poll results



“If a work is generated exclusively by artificial intelligence, without any human interaction, should it be eligible for copyright protection?”



“Do you use AI in your work or are you interested in doing so?”



“The Government has set out 5 options in respect of the current copyright exceptions. Which one is your preference?”

7%



Option 0: Make no legal change

66%



Option 1: Improve licensing environment for the purposes of TDM

0%



Option 2: Extend the existing TDM exception to cover commercial research and databases

13%



Option 3: Adopt a TDM exception for any use, with a rights holder opt-out

0%



Option 4: Adopt a TDM exception for any use, which does not allow rights holders to opt out

7%



Not Sure

“Should the government consider ethical issues relevant to AI when making changes to the law?”

100%

0%



Yes

No

DACS[®]

Established by artists for artists,
DACS is a not-for-profit visual artists'
rights management organisation.

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