# THE ROLE AND CONTROVERSY OF ARTIFICIAL INTELLIGENCE TECHNOLOGY IN PACKAGING DESIGN AND ILLUSTRATION

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**Abstract**: In the current digital era, Artificial Intelligence (AI) has played an increasingly influential role in the realm of design, be it packaging design or illustration. These developments bring new opportunities and challenges for designers. In its application, AI can speed up the production process and create diverse designs, however, there are growing concerns regarding the copyright of works produced with the help of AI. This controversy can also be seen in movements on social media, such as the hash tag "#tolakgambarAI" which became a trending topic in Indonesia, where designers and illustrators expressed their concerns. This study explores the various views and debates surrounding the use of AI in design, using critical discourse analysis presented by Norman Fairclough. This method involves three steps, namely, text analysis to see the use of language in AI discourse, analysis of the text production and consumption process in a social context, and how this discourse has an impact on society. The results show that although the use of AI can increase productivity, it also brings problems regarding the loss of human roles as well as legal challenges in copyright. Thus, a balanced approach is needed to ensure that this technological innovation can support the sustainability of creativity and design practice in the future.

**Keywords:** AI, Copyright, Discourse analysis, Design, Humans

## Introduction

Along with the times, technology continues to develop until now it greatly affects how people live their activities, this rapid development also makes many changes that must be followed by humans, be it from the aspects of social culture, economy, communication, education to lifestyle. The development of technology also provides efficiency that affects human work, which makes the work easier and faster to complete. The technology that continues to develop is also currently the topic of discussion that is currently being studied by the public, one of the topics of discussion is the presence of technology referred to as AI or commonly referred to as artificial intelligence. AI, also known as artificial intelligence, has the ability to assist human work in various fields by analysing various commands submitted and processed through a computer program on a wide scale that allows faster and more effective personalization of commands. Such as the advent of technology that uses algorithms and structures identified in large data sources to generate new and original content that feels like it was created by humans, commonly referred to as "Generative AI". This AI is technically made to resemble a question and answer field with a "chatbot", which can "talk" to humans via text. The application can respond to a given question, and the AI delivers answers with a variety of outputs such as answering formally, telling stories, or even writing computer code to produce a work of art from just a command text, although it often produces wrong answers for users, and can reproduce biased arguments, AI technology can help various human jobs by speeding up the production process and optimizing the work (Ariefianto, 2024).

Meanwhile in the broader realm, the use of artificial intelligence (AI) has fundamentally altered the landscape of human lifestyles, opening up new opportunities and complex challenges, such as the application of AI technology to voice-based virtual assistant systems like Siri and Alexa. AI also enables Spotify, Youtube and BBC iPlayer to suggest what you want to hear or watch next. In addition, this technology helps Facebook and Twitter determine which content they will show to users. With the application of AI, Amazon can analyse

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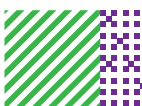
its customers' shopping habits to recommend future purchases. Amazon also utilizes AI to crack down on fake reviews (bbc.com, 2024).

Based on this phenomenon, the application of AI is indirectly related to the sustainability of the human profession. The implementation of AI itself has provided significant progress, but like other technologies, the use of AI, especially in the realm of application in the arts, also raises questions, especially in the fields of ethics, privacy, and social impacts that need to be taken seriously. This is also expressed by Andika (2024) who stated that the presence of AI in the field of art, especially illustration, can provide new inspiration to artists, but it is necessary to be aware of its negative impacts, such as authenticity, ethics, and dependence on technology, to ensure the use of AI in art remains within ethical boundaries and contributes to the development of quality art.

Not only that, a digital artist Raiyan Laksamana also argued in a brief interview with VOA, he stated that "Basically this AI itself can also create these images because it is trained with various images made by other artists from around the world. It is a bit unfortunate that to make the results more perfect, this AI requires a very large data set of images that are scattered from the Internet without permission," (Ihsan, 2024). Seeing how the AI works in creating images, in the realm of the art world, especially in illustration, many artists feel that AI is taking over the creative aspects that were previously purely made by humans. Fadilah, Ramdhani, Handriotopo (2023) argue that the impact of AI not only disrupts their work but also raises ethical and professional questions about the role of artists in this era of advanced technology. The presence of AI itself forces us to reconsider the meaning of originality and creativity in the art world.



Figure 1 Packaging Nutella https://www.
packagingconnections.com/blog-entry/ai-branding.htm

Another issue arises when large companies start to familiarize the use of AI in their products or brands. This use can be seen from the increasing adoption of AI technology in various aspects, such as Brand Nutella's efforts to increase

its product sales by incorporating a database of patterns and colours into its packaging algorithm by relying on generative AI that quickly generates 7 million variants of jar designs, relying on highly recognizable brand lettering that allows design elements to be more diverse and customizable. It started with customer service, content production, and data analysis (Goyal, 2023).

Meanwhile, the action of rejecting AI in the realm of illustration and packaging design is increasingly becoming with the presence of the movement, #TolakGambarAI, which has become a trending topic on social media twitter, started from a viral post on the X / Twitter platform on December 31st which shows billboards of two politicians during the presidential election campaign with images made by generative AI (Gen AI). The hash tag #TolakGambarAI was subsequently raised by the Indonesian artist community to fight for copyright, as well as concerns about copyright and the future of their work. The rejection action, which went viral on social media, was carried out as a form of protest that images generated by AI are often based on several key concerns. This was conveyed through a thread on the X website, which argued that AI works are less original because they only modify existing images, thus reducing the value of creativity and uniqueness that human artists usually produce. Many artists from around the world, including Indonesia, are protesting the use of AI in art. They reject AI works displayed on digital platforms because they resemble human works and reduce the chances of being seen by clients. The issue of copyright is controversial as AI works are often seen as compilations of existing material, which can disregard the creative rights of the original artist. There are also concerns that the use of AI in art could reduce employment opportunities for human artists, as AI can produce works quickly and efficiently. Therefore, many artists and art advocates are calling for copyright protection and recognition of human creative works in the face of AI technology development.
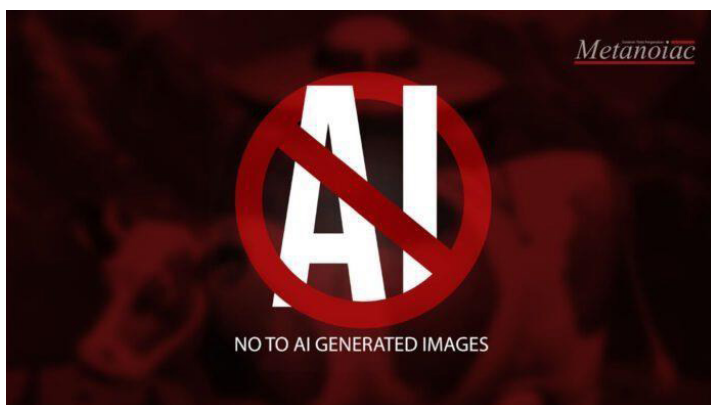


Figure 2 tolak gambar AI https://www.packagingconnections.com/blog-entry/ai-branding.htm

As more companies integrate AI, concerns have been raised about its impact on labour, ethics, and privacy. Such AI technologies can provide efficiency and innovation, but also bring new challenges that need to be addressed by industry and society. This study will further examine the role and impact of AI in packaging design and illustration, which can speed up production and increase the variety of works but there are issues related to copyright and concerns about the future of artists. With Norman Fairclough's critical discourse analysis, which explores further the views on the role and impact of AI in design, especially in the scope of illustration and packaging design. In this domain, AI is considered to have significant potential in changing the productivity and development of the industry, so it can be considered a disruptive factor in the way designers work (Persma, 2023).

The results of this research will examine the extent to which AI technology affects the creative process in packaging design and illustration. This research aims to show that while AI can significantly increase productivity, there are challenges that cannot be ignored regarding the role of humans in the creative process and copyright issues. Therefore, a balanced approach is needed to ensure that human creativity is preserved and artists can continue to work in this era of advanced technology. This approach will highlight the importance of collaboration between AI and human designers to create innovative and valuable designs, while maintaining the sustainability of creativity and protecting the creative rights of artists.

**Research Method**

As a study method, many experts such as Van Dijk, Theo Van Leeuwen, Roger Fowler et al, Sara Mills, and Norman Fairclough have developed critical discourse analysis. Meanwhile, this research will apply the critical discourse analysis proposed by Norman Fairclough (Badara: 2012) regarding the role and cons of AI in the realm of packaging design and illustration, basically there are two main issues that will be researched, namely the research "The Potential of Artificial Intelligence in the World of Design Creativity" as well as being the main topic, namely the role and controversy of using AI in the field. The qualitative approach in this research is chosen based on the main data in this research is descriptive data, and will be studied based on three approaches from Norman Fairclough, presented by Eriyanto (2001), which are as follows.

a. Text analysis: In Fairclough's model, texts are analyzed linguistically, looking at vocabulary, grammar and metaphors. In addition, this model also features coherence and cohesiveness, which is how inter-words or inter-sentences are combined into a sense.

b. Discursive practice: Discourse Practice analysis is a discourse analysis that discusses how a text is produced and consumed. Both related to the complex network of intertexts involved (intertextuality), these practices are related to the texts produced and received and interpreted by readers.

c. Social practice: Sociocultural practice is a dimension that deals with the context outside the text. The context here plays a role in several things, such as the situational context of the institutional practices of the media in relation to a particular society, culture and politics. Critical discourse analysis is used as the use of language in speech and writing or as a form of social practice. In this case, discourse is not only seen in the study of language alone, but also relates to the context that exists in society.

By applying these three approaches, this research is expected to provide a comprehensive picture of the impact of AI in the world of design, both in terms of the meanings produced, the production process, as well as the implications on society. This approach will not only reveal how AI is changing the way we produce and consume design, but also how these changes affect people's direct views on AI.

**Discussion and Results**

This research focuses on the role and controversy of AI in illustration and packaging design. Therefore, this research will focus on two main aspects, namely the role of AI in the realm of design and the cons of using AI in the field of illustration and packaging design. This research will further analyse these two sides to gain a thorough and balanced understanding of the impact of AI on the design industry, which will be examined as follows:

**The Role of AI in Microstructural Text Analysis in the Journal "The Potential of Artificial Intelligence in the world of Design Creativity"**



Figure 3 Artificial intelligence's potential in world's creativity https://kumparan.com/wisnu-wrdhn/revolusi-kecerdasan-buatan-membuka-peluang-baru-dalam-dunia-industri-kreatif-20qf0ASMpPa

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1.  **Representation:**

AI is represented as an innovation that supports designers by speeding up processes, increasing efficiency, and enabling greater creative exploration. The article highlights that AI helps designers save time on technical aspects, allowing them to focus more on developing creative concepts, as seen from the delivery of the Narrative, which includes the following:

a.  Some paragraphs explain the development and advantages of using AI such as "The use of AI technology in the world of design and art, be it in illustration, packaging design to Image Enhancement and Photo Enhancement and so on."

b.  Several paragraphs convey the author's view that categorizes AI as a solution that simplifies the design process, highlighting the point of view about the advantages of AI that has the ability to save time and increase design productivity.

2.  **Relationship:**

The discourse in this journal deals with the mutual benefits of AI and designers. AI is positioned as a tool that can increase the productivity of designers, where AI is positioned to be a tool, not a replacement for designers. This shows AI's position as a technology that amplifies, rather than takes over, the human creative process. This categorization occurs because the text builds on the view that designers can work more productively with AI, making it a supportive partnership.

3.  **Identity:**

In research reviewed by Satrinia, D., Firman, R. R., & Fitriati, T. N. (2023) in the article titled "Potential of Artificial Intelligence in the World of Design Creativity". *Journal of Informatics and Communications Technology* (JICT), published by Telkom University, positioned professionals who are adaptive and open to technological change. This analysis highlights that designers are perceived as having the ability and desire to continuously adapt, making AI a part of their tools. This categorization emerged when the text suggests that AI helps shape designers' identities as innovative and continuously learning in line with technological developments.

**The Role of AI in Mesostructural Text Analysis in the Journal "The Potential of Artificial Intelligence in the world of Design Creativity"**

This analysis addresses dimensions related to the process of production and consumption of texts in the media. Here, the mesostructure highlights how the discourse on AI in design is presented and influenced by the media that writes it, including language, context, as well as the intended audience. The use of

text discourse in this document presents AI as an important innovation in the design domain, capable of increasing efficiency and creativity, but also posing ethical and professional challenges. This discourse underscores the role of the Author in explaining the current technological situation that threatens the art-worker's perspective on the advantages of AI technology, but also explores critical views, making room for debate on the pros and cons. This discourse was chosen because of the relevance between the issue of technological development and the potential impact on the design profession. With the background of the facilitator as an academic institute, the research results of professional journals tend to attract readers in the design industry, and AI enthusiasts who are in-depth, analytical, and critical, and aim to provide insight and become a reference for further studies.

### The Role of AI in Macrostructural Text Analysis in the Journal "The Potential of Artificial Intelligence in the world of Design Creativity"

In the social context, Artificial Intelligence (AI) technology in the field of packaging design and illustration operates in a dynamic economic, cultural and technological environment. External factors influencing this discourse include in relation to technological developments and the digitalization of AI applications spurred by advances in information technology, which enables new innovations in design and creativity. Widespread digital transformation is creating a higher need for efficiency and creativity in various industries. On the one hand, AI technology offers the potential to achieve this competitive advantage by creating designs that can be customized to suit consumer tastes. However, reliance on AI also invites discussion on how to maintain human authenticity and creativity in the design process.

Taken together, these socio-economic factors direct the discourse around AI in design to questions about its impact on the role of humans, copyright, and industry adaptation to cutting- edge technologies.

### Final Synthesize

Based on the above observations, it can be explained that Artificial Intelligence (AI) has transformed creative design through several software-related applications that graphic designers use, be it illustration and packaging design. Although AI increases efficiency and allows designers to focus on concepts, there is a risk of replacing human jobs. Therefore, it is crucial for individuals to adapt and improve skills that are difficult for AI to replicate, such as creativity and conceptual ability.

### Cons of AI in Microstructural Text Analysis in Journal

**"Application of Artificial Intelligence in Graphic Design Media Using Edmund Feldman's Interpretation Analysis"**

## PENERAPAN *ARTIFICIAL INTELLIGENCE* PADA MEDIA DESAIN GRAFIS MENGGUNAKAN ANALISIS INTERPRETASI EDMUND FELDMAN

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**Abstrak**

Seiring perkembangan zaman, teknologi terus berkembang secara masif dan semakin terintegrasi dalam kehidupan masyarakat. Salah satu teknologi terkini yang semakin populer adalah kecerdasan buatan atau artificial intelligence (AI). AI merupakan cabang ilmu komputer yang berfokus pada pengembangan sistem komputer yang mampu menjalankan tugas-tugas yang biasanya memerlukan kecerdasan manusia. Dalam lingkup desain komunikasi visual, AI tidak hanya berurusan dengan unsur-unsur grafis, tetapi juga menuntut desainer untuk lebih kreatif dalam menarik perhatian audiens. Namun, penerapan AI dalam desain komunikasi visual beberapa tahun terakhir ini telah menimbulkan pro dan kontra. Di satu sisi, AI mempermudah pekerjaan desainer melalui berbagai tools yang tersedia. Di sisi lain, ada kekhawatiran bahwa AI akan menggantikan peran desainer manusia. Hal ini dikarenakan teknologi AI bekerja dengan

Picture 4. tolak gambar AI https://jurnaldigit.org/index.php/DIGIT/article/view/372

## 1.     Representation:

In this research, AI representations are seen as more of a threat to original art and the human creative process. In this context, AI is considered to reduce authenticity by automatically modifying existing images, and a threat in terms of copyright that does not include the original creator, unlike human designers who go through a deep and personal thought process. This suggests that the presence of AI in design art could potentially erase the unique role of human experience and thought, a view conveyed through several narratives presented in the journal:

There is a narrative that AI technology works by collecting images from the internet and processing them into a database to create works based on descriptions provided by users, which often leads to criticism that the works produced by AI are less original because they are considered to only modify existing images. In this context, the issue of copyright becomes controversial, as AI works are often seen as compilations of existing material, making the copyright of such works less valuable.

The next narrative refers to the paragraph. The use of adorable character illustrations on the two pairs of Presidential candidates in 2024 reflects their efforts in conveying personal branding. Social media such as Instagram can also be utilized as a personal branding tool to project positive values. However, the use of these illustrations can lead to bad interpretations because it is

considered disrespectful to artists and has a controversial value amid the debate over the use of AI technology versus originality created through a long creative process by a designer.

## 2.    Relation

In the context of relationships, there is a significant distance between the creation of art by humans and AI. Art workers feel threatened, seeing that AI contributions have the potential to replace their roles in the design industry. Especially from how large industries such as falcon films have authorized the use of movie posters that use AI in movie posters, "Pasutri Gaje" to the Indomie brand with advertisements from AI results. This indicates a relationship of inequality between humans and technology, with AI as a party that might shift the position of traditional artists and cause discomfort to designers, especially in relation to the creation of works that are full of interpretation and emotion.

## 3.    Identity:

Research conducted by Rachmawati, Rosyid, Parman, Solihan, and Putra (2024), explains that in general, the identity of artists who prioritize process, expression, and creativity tends to be eroded by the emergence of AI. AI, which lacks the capacity for emotion or personal experience, is seen as a threat to authenticity and individuality in artworks. The use of AI in design can be perceived as homogenization, where designs lack the distinctive character or inherent emotional value that usually arises from the unique perspectives and interpretations of human artists.

**The Role of AI in Mesostructural Text Analysis in the Journal "The Potential of Artificial Intelligence in the world of Design Creativity"**

Based on the discourse reviewed, this research illustrates the flip side of AI technology that threatens the very essence of art. As a result of production mechanisms that do not require direct intervention from human artists, AI-generated products are often considered less authentic. The artists who contributed to this study view AI's involvement as producing sterile works devoid of emotion or personal narratives commonly found in manual artworks. This suggests that while AI is capable of fast and accurate production, the emotional or unique qualities sought by art consumers cannot be fully replaced by AI. The analysis also concludes that while AI production may challenge the limits of creativity, it is not fully capable of conveying the emotional meaning that is often fundamental to art.

This results in a sharp divide between the need for technology in the industry and society's desire to maintain the authentic and emotional essence of art.

This discourse shows that while AI brings convenience in work efficiency, appreciation of art is still heavily influenced by human factors involving feelings and understanding of context.

**The Role of AI in Macrostructural Text Analysis in the Journal "The Potential of Artificial Intelligence in the world of Design Creativity"**

The analysis on the macrostructural dimension focuses on the social context that influences the discussion against the use of AI in art and design. On the one hand, ethical norms in the art world emphasize the importance of authenticity and personal expression, which in the context of art is an important means of conveying human values. AI that lacks personal experience or emotional perception is seen as incapable of conveying the subtle messages that are usually present in human artworks. In society, art has traditionally been viewed as a unique and individual expression of the creator. When AI enters the realm of art, people who are accustomed to emotional values and individual expression in artworks feel disturbed by works that are produced without human understanding or emotional experience. In art culture, the human creator plays a central role, and AI is seen as obscuring that essence.

**Final Synthesize**

The analysis concludes that the opposition to the use of AI in art and design is based on the view that AI cannot replace the emotional, cultural and ethical complexities inherent in human artworks. Although AI has great potential for efficiency and mass production, its limitations in presenting the essence of humanity make people still view the presence of AI sceptically in the realm of art. A balance between technology and human values needs to be prioritized so that AI remains a tool that supports, not replaces, the uniqueness of human art.

**Conclusion**

AI in design, including illustration and packaging, offers great opportunities to improve creative efficiency and competitiveness through technological innovation. However, the con side arises from the fear that AI will reduce the authenticity of artworks and replace the role of humans in the creative process. The presence of AI in the creative sector raises ethical and social debates about the underlying values of art. It is also important to establish a balanced framework, where AI becomes a tool, not a substitute for creators. Education on the integration of technology and ethics in design needs to be developed so that artists can utilize AI without losing the creative essence and originality. Stakeholders also need to develop policies that protect human copyright and ensure AI is used ethically in the arts.

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