

How is AI Reshaping the Boundaries of Contemporary Creative Arts?

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Summary of Research

In this thesis, I will be conducting research into the use of AI in the creative process, referencing various art forms, with a focus on photographic art. Artificial intelligence (AI) refers to computer systems that can perform complex tasks that historically only humans could do (Staff, 2024). For instance, the term 'AI' describes a wide range of technologies that power several of the services and goods society uses every day. This can range from apps to chatbots that provide customer support (Staff, 2024). Due to the rapid increase of AI in today's society, I aim to provide insight into the ethical, economic, social, and cultural implications that arise with the presence of artificial intelligence in the contemporary art world. To accomplish this, I will conduct a thorough review of existing literature that addresses the ethical, economic and socio-cultural implications of AI. Additionally, I will also incorporate my own research findings to provide a deeper understanding and relate these implications to the context of my own individual work.

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'A faked video of Ukraine's president is being shared online' (N.d, 2022), Accessed at:

<https://news.sky.com/story/ukraine-war-deepfake-video-of-zelenskyy-telling-ukrainians-to-lay-down-arms-debunked-12567789>

'Edward De Belamy' Obvious (2018), Accessed at: <https://obvious-art.com/portfolio/edmond-de-belamy/>

'Algorithm bias researcher Joy Buolamwini showing the racist faults in the "Aspire Mirror."'

Kantayya (2021). Accessed at: <https://berkeleybeacon.com/coded-bias-latest-screening-from-bright-lights-film-series-highlights-racial-bias-in-ai/>

A comparison between traditional stop motion methods and developing CGI techniques (N.d).

Accessed at: <https://www.cartoonbrew.com/cgi/how-the-jurassic-park-dinosaurs-switched-from-stop-motion-to-cgi-100955.html>

Introduction

As previously mentioned, I have outlined 3 core areas of research into this topic. The first of which enquires into the ethical implications surrounding the use of AI in the creation of artworks, more specifically the issues of ownership, originality and perceived creativity that may arise. I will do this by reading and referencing various academic sources regarding these issues, in an attempt to uncover and define good ethical practice in creating artworks with the use of AI. For instance, AI is arguably a powerful technological tool with the potential to do a lot of good. However, it is important to be aware of the ethical implications that AI can cause, so that people can develop it and use it in a responsible way (GeeksforGeeks, 2023). Chen et al (2020), provides an example of how to preserve the morality in using such programs is the implementation of a new kind of system that is built upon the combination of two methods of generating imagery, which together promote diversity and originality in the artworks produced. The author explains that existing style transfer methods that are able to transfer artistic styles onto everyday photographs are limited by their lack of ability to produce new image contents, lacking the creativity that defines a piece of art. In addition to this, it is elucidated that the commonly used GAN (generative adversarial network) systems are a means of synthesising images with new content, without the ability to specify any given artistic style. Within this article, it is discussed that the combination of style transfer as well as GANs within the creation process can lead to increased creativity and diversity within resulting works. However, this method of employing two separate systems is time consuming, as such a more efficient and convenient solution is proposed in the form of a synthesis between the two systems into one coherent program called 'ArtistGAN', which can produce visually appealing results at a much quicker pace (Chen et al, 2020). Despite this promising method of production, it could also be said that the effects such a program may have on the evolution of Individual artworks' meaning, as well as the broader artistic world cannot be predicted and we must continue

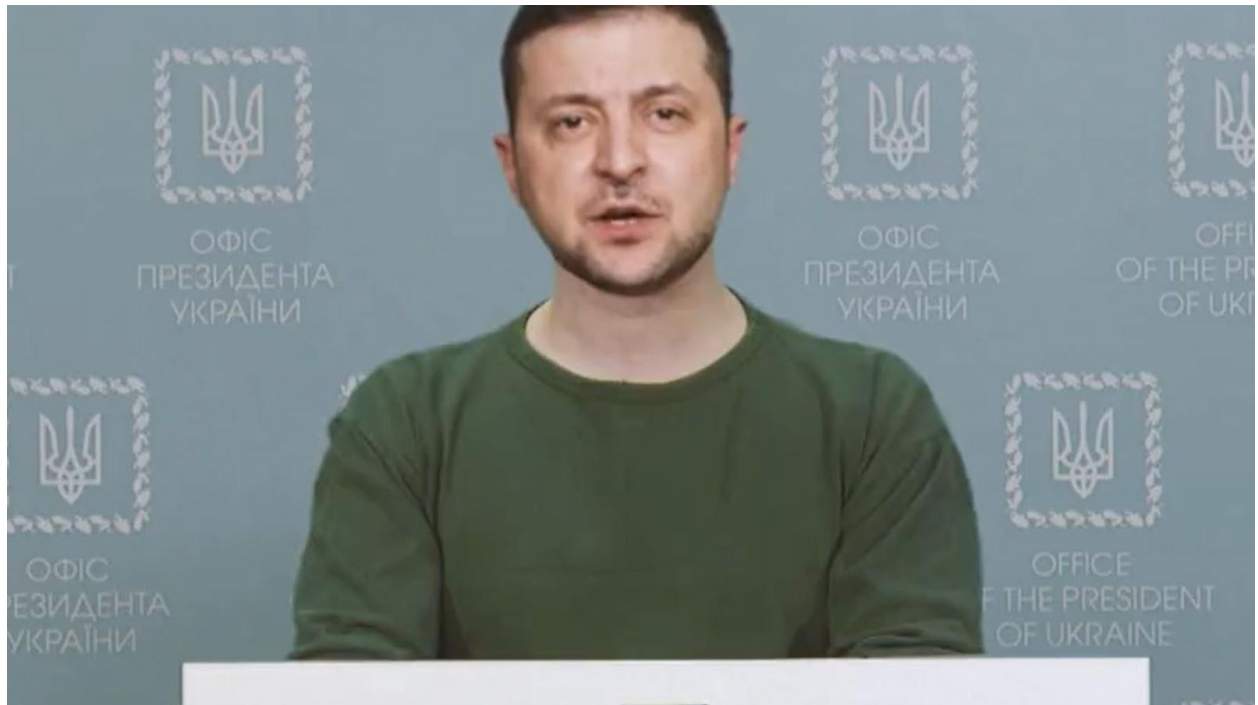
to take caution in how we utilise this emerging technology. Furthermore, the increasing workplace use of AI technologies also has implications for the experience of meaningful human work (Bankins and Formosa, 2023). Photography and artwork often carry a unique emotional resonance that is tied to the artist's or photographers' perspectives, experiences and intentions. As AI takes over more technical tasks in photography like editing or sorting images, it could arguably change the role of the photographer or artist. Bankins and Formosa (2023) use their research to emphasize this, and demonstrate how AI diminishes opportunities for meaningful work and the ethical implications of these changes arguably remains under-explored (Bankins and Formosa, 2023).

The second area of research that will be explored is the economic implications of the use of AI in the creation of imagery for commercial purposes as well as artists who wish to monetise their work on an individual level. Jiang et al (2023) holds the position that due to the fact that artists dedicate such a large portion of their time to refining their skills through years of practice, observation and schooling they are put at a disadvantage when compared to generative AI, with its inherent ability to carry out these tasks with ease due to its advanced learning capabilities. He continues to explain that while artists may be required to pay for supplies, books and tutorials, companies such as Stability AI are producing works for a much smaller price without paying compensation while accumulating much larger sums of money than traditional creative entrepreneurs are able to keep pace (Jiang et al 2023). This explanation of the current situation surrounding AI in the commercial space raises the discussion on whether human creators will be able to keep up with such an efficient and profitable process; whether they will be replaced altogether. Jiang et al considers this possibility and states that leaders of companies like Open AI have openly stated that they expect generative AI systems to replace creatives (Jiang et al, 2023). The fact that this perspective is held by companies that have the growth potential of AI in their best interests may suggest that this opinion may seem overly optimistic and biased due to the desire for profit. However, it could also

be said that these companies have what could be considered the best understanding of their programs and are qualified to make estimations regarding them.

The third area of research I will be investigating covers both the social and cultural impacts of AI generated artworks. For example, there is a potential for misunderstanding of ethnic or cultural backgrounds if a program lacks certain information – AI may generate works that could be seen as insensitive if it does not possess the contextual knowledge surrounding various cultural practices and customs. Childers stated that “tech is often created with the biases of its creators” (Childers, 2023, p.22) and continues to explain that biases are not always intentional and can potentially be a result of a lack of diversity between the program design team, which would provide a wider array of context to the AI which aids it in remaining as accurate and appropriate as possible. For instance, while an algorithm itself may be biased, humans can also introduce inaccuracies based on how they use the AI tools (Abrams, 2024).

While some biases within AI systems are accidental, there is also the problem of political bias and the use of AI to further an agenda through generated images that might purposefully spread misinformation. For instance, falsified photographs of political figures may be generated in order to mislead the public into having a biased opinion of them. One such example of this happening is reported by Allyn (2022) in an article that highlights a deepfake video that depicts President Volodymyr Zelenskyy instructing the Ukrainian armed forces to “lay down their arms and surrender the fight against Russia” (Allyn B, 2022). The author then continues by saying it is unclear who is behind the deepfake video, but government officials in Ukraine have warned about the potential for Russia to spread falsified content as part of its information warfare. This example shows the potential to abuse such systems to further a political agenda and while this instance was detected due to its minor faults, it is going to become increasingly difficult to differentiate reality from falsehood as the technology continues to advance.



'A faked video of Ukraine's president is being shared online' (Sky News 2022)

Chapter 1: Ethical Considerations of AI in the Creative Process

Erosion of Human Creativity

Despite AI's accessible and efficient nature, there is growing concern about the potential for users to develop an over-reliance on AI tools, which could result in a decline in traditional artistic skills and techniques. As creators increasingly delegate tasks such as editing, composing and designing to AI systems, they may bypass the opportunity to learn and refine these processes independently. This trend could erode the mastery of foundational skills that have historically been essential for artistic development. Over time this reliance on AI may shift the focus from human craftsmanship and expertise to the capabilities of AI, changing the landscape of creative industries. As well as this, dependency on AI could constrain creativity itself. Many AI tools operate within fixed frameworks or presets, which may in turn limit the scope of experimentation and innovation. Artists using these tools may feel restricted to the possibilities that the AI offers, potentially reducing their ability to think creatively beyond the tool's boundaries. This point is illustrated by the statement that "As it stands now, no amount of data can furnish these systems with the intrinsic ability to reason or the capacity to gain new knowledge." (Sieg, p25, 2023)

Shaji-George et al highlight this concern, stating that "if AI were to advance to the point of matching or exceeding human capacities in creative domains... the risk is humans losing all self-sufficiency, becoming incapable of and absolved from independent productive thought" (Shaji-George et al, p.147, 2024). This observation suggests that as AI becomes more capable, the role of the artist may shift from that of an active creator to a passive user, relying on AI's suggestions and outputs.

Another key implication of this over-reliance on AI is the potential for undervaluing unique expertise

and individual style. Traditional art is often celebrated for its connection to the artist's personal vision and the skill involved in its creation. As AI automates more complex creative tasks, the artist's role may become less visible, with the tool's capabilities overshadowing their contributions. This shift in focus may lead to a standardisation of outputs, where distinct styles are no longer recognised or appreciated to the same degree, as the individuality of the creator becomes less apparent.

AI systems are trained on existing datasets, which often possess dominant styles or patterns. As a result of this, these systems are likely to replicate what already exists rather than innovate, potentially leading to a homogenisation of artistic works. This replication could lead to outputs that are viewed as generic or derivative due to their resemblance to existing works. G. Benjamin and Y. Benjamin explain that this phenomenon contributes to an ecosystem where innovation is stifled, and artistic outputs lack originality. Such an environment could diminish the diversity and creativity traditionally associated with artistic endeavours (G. Benjamin & Y. Benjamin, 2023). This notion is shared by Sieg, who states that "As algorithms churn out images derived from their programmed data; they capture only the visual aspects without the essential discourse and critical engagement that lend art its distinct character" (Sieg, p25, 2023). The idea that AI can only produce work derivative of pre-existing data could suggest a lower artistic value than what may be applied to more traditional methods.

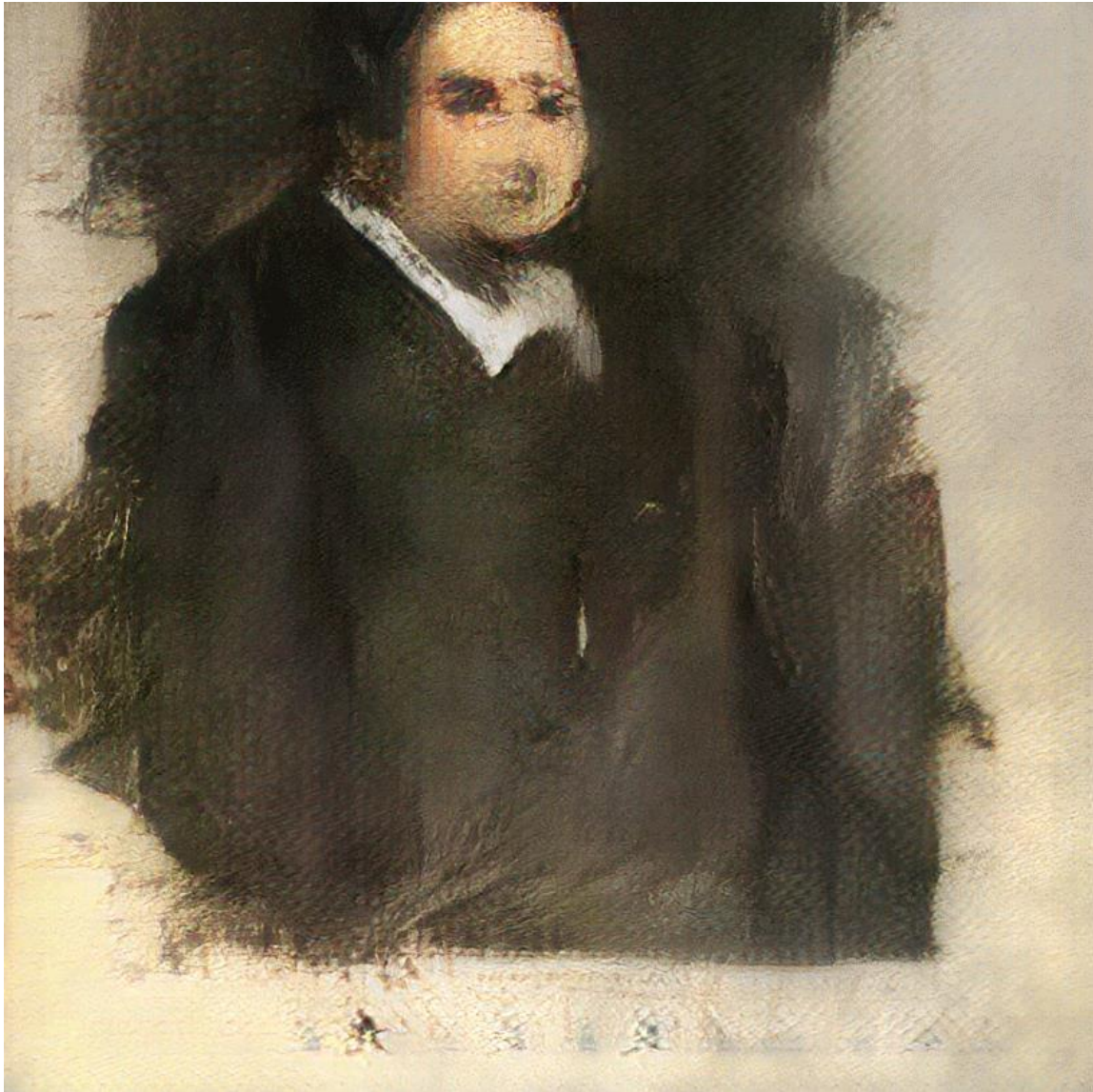
Value of Art

Another aspect of AI within the creation process that must be considered, is the effect it has on the perceived artistic value the consumer places on works produced by, or with assistance from AI. Guerreiro outlines two contrasting views that one may have on such practice by explaining that AI systems are often viewed as lacking emotional intelligence and that the art creation process at its

core is interlinked with emotional expression. There is a consensus that these systems are not as capable of creating works of art at the same intellectual level as humans. However, while these systems could be considered less artistic in nature, it is also possible that over the coming decades, as AI evolves it may surpass human intellect entirely. Guerreiro supports this concept by explaining the idea, supported by scientific research that suggests that there are three stages of evolution AI may undertake. The first stage, known as Artificial Narrow Intelligence, describes the current state of AI, where its use leads to the attainment of predefined tasks with better performance than humans in a select number of fields. The second stage, one that may be fast approaching, is known as Artificial General Intelligence, an iteration of AI technological advancement that shows a system that is able to solve problems independently, equalling human intelligence in a wider array of fields, for which it was never designed for. Finally, the most advanced perception of what AI may be capable of, is known as Artificial Super Intelligence, which possesses the conscious ability to self-improve, a system that has the potential to make individuals unnecessary. This type of system is capable of outperforming human intellect in all areas and attain creative attributes that may apply to a vast array of disciplines (Kaplan & Haenlein, 2019) (Guerreiro, 2022). This could lead to the conclusion that despite the primitive nature of AI and creativity in its current form, the evolution process outlined could suggest the possibility that AI may be capable of creating works in even more abstract, unique and original ways, which in turn may lead to an increase in the majority's perception of artistic value within AI created works.

Despite the notion that AI in its current form is devoid of true artistic value, it is important to understand that the value placed on any given piece is subjective to those who view it. For example, a notable series of artworks created with AI is 'La Famille De Belamy', a collection of AI generated images produced by the art collective, Obvious. The works were created through an algorithm trained on a dataset of thousands of portraits dating back to the fourteenth century,

spanning the centuries leading up to the end of the twentieth century, selecting attributes and combining them into one cohesive image. The portraits include imperfections that one might expect from an AI generated image, this seems to be intentional and thus provides a distorted signature representing the AI's contribution to the works. One of these artworks particularly, 'Edmond de Belamy' (Obvious, 2018) was sold at an auction in New York for \$432,000 (Jones, 2018). If there is any correlation between monetary and artistic value, this demonstrates that AI generated art has the potential to be held at high regard and therefore must possess some degree of artistic value.



‘Edward De Belamy’, Obvious 2018

Authorship and Authenticity

Including AI in the creation of art presents significant challenges to traditional ideas of authorship by blurring the lines of creative ownership. It becomes unclear whether credit should be attributed to the artist who used the tool, the developers who created the AI, or the dataset that the AI was trained on. This ambiguity arises because the resulting work is no longer a result of independent human creative process, instead it is a collaborative effort alongside the machine’s computational

capabilities. Such uncertainty complicates the recognition of artistic involvement and raises crucial questions about how credit and ownership are assigned in such processes.

The idea that the user possesses authorship over AI generated images is explained by Snihur and Bratus (2023) that in most cases AI “will require substantial human involvement. For example, extensive prompt-crafting and generation of multiple different variations (Snihur and Bratus, 2023). Therefore, this can be considered merely a draft and as such the authorship partially or wholly lies with the human author as the one finally bringing the work to the required level of quality (Snihur & Bratus, 2023). This perspective aligns with the argument that while AI systems can produce initial drafts or variations, the human artist retains authorship by shaping and elevating the work to its final form. In this context, AI acts as a tool or collaborator rather than the sole creator. This distinction emphasises that the human artist’s intent and decisions are crucial to transform AI outputs into fully fledged artworks. Without this human involvement, AI may generate works that lack the necessary qualities associated with finished works of art.

The audience’s perception of value is heavily influenced by the authenticity and emotional resonance a work possesses. As stated by Lim, “there may be a temptation to cling to romantic notions of creativity and innovation, praising human genius that created real art in a way we never do if we realised that they were created by an AI like GAN” (Lim, p816, 2018.) By this Lim implies that there is an existing cultural bias based on traditional notions of creativity, often romanticising human artistic processes and overlooking how AI operates similarly, deriving patterns, influences and techniques from existing works. Lim highlights that while this romanticism may hinder acceptance of AI-generated art it would be hypocritical to devalue such works as humans tend to rely on the same processes of learning and adaptation. This brings to light the importance of balancing these perspectives and the idea that audiences must move past rigid expectations of emotion and intent as exclusive hallmarks of art to embrace AI’s potential to expand creative

boundaries. The acknowledgement of similarities between human and AI driven processes may lead to a more nuanced understanding of artistic value and innovation.

Chapter 2: Socioeconomic Impacts of AI integration

Impact on Employment

There is an increasing risk of reduction in job opportunities for those who work in the creative industry due to the introduction of AI and its ability to automate tasks (Božić, 2024). The emergence of AI as a means of creating content has led to various implications on the economic climate surrounding the creative industry. For example, leading economists and policy experts have looked more closely at how society invests and deploys AI and automations (Rotman, 2022). Rotman, (2022) suggests that these technologies have arguably not done much to grow the economy, even as income inequality worsens. The obsession with mimicking human intelligence has led to AI that too often simply replaces workers rather than extending human capabilities and allowing people to do new tasks (Rotman, 2022). The highly efficient, autonomous methods now possible through the use of generative systems have reshaped the way creators produce their work. One such example is Adobe's implementation of AI within the image editing process through tools such as 'Generative Fill' a tool that aims to assist rather than act as the primary driving force of producing work. This tool is highly efficient and user friendly, its simplicity has led to new opportunities for creators who may otherwise be unable to achieve the resulting work this tool can provide. This will be a positive change for those who can adapt and integrate AI into their workflow, as it holds the potential to expand creative range as well as boost productivity. However, professionals in lower-skilled or more repetitive roles may find it difficult to retrain and will likely struggle to compete with AI-driven alternatives. Another example of a process that might have an impact on job opportunities is digital art creation through the use of AI image generation software such as DALL.E. This could potentially pose a threat to creators such as stock photographers and artists who cannot compete with such

efficient systems by using traditional methods. Wang and Liang state that “many low-end content creators will lose their original jobs and be forced to move to other positions. However, top creators will continue to use their unique styles to become training data providers sought by major models or service companies.” (Wang and Liang, p.156, 2023) This idea that an organisation will be able to purchase a highly skilled content creator’s intellectual property such as the work of a stock photographer, outlines the reality of how jobs may be affected in this field. By applying the photographer’s highest quality images in the dataset, the mass production of work that takes their style can be carried out.

It could be said that there are consequences of the shifting dynamics between corporate bodies and content creators. One of which is the monopoly that leading corporations may hold over creative industries where AI is applicable. This is due to the fact that AI development is controlled by major players with substantial resources which limits opportunities for smaller developers and independent artists. For instance, the excessive focus on human like AI drives down wages for most people and amplifies the market power of those who own and control these technologies (Rotman, 2022). Accessibility to advanced AI technology will be blocked by expensive subscriptions and hardware requirements and the use of proprietary platforms will restrict flexibility. Corporations with their vast capital are able to mass produce low-cost AI generated content, making it much more difficult for independent creators to compete on a financial level. It could be said that while AI promises to democratise creativity, within this context it often commodifies art, favouring corporate outputs over unique human input. Large tech companies such as Google and OpenAI are monumental to the development of AI art tools, which puts them in a position of significant power over the digital art world. This leads to an increasingly difficult time for independent artists maintaining pace with such companies, due to the financial constraints of accessing such resources or opportunities (Grba, 2023)

Intellectual Property (IP) and Ownership

As AI generated content becomes more prevalent, challenges arise in terms of intellectual property protection. In the same way digital content has become increasingly easy to copy and distribute, the same can be said for AI generated works which require minimal control from the original creator. For this reason, difficulties arise for artists and creators who work with AI to maintain ownership and prevent unauthorised use of their work (Božić, 2024.) AI's ability to generate content at scale with minimal human input complicates the enforcement of traditional copyright laws, which by design are tailored towards protecting human authorship. To discern who possesses ownership over any given AI generated artwork the dataset it is trained on should be considered. When AI is trained on publicly available data, it may inadvertently reproduce elements of pre-existing works, raising concerns about fair use and potential plagiarism. This issue is particularly pressing when AI tools are used to generate content that closely resembles copyrighted material, as artists may not have the full legal right to the output. Furthermore, the lack of transparency in AI's decision-making process makes it difficult to determine whether any part of the output is derived from protected content. Creators who use AI in their practice are at risk of unintentionally creating derivative works which in turn may lead to legal disputes over the originality of the work and who is accredited. The challenge becomes especially pronounced when AI tools rely on vast datasets that include copyrighted content. If an artist uses AI to generate work that resembles a copyrighted image, even inadvertently, it could be considered an infringement on copyright laws. This raises increasingly important questions about who owns the intellectual property rights to AI generated works, whether it is the developer of the AI, the user of the AI or the datasets that trained the model.

Moreover, this shift introduces a larger ethical concern - how do we define originality in a world where AI can mimic and replicate styles, themes or even entire works of art? The very concept of authorship is blurred when AI is involved. Artists who use AI as a tool in their practice might find it difficult to establish clear ownership, as the boundaries between human creativity and machine generated outputs become increasingly difficult to draw. This is further complicated by the fact that AI can often produce vast amounts of content in a short time, making it nearly impossible to track every instance of potential infringement or unauthorised use. Craig states that “it is not appropriate for copyright law to respond to these technological developments in a formally tech-neutral way, treating alike AI and human activities and artefacts that are fundamentally different in nature.” (Craig, p.30, 2022) This statement argues that copyright law should not treat AI generated works and human creations the same way, as they differ fundamentally in nature. Human creativity is driven by personal intention, emotion and subjective experience, while AI generated works are created through algorithmic processes without intent or personal vision. Copyright law has traditionally protected human creativity, acknowledging the artist’s role in the creation process. Treating AI outputs the same as human creations could undermine the purpose of copyright, complicating ownership and accountability issues, especially in cases where AI generated works unintentionally infringe on existing copyrights. It is become increasingly apparent that copyright law must evolve to address these differences.

Accessibility and Inclusivity

AI technologies have great potential to revolutionise creative industries, as it offers unprecedented tools for artistic expression and production. However, its implementation raises concerns regarding accessibility and inclusivity. This is highlighted by the observation that “AI technologies can amplify existing social inequalities by reinforcing biases and discrimination present in

historical data used to train AI algorithms” (Farahani & Ghasemi, p.3, 2024). The creative use of AI is not immune to these challenges. Biases embedded in training data, which often reflect historical inequalities, can skew the outputs of AI systems, perpetuating stereotypes or underrepresenting marginalised communities. This issue becomes particularly significant in creative contexts, where representation and diversity are central to cultural expression. For instance, if an AI model used to generate visual art or music is trained predominantly on data from dominant cultural traditions, its outputs may fail to reflect the richness of underrepresented voices. This not only limits the inclusivity of AI-generated content but also risks marginalising artists whose cultural heritage is inadequately represented in training datasets. Furthermore, the high costs and technical expertise required to access cutting-edge AI tools create barriers for artists from disadvantaged backgrounds, widening the digital divide. These barriers reinforce existing inequalities, limiting who can benefit from AI-driven creativity and whose stories are told. Addressing these challenges requires prioritising diverse and representative datasets, improving access to AI technologies and implementing ethical safeguards to ensure that AI promotes inclusivity rather than amplifying systemic inequalities in the creative process.

Joy Buolamwini, in her research around AI facial recognition with systems such as the ‘Aspire Mirror’, focuses on how such systems exhibit significant bias, particularly against people of colour as well as women. In her research, she found that facial recognition software was less accurate at identifying faces of darker-skinned individuals and women, which is largely due to the lack of diverse data used to train the algorithms. She explains that “if the faces in the dataset are not diverse, the model will struggle when presented with unfamiliar ones. In my case, a white mask was a closer fit to what the system had learned was a face than my actual human face.” This serves as a powerful example of how AI models, when trained on non-representative datasets can fail to accurately interpret or recognise individuals from underrepresented groups. This ties to issues of AI

bias in both facial recognition and art creation. In the context of AI-generated art, the lack of diversity in training data can similarly lead to outputs that fail to represent the full range of human experiences, cultures and appearances. Just as Buolamwini's face was misidentified because the model was trained on primarily white faces, AI art systems trained predominantly on western or white-dominated datasets tend to produce artworks that reflect a Eurocentric aesthetic. This results in marginalised groups being underrepresented in AI-generated art, as some systems have learned to favour images and styles from the dominant data it was exposed to.



‘Algorithm bias researcher Joy Buolamwini showing the racist faults in the “Aspire Mirror.”

(Kantayya. S, 2021)

Chapter 3: Legal, Ethical and Strategic Pathways for the Future

Legal Reforms and Ownership Frameworks

As discussed, determining who holds ownership over AI-generated artworks is a complex legal issue due to the fact that traditional laws surrounding intellectual property are oriented around addressing human authorship. The involvement of multiple contributors to this artistic process creates a certain ambiguity around who deserves recognition for the final output. Aggarwal suggests a solution that emphasises transparency and accountability by ensuring that all contributors are clearly acknowledged and can defend their contribution. As stated, “First, to avoid ghost contributions, all contributors should be clearly listed either as authors or in the acknowledgements, ensuring there is no ambiguity about their contributions” (Aggarwal, p14, 2024). The approach outlined advocates for a collaborative model where all parties are recognised fairly.

The contributors to an AI generated artwork such as the developer, user and dataset curator should all be recognised for their role in shaping the resulting works created by the system at hand. This equal recognition avoids unjustly favouring one contributor over others while providing a comprehensive view of how the work was created. Additionally, open discussions should be encouraged in order to establish agreements on roles and responsibilities, preventing disputes over ownership after the fact. As Aggarwal suggests, ensuring contributors receive recognition while being held accountable fosters fairness and trust. Such frameworks could evolve into legal agreements or licensing models providing a foundation for AI ownership rights. This transparent,

collaborative approach would not only resolve authorship disputes but also support innovation by building trust and accountability in creative industries using AI.

Due to AI's reliance on vast datasets for training, legal and ethical concerns are raised concerning ownership and innovation. Many datasets often include copyrighted material, which creates a risk of infringement when AI generates work that resembles pre-existing material. To address this, legal reforms must be put in place to ensure developers and users operate in an ethical and lawful manner. One potential solution to this issue lies in adjusting licensing frameworks and fair use guidelines, with an aim balance the use of copyrighted material not only for innovation but also for the protection of its rights holders. As Hacker states, "Only the innovation risk, in the form of a blocking risk stemming from intellectual property rights, has recently found a concrete solution in the TDM exceptions" (Hacker, p280, 2021.) Hacker highlights how the Text and Data Mining exceptions, as outlined in article 4 of the CDSM directive, now allow the commercial use of protected data for AI training, while providing creators the option to opt-out and withdraw their work from what is available to certain AI models. This approach shifts the burden from users to the creators of original works which may create a balance between innovation and the protection of intellectual property.

These exceptions by design, aim to make datasets readily available for AI training, while preserving fair use rights for creators. This opt-out mechanism has the potential to lead to a higher number of works available for training due to its support of innovation and minimising of licensing obstacles. The law must continue to evolve in order to ensure fairness and transparency in the development of AI while addressing issues such as ownership disputes. Transparent licensing practices, combined with fair use exceptions such as TDM might ensure equitable opportunities for smaller developers and independent creators, simultaneously fostering innovation in AI-driven art.

Ethical Strategies for Inclusive and Responsible AI integration

In this era of unprecedented advancement in AI technologies, it is of utmost importance that a certain level of transparency is maintained when employing AI in the creation process. Clear communication about how AI systems function, the datasets they are trained on, and their role in creative outputs is paramount. Doing so will foster a sense of trust and understanding, particularly in these creative industries, by distinguishing between human and machine contributions and supporting ethical integration. Lehtimäki (2024) examines Rydenfelt's (2017) and explains that within the discussions, the importance of truthfulness was highlighted in the context of the generation of visual content (Lehtimäki, 2024). He continues by stating that "the findings highlight the importance of presenting information accurately and being transparent about AI's role in content creation" (Lehtimäki, p73, 2024)

One example of where transparency has been achieved in this context is Runway ML, a platform that openly discloses the AI models used, such as stable diffusion and GANs, and explains how these models power tools for image synthesis, video editing, and text-to-image generation. In one instance, Runway ML has shown transparency and insight into the ethical frameworks they have in place by explaining their adoption of "the provenance standards outlined by the Coalition for Content Provenance and Authenticity (C2PA) to trace whether a given media item is generated or authentic. We do this by adding invisible watermarks to every Runway generation, thereby retaining evidence in the metadata that it is AI-generated. This technology will both detect misuses and enable users to distinguish AI-generated content from what is real." (RunwayML.com, N.D). This

integration not only promotes transparency for the user but also enables transparency with potential consumers due to the invisible watermark, labelling AI generated content as such.

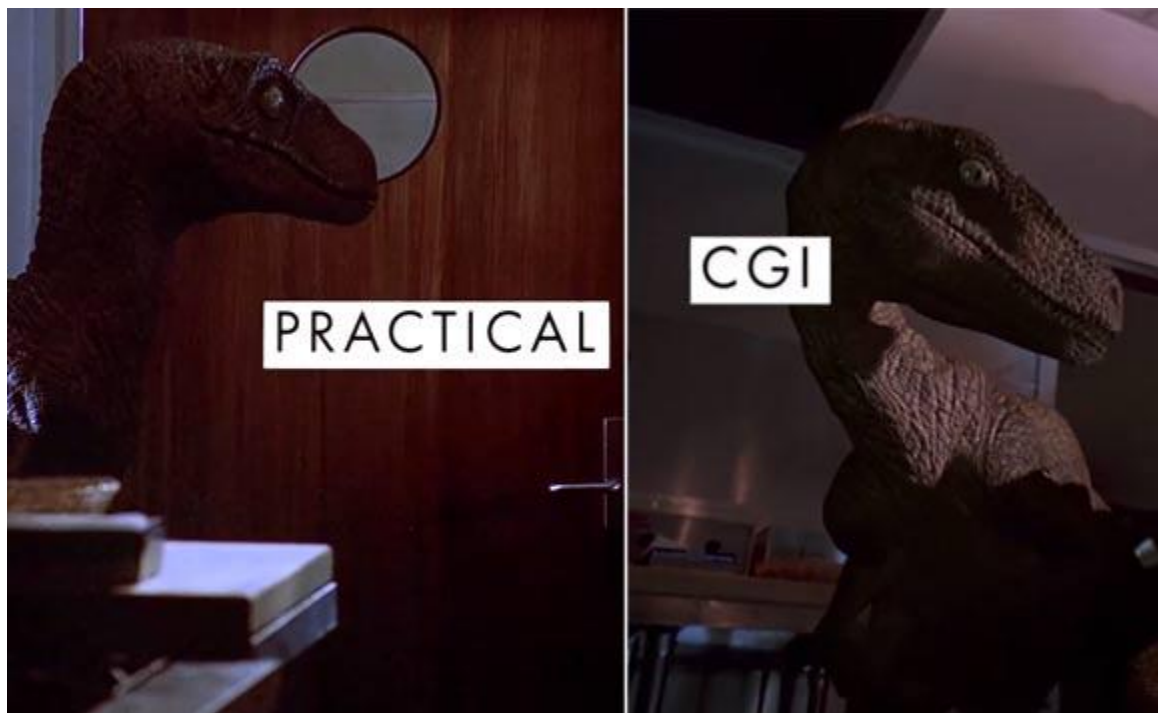
Maintaining ethical principles is a key factor within my own artistic practice, where I seek to outline for myself a code of conduct that enables me to proceed morally in the age of AI. I choose to use AI models that promote transparency and provide sensible solutions to problems of ownership and authorship. With this code of conduct in mind, within my work I seek to source as little information externally as possible, avoiding the use of third-party content to affirm my own authorship over the resulting work. An example of how I achieve this is my use of custom datasets that use images I have captured. I employ Exactly.AI as a tool to create and refine content that informs my AI-generated artworks as it allows me to ensure transparency in how my images are generated. In addition to this, while my practice currently does not require it, I am able to ensure that I include diverse and representative content which ensures fairness and inclusivity in the AI's creative outputs. I also have full assurance that the materials used are ethically sourced, whether they are my own or properly licensed third party data. This method of generating content ensures that the work aligns with my artistic intent while avoiding unintentional replication. It also provides a means of tailoring a system to reflect one's own creative vision rather than relying on generic, pre-trained models that might perpetuate biases or exclude underrepresented perspectives. This approach may serve as a model for other artists who seek to integrate AI into their workflow responsibly.



An AI generated image depicting infrastructure's encroachment on natural spaces (Generated through a custom dataset on Exactly.AI, prompted by myself)

The issue of Job displacement within fields where AI is applicable to any given creative process is prevalent. While using these systems provides countless benefits in productivity and efficiency, Coyle explains that economic gains must be across the board, not only benefitting tech millionaires or billionaires, but also those with middle income jobs that may have otherwise been undercut by automation. She continues by explaining that this potential AI possesses for displacing workers and altering labour markets must be mitigated to maintain political stability (Coyle, 2021). Bender illustrates the view that “rather than simply working with AI assistants to do the same work they already do (but faster or more efficiently)... creative artists can benefit from applying their existing skills, mindsets and conceptual understandings to evolve the aesthetic and engaging aspects of digital media” (Bender, p.9, 2024). Bender continues by drawing parallels between the emergence of AI in the creation process with the introduction of CGI into filmmaking. He raises an example of adaptation of job roles to suit advancing technology by explaining that the CGI team on

Spielberg's Jurassic Park had a crucial role in shaping the final result through the skillsets and expertise they bring to the table. He furthers by stating "the key point is not that CGI could not replace the puppeteers. Rather, this historical precedent shows that there was an important element of storytelling that could simply not be done by the technology and required the knowledge possessed by the puppeteers" (Bender, p.10, 2024). This same logic can be applied to roles such as stock photography, where the photographer may not take part in the physical process of creating an image, but plays a crucial role in maintaining a certain aesthetic or inherent meaning each photograph is supposed to convey.



A comparison between traditional stop motion methods and developing CGI techniques (Retrieved from an article by A. Amidi on CartoonBrew.com)

Conclusion

In conclusion, this research has outlined a pivotal shift in creative industries due to the integration of AI into the artistic process. I have outlined unprecedented opportunities for innovation while raising complex ethical, legal and economic challenges. AI's ability to enhance creativity is undeniable, yet its reliance on pre-existing data and lack of emotional intent challenges traditional notions of human expression. The erosion of traditional artistic skills due to a dependency on AI systems emphasises the importance of fostering collaboration between human creativity and AI's machine capabilities rather than substitution. Similarly, AI's role in shaping audience perception highlights a need for transparency to maintain the authenticity and value of artistic outputs. Evidence submitted by the University of Oxford shows that in her research, Anne Ploin has outlined machine learning as an emerging tool for artists to use at their disposal rather than acting as a replacement to the artists. Through her research, the University of Oxford has concluded that:

“The main message is that human agency in the creative process is never going away. Parts of the creative process can be automated in interesting ways using AI, but the creative decision-making which results in artworks cannot be replicated by current AI technology” (University of Oxford, 2022)

The socioeconomic impacts of AI integration are poignant in this era of advancement in the field of AI. While AI introduces risks such as job displacement and market saturation, it also creates opportunities for new hybrid roles and collaborative workflows. However, unequal access to AI tools and biased datasets continue to perpetuate systemic inequalities, limiting inclusivity in the creative landscape. Addressing these disparities requires ethical AI development, more diverse datasets, and equitable access to technology.

Legally, the complexities of intellectual property and ownership in AI-generated art demand urgent reforms. The traditional frameworks of copyright and patent laws must evolve to address the collaborative nature of human-AI creativity without stifling innovation. Clear, fair ownership structures that balance the interests of developers, users, and artists are essential for ensuring the ethical use of AI in the arts. To move forward productively, this dissertation advocates for transparency, inclusivity, equity and a retraining of workers' skillsets. It also advocates for legal reforms that address ownership and innovation challenges that are presented by AI. By embracing these strategies, the creative industries can harness AI's potential to enhance creativity while preserving the human touch that defines artistic expression.

Ultimately, the responsible integration of AI in the artistic process lies in balancing innovation with ethical considerations. Balancing these two factors ensures that AI serves as a compliment to human creativity rather than overshadowing it. As AI continues to evolve, the art world. Must adapt thoughtfully in order to create a future where technology and human ingenuity are able to coexist in harmony, redefining the boundaries of creativity.

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