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## The Ethical Philosophy of Industrial Design in Light of Artificial Intelligence

الفلسفة الاخلاقية للتصميم الصناعي في ضوء الذكاء الاصطناعي.

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### Abstract:

This research aims to shed light on the specific role of artificial intelligence (AI) in design from the perspective of ethical philosophy, emphasizing that AI is not a replacement for the human designer but rather an advanced tool used to enhance human creativity. The study argues that the creative designer is the one capable of harnessing available tools, such as AI, to express their unique creative vision, affirming that AI is a means of supporting—not replacing—the design process.

Ethical philosophy, a branch of philosophy, involves the regulation of concepts related to right and wrong behaviour, emphasizing the importance of pursuing what is morally right. Ethics has always been a central concern for philosophers across ages. Although their definitions and interpretations have varied, the core objective remains constant: ethics is behaviour. Behaviour can be either right or wrong. Right behaviour stems from values such as truth and goodness, while wrong behaviour results from life's inconsistencies, which obscure the clear meaning of truth and goodness.

There are many misuses of artificial intelligence that pose intellectual and scientific threats to humanity. Ethical AI refers to the development and deployment of AI systems in ways that prioritize fairness, transparency, accountability, and respect for user privacy and autonomy. This involves creating AI that not only performs tasks efficiently but also aligns with societal values and ethical standards. Ethical AI seeks to ensure that these systems do not cause harm or injustice and that they are used to serve the public good.

ethical philosophy constitutes a critical framework that cannot be overlooked in AI-driven industrial design practices. Adherence to this framework helps guide the design process toward creating intelligent solutions that promote social justice, respect human values, and mitigate ethical risks related to bias, loss of responsibility, and cultural detachment.

Ethical AI seeks to fulfil this framework, though it remains in the research and development stage. For its proper implementation, collaborative efforts are required among developers, companies, governments, the public, and academic institutions. Furthermore, promoting education and public awareness serves as a foundational pillar for empowerment and accountability.

Through adherence to ethical principles and collective collaboration, we can steer AI to become a tool for justice and public benefit. From this perspective, despite the visually appealing outputs of AI-generated designs, achieving truly good design creative design that fulfils human needs cannot disregard the essential role of the human designer, even amid the tremendous technological advancement represented by AI. Creativity is a divine gift bestowed uniquely upon humans, who have in turn developed AI technology to facilitate and simplify various life domains not to replace humans. Nothing can substitute the creative human being, who was created by God to remain.

The creative industrial designer is thus the one who adapts AI applications to serve and support the design process while upholding intellectual property rights.

### Keywords

Ethical Philosophy, Artificial Intelligence, Industrial Design, Intellectual Property.

### Introduction

Artificial intelligence (AI) is one of the rapidly evolving modern sciences, with diverse and expanding applications. It has been utilized in a wide range of functions such as research, translation, image generation, **and the creation of preliminary conceptual visuals** all aiming to support the human designer and facilitate various aspects of life and work.

There has been significant debate regarding the uses of AI and the appropriate ways to benefit from it. Some view AI merely as an assistive tool that should not be overly relied upon. Others see it as a highly capable alternative that could potentially replace human designers in several stages of the design process.

When approaching the subject from the lens of **ethical philosophy**, a branch of philosophy concerned with concepts of right and wrong and exploring its intersection with **design ethics** and **intellectual property rights**, we find a major conceptual dilemma between traditional and contemporary perspectives on design. These tensions are largely due to differing viewpoints on the role of AI in the current design landscape.

**Design** is not merely a practice that conforms to expectations; it can—and should—be guided by ethical principles. **Ethics** play a direct and central role in the design process, fostering creative and authentic outcomes characterized by transparency and integrity. This is achieved by treating all individuals fairly, acting with honesty, avoiding conflicts of interest, and respecting privacy and confidentiality—all within the framework of established guidelines for professional conduct in design.

### Research Problem

The current uncertainty surrounding the role of artificial intelligence and its relationship with the design process.

### Research Significance

To shed light on the defined role of artificial intelligence in the design process within the framework of ethical philosophy.

### Research Claim

The truly creative designer is the one who can skilfully employ all available tools—including artificial intelligence to express their personal creativity within an ethically grounded framework.

### Research

### Objective

To affirm that artificial intelligence is

merely an advanced tool designed to assist the human designer throughout the design process.

### **Research Methodology**

This research adopts the inductive methodology.

### **Ethical Philosophy:**

Ethical philosophy is a branch of philosophy that involves the regulation and conceptualization of **both right and wrong behaviour, as well as the importance of adhering to morally correct conduct.** (1٣:p.19).

According to Plato, philosophy is founded on three core values: truth, goodness, and beauty. The pursuit of one of these values inevitably leads to the pursuit of the others. For instance, the one who seeks truth is inherently also in search of goodness and beauty, and likewise, the pursuit of goodness entails a simultaneous quest for truth and beauty.

**Truth is one of the essential foundations for achieving intellectual virtue, which ultimately leads to wisdom.**

The term "ethics" is derived from the Greek word *ethos*, meaning character. In philosophical terms, ethics refers to human behaviour that aligns with the innate sound nature upon which God created humanity.

It also encompasses the behavioural changes that result from the trials and life situations through which God tests humans, involving increasing worldly temptations beginning with the story of Cain's murder of his brother Abel, continuing to the present day.

Human behaviour has since become inconsistent, and this fluctuation stems from a person's capacity to remain committed to an ideal form of moral nature or conversely, to fall into the lure of worldly desires.

**In modern times, the concept of truth has become obscured by contemporary developments, and the path to its realization has grown increasingly difficult to pursue.**

Although philosophers have differed in defining the concept of ethics, their ultimate goal remains the same: to attain virtue and achieve happiness through the foundational values of truth, goodness, and beauty.

From a philosophical standpoint, ethics is the study of the principles and values that govern human behaviour and determine what is right and wrong. Each philosopher has had a unique perspective regarding the nature or origin of ethics, as detailed below<sup>(1٣:p2)-(9p1)</sup>:

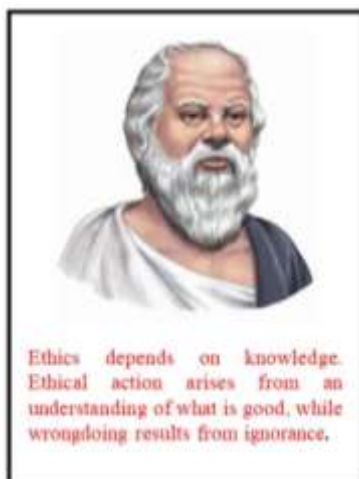


Figure 1: Socrates

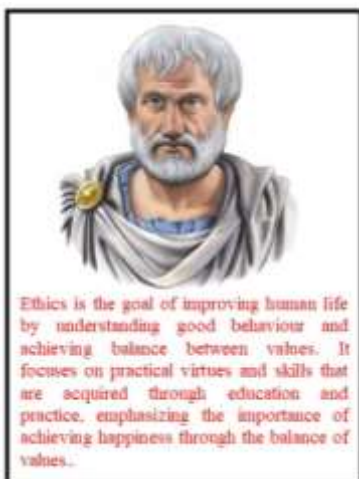


Figure ٢: Aristotle

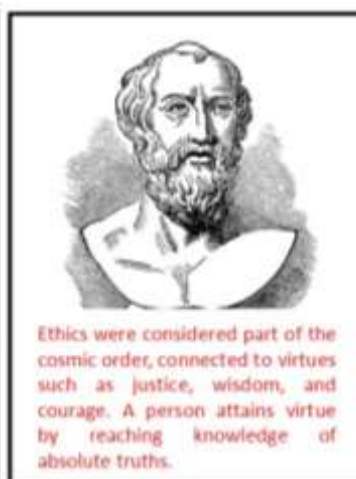


Figure 3: Plato

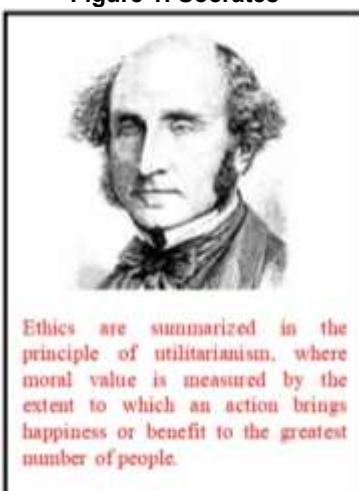


Figure 4: Johan Mill

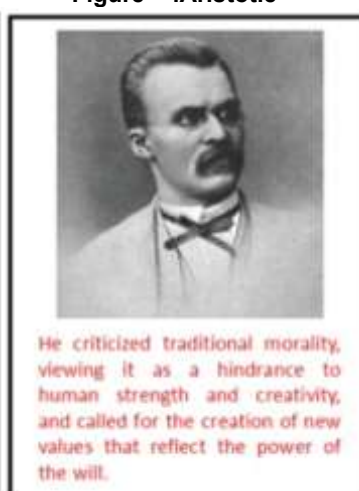


Figure ٥: Nietzsche

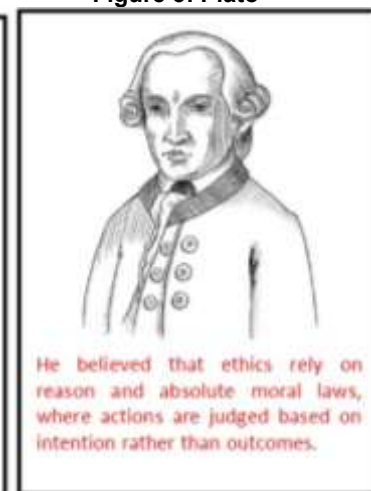


Figure ٦: Kant

### Branches of Ethical Philosophy:

Ethical philosophy is traditionally divided into three main branches: (1٤:p.1)

1. **Meta-ethics:** This branch explores abstract, foundational questions such as: What is morality, What is justice, and Is there such a thing as objective moral truth. It seeks to analyse the nature, origin, and meaning of ethical concepts without necessarily prescribing specific actions.
2. **Normative ethics:** This branch focuses on establishing moral standards and principles for determining right and wrong.

3. **Applied ethics:** This branch deals with the practical application of ethical principles to real world issues of moral significance. such as war, capital punishment, and also the everyday moral dilemmas that individuals face. It bridges the gap between theoretical ethics and lived experience.

Thus, ethical philosophy offers a comprehensive framework and the intellectual tools necessary for examining moral life and discerning right from wrong in both theoretical and practical contexts.



Figure 7: Branches of Ethical Philosophy

### Ethics as a Central Philosophical Concern

Ethics has always been a central concern for philosophers across different historical eras. Despite the varying definitions and interpretations of ethics throughout time, the core objective remains unchanged: ethics concerns behaviour. Behaviour can be categorized into two types right and wrong. Right behaviour stems from the values of truth and goodness, while wrong behaviour arises from the fluctuations and inconsistencies of life that obscure the clear meaning of these moral values.

#### Artificial Intelligence:

Artificial intelligence (AI) emerged in the 1950s, and the term was first introduced during the Dartmouth Conference on Artificial Intelligence in the summer of 1956. The term was coined by **John McCarthy**, who is considered one of the founding fathers of AI, alongside **Alan Turing**, **Marvin Minsky**, **Allen Newell**, and **Herbert Simon** <sup>(A:p81)</sup>.

AI is classified according to two main categories:

1. Based on capability
2. Based on functionality

#### First Classification . Based on Capability:

1. Narrow AI (Weak AI):

This type is designed to perform a single task or a limited set of tasks. It lacks the ability to make decisions beyond its programming. Common examples include **Siri** and **Google Assistant**.

2. **General AI (Strong AI):**

This type is capable of thinking, learning, and problem-solving, with the ability to transfer knowledge from one domain to another. However, such a system has not yet been realized and remains a long-term goal.

3. **Super intelligent AI:**

A theoretical form of AI that surpasses human capabilities in all domains, including decision-making and emotional intelligence. While it aims to solve complex problems, it raises significant ethical and philosophical concerns regarding control and autonomy. Fortunately, it remains a hypothetical concept as of now.

#### Second Classification – Based on Functionality:

1. **Reactive Machines:**

These systems respond to inputs but do not store data or learn from past experiences. An example is **IBM's Deep Blue**, the chess program that



defeated world champion **Garry Kasparov**. It could analyse possible moves but lacked learning ability.

## 2. **Limited Memory AI:**

This type learns from previous experiences but gradually forgets stored information. A common application is in **self-driving cars**, which learn from their surrounding environment without permanently retaining the data.

## 3. **Theory of Mind AI:**

A conceptual type of AI that aims to understand and interact with human emotions. Still in the research and development phase, it holds potential for future applications such as **healthcare robots** capable of emotional interaction.

## 4. **Self-Aware AI:**

Also in the realm of theoretical research, this type aspires to achieve **consciousness** and the ability to think and feel independently. While ongoing efforts aim to reach this stage, it remains an aspirational goal for the future of AI development.

Stephen Hawking, one of the most renowned physicists of our time, wrote an article in which he warned against the unchecked development of artificial intelligence (AI), describing it as a greater threat to humanity than nuclear weapons. He emphasized this concern in a televised interview with the BBC, stating:

**"The development of full artificial intelligence could spell the end of the human race."**

There are, in fact, many unethical or harmful applications of AI that pose

intellectual and scientific risks to humanity. These include:

1. **Deep fake technology and violation of individual rights**
2. **Theft of creative content (images, music, texts)**
3. **Impersonation of authors and intellectual figures**
4. **Digital piracy**

## 1. **Deep fake Technology and Violation of Individual Rights**

Deep fake technology is considered one of the most threatening tools to human identity and intellectual property rights. Linguistically, "deep fake" refers to the perfection of imitation derived from the Arabic concept of "إتقان" (precision), as in the Qur'anic verse: **"The Creator of all things, who has perfected everything."** (Surah An-Naml: 88).

This technology uses AI to synthetically place a person's face on another's body or replicate someone's voice in a highly convincing manner that makes it difficult for humans to distinguish from reality.

Deep fake relies on **limited memory AI**, which can learn from data temporarily but does not store it permanently.

**In 2020, for example, a deep fake video of former U.S. President Barack Obama went viral, showing him saying things he never actually said, generated entirely using AI.**

## 2. **Theft of Creative Content (Images, Music, Texts)**

The use of AI to steal or imitate creative content is among the most controversial

ethical debates today. Some illustrative examples include:

#### **a. Music Theft**

AI-generated imitation of artists' voices has become a major ethical and legal dilemma. Using sophisticated software, AI can mimic a singer's voice with such precision that it becomes nearly indistinguishable from the original artist's performance often without their consent or awareness. A notable example is the viral AI-generated song using the voices of **Drake** and **The Weekend**, which was eventually removed from streaming platforms due to pressure from record labels. These companies deemed the practice unethical, even though current laws do not provide clear protection against AI-generated replicas of artists' voices (2: p1).

The core issue lies in the lack of a legal framework governing this domain. Existing laws primarily focus on protecting human creative content, without addressing AI-generated creations. This gap allows for

potential misuse, such as damaging artists' reputations or exploiting their names for illicit profit.

Some countries, such as **Saudi Arabia**, have started to address these issues by establishing **centres for AI ethics and research**, aiming to create future-oriented policies that safeguard artists' rights and prevent the unethical use of emerging technologies.

#### **b. Visual Art Theft**

AI applications can now generate artworks in the styles of world-renowned painters within minutes.

To support this argument, examples of artworks generated using AI applications were included, showing how artistic content is being replicated without any restrictions. One such application is **Co-Pilot**, which allows users to generate art in specific styles with minimal input.

**Prompt example<sup>1</sup>**: "Create a painting about life inspired by Van Gogh's work."



Figure 1: A Painting in the Style of Van Gogh

**Prompt 2**: "Draw Van Gogh's original painting in the style of Picasso."



Figure ٩: Two Paintings in the Style of Picasso

**Prompt 3:** "Draw a painting about life in the style of Van Gogh, Picasso, and Da Vinci."



Figure Shape 1٠ : A Painting Combining the Styles of Van Gogh, Picasso, and Da Vinci

٣

### . Impersonation of Authors and Thinkers

Fake books have been published using artificial intelligence. Author Jane Friedman discovered that fake books had been published under her name on Amazon, although she had not written them. These books were generated by an AI system that had learned her writing style and produced similar content. The AI system used in this case belongs to the category of limited memory AI, classified according to function. It was trained on data from her original works and then

generated new content in her distinctive style.

The issue of training AI to mimic books emerged with the discovery of a dataset known as Books3 in 2023, which was used to train AI models such as ChatGPT and Meta AI on real book texts. This enabled the generation of content that imitates the style of well-known authors. Some users began to generate new books in the style of specific writers, then publish and sell them without acknowledging the source of inspiration. All of this occurred without the authors'



permission. This dataset included thousands of published books, some of which were protected by copyright, constituting a clear violation of intellectual property rights.

#### 4. Digital Piracy

In 2023, AI was used to hack the protection algorithms of digital video games, illegally converting paid games into free versions. This was made possible through the use of limited memory AI, as the AI analyzed data and generated hacking codes but lacked the self-awareness to develop new software independently.

Based on the above, it is evident that artificial intelligence is being used in many unethical ways, unrestricted by any comprehensive ethical or legal framework. While intellectual property laws can prosecute human violators, there is currently no direct legal structure to deter or govern misuse by AI systems.

Despite the emergence of **Ethical AI**, which seeks to guide AI usage within moral boundaries, it remains in the early stages of development and regulation.

#### Ethical Artificial Intelligence

Ethical AI refers to the development and deployment of artificial intelligence systems in a way that prioritizes fairness, transparency, accountability, and respect for user privacy and autonomy. It aims not only to ensure task effectiveness but also to align with societal values and ethical standards.

The primary goal of ethical AI is to ensure that these systems do not cause harm or injustice, and that they are used for the benefit of society. The significance of ethical AI lies in the following:

1. **Preventing Harm**  
Reducing the risk of physical, emotional, or financial harm caused by AI systems.
2. **Promoting Fairness**  
Ensuring that AI systems do not discriminate against individuals or groups based on race, gender, age, or other protected characteristics.
3. **Building Trust**  
Strengthening public confidence in AI technologies through adherence to ethical principles.
4. **Ensuring Accountability**  
Establishing clear guidelines for responsibility and accountability when AI systems fail or cause harm.

#### Principles of Ethical AI<sup>(١٧:p.2)</sup>

Ethical AI is grounded in several core principles, including:

- **Fairness:** Designing inclusive systems that respect user diversity, eliminate bias, and promote equality.
- **Transparency:** Ensuring that AI systems are explainable and operate with openness in their decisions and processes.
- **Accountability:** Clearly identifying responsibility and enforcing legal and ethical oversight.
- **Privacy and Autonomy:** Respecting individual rights and freedoms in the collection and use of personal data.

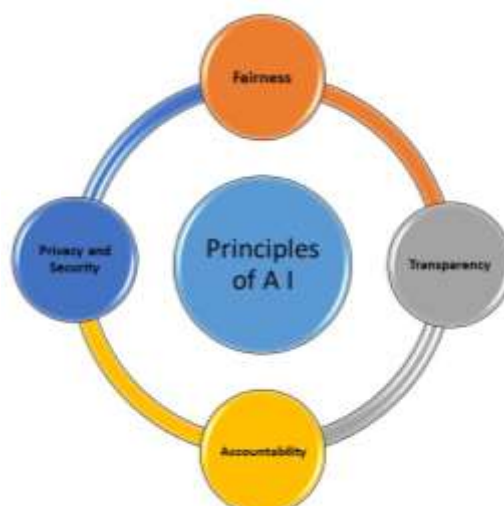


Figure 1\': Principles of AI

### Intellectual Property:

Intellectual property refers to creations of the mind, encompassing everything from artistic works and inventions to computer software, trademarks, and other signs used in the commercial domain.

Intellectual property represents the core of protecting human creativity. It is not merely a legal framework but also reflects an ethical philosophy that values individual effort and the right to attribution. With the rapid advancement of artificial intelligence technologies, these rights are now under unprecedented threat. AI is capable of generating texts, images, and design works that imitate or draw from existing works without permission or proper acknowledgment of the source.

In the absence of strict ethical regulations, intellectual property becomes easily violable with little accountability. What is even more concerning is that AI, being a neutral tool, bears no responsibility for how

it is used, placing the moral burden entirely on users and developers. Ignoring the philosophical dimension in the treatment of this technology fosters an environment that justifies intellectual theft under the guise of “automated creativity.”<sup>(V:p.3)</sup>.

Therefore, the relationship between law and ethics must be redefined in the age of artificial intelligence. Protecting intellectual property is no longer a legal luxury; it is a necessity to ensure creative justice. Clear ethical standards must also be integrated into the design and application of AI (Ethical AI). Only through such balance can we preserve the value of human creativity in an age increasingly dominated by machines. The misuse of AI during the stages of the design process, coupled with a disregard for ethical design philosophy and a lack of respect for intellectual property laws, will inevitably hinder the achievement of innovative design that fulfills the essential elements of successful design.

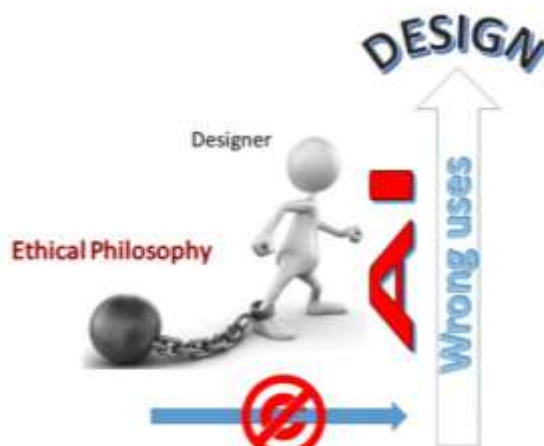


Figure 1٢: Ethical Philosophy and Its Relationship with the Misuse of Artificial Intelligence in Design

On the other hand, the correct use of artificial intelligence within the design process while respecting intellectual property laws and adhering to the ethical

philosophy of design serves as the pathway to achieving the desired creative innovation.



Figure 1٣: Ethical Philosophy and Its Relationship with the Correct Use of Artificial Intelligence in Design

Although adhering to the ethical philosophy (truth) may initially seem complex and confusing for the designer, following it

leads to freedom and outstanding creativity in design (١١:٢١).

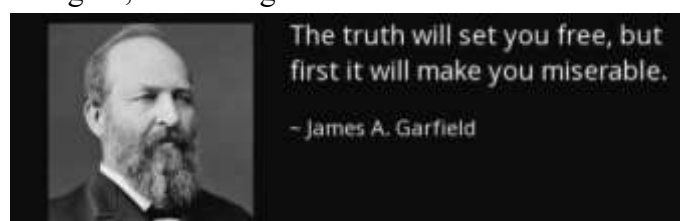


Figure 1٤: The Truth by James Garfield

Truth is the only thing that cannot be hidden at all; no matter how much time passes; the truth must eventually emerge. (For three

things cannot be hidden for long: the sun, the moon, and the truth (١٢:٢١).



Figure 1<sup>o</sup>: The Truth

If we attempt to translate the correct relationship between industrial design and artificial intelligence within the framework of ethical philosophy, we find that ethical philosophy serves as the governing framework or compass that directs the use of AI in design. It ensures the respect for human dignity, intellectual property rights, justice, non-discrimination, and sustainability.

On the other hand, artificial intelligence is merely a supportive tool for industrial design by reducing the time for design and development processes and analysing usage data and consumer behaviour<sup>(٤:١٥١)</sup>. However, the improper use of AI and the failure to adhere to the principles of ethical philosophy can lead to idea theft and erase the distinctive human creativity needed to fulfil human needs<sup>(٥:١٥١)</sup>.

Thus, ethical philosophy is a critical framework that cannot be overlooked in

industrial design practices involving AI. Adhering to it helps guide the design process toward creating intelligent solutions that enhance social justice, respect human values, and mitigate the ethical risks associated with bias, the erosion of responsibility, and detachment from cultural contexts.

Ethical AI strives to achieve this framework, but it is still in the research and development phase. For it to be implemented correctly, it will require collaborative efforts from developers, companies, governments, the public, and academic institutions.

Furthermore, promoting education and community awareness is a fundamental pillar for empowerment and accountability. By adhering to ethical principles and fostering joint collaboration, we can direct AI to be a tool for justice and the common good.

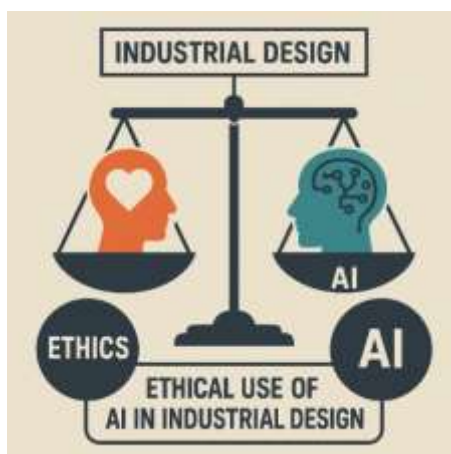


Figure 1١: The Relationship Between Industrial Design, Artificial Intelligence, and Ethical Philosophy

And God distinguished humans from other creatures with innate knowledge and creative ability, as mentioned in several Qur'anic verses, such as:

**"And He taught Adam the names, all of them."** (Al-Baqarah, 31)

This verse indicates the distinction of humans with intellect and the ability to learn and create. God taught Adam the names of things, which symbolizes the ability to understand and innovate, a capacity that God granted to humans alone, setting them apart from all other creatures.

**" And We gave understanding of the case to Solomon"** (Al-Anbiya, 79)

This verse speaks about the Prophet Solomon and shows how God endowed humans with the ability to understand and excel in various fields, such as wisdom and a profound understanding of phenomena.

An applied comparison was made between one of the designs by the world-renowned designer Dieter Rams and a design executed using an artificial intelligence application,

Co-Pilot. The task directed to the application was to mimic the design of a pocket radio in the style of the famous designer Dieter Rams. Dieter Rams was chosen because he has clear and direct principles in creative design, which are: (١٧٨p)

1. A good design is an innovative design.
2. A good design makes the product useful.
3. A good design is aesthetic.
4. A good design makes the product understandable.
5. A good design is not annoying.
6. A good design is honest.
7. A good design lasts a long time.
8. A good design includes all the details until the end.
9. A good design is environmentally friendly.
10. A good design is the least design possible.



**A Survey to Measure the Impact of AI-Generated Designs by Dieter Rams and AI-Assisted Designs Based on the Application of Dieter Rams' Principles of Good Design**

Name: \_\_\_\_\_  
Job Title: \_\_\_\_\_

**First Example: (Pocket Radio)**

AI-Generated Design      Dieter Rams' Design

Based on the visual observation of both designs, has the AI-generated design fulfilled Dieter Rams' principles of good design or not? The principles are as follows:

• Is it an innovative design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product useful?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it aesthetically pleasing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product understandable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it undisturbed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it a human design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it long-lasting?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Are all details thoroughly considered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it environmentally friendly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it feature the minimum possible design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**Second Example: (Brown Pocket Domestic Lighter)**

AI-Generated Design      Dieter Rams' Design

Based on the visual observation of both designs, has the AI-generated design fulfilled Dieter Rams' principles of good design or not? The principles are as follows:

• Is it an innovative design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product useful?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it aesthetically pleasing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product understandable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it undisturbed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it a human design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it long-lasting?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Are all details thoroughly considered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it environmentally friendly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it feature the minimum possible design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**Third Example: (Brown Cylindrical Lighter)**

AI-Generated Design      Dieter Rams' Design

Based on the visual observation of both designs, has the AI-generated design fulfilled Dieter Rams' principles of good design or not? The principles are as follows:

• Is it an innovative design?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product useful?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Is it aesthetically pleasing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Does it make the product understandable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

• Is it undisturbed? ☐ Yes ☐ No

• Is it a human design? ☐ Yes ☐ No

• Is it long-lasting? ☐ Yes ☐ No

• Are all details thoroughly considered? ☐ Yes ☐ No

• Is it environmentally friendly? ☐ Yes ☐ No

• Does it feature the minimum possible design? ☐ Yes ☐ No

Figure 1٧: The survey form

The questionnaire was administered to a sample of ten industrial design professionals, comprising six academics (university professors) and four freelance designers. These experts were consulted

through a structured survey to assess the extent to which the AI-assisted designs adhered to Dieter Rams' ten principles of good design. The findings were as follows:

Table No.1

Design by the industrial designer Dieter Rams.	Design executed using one of the artificial intelligence applications.
<b>First</b>	
	
Shape 1٨: The T3 pocket radio <sup>(١٠:٠٠:٠١)</sup>	Shape ١٩: A new design for a pocket radio mimicking Dieter Rams' design.

## Second



Shape ٢٠: The original Braun dynamic pocket lighter. (١٠:p1)



Shape ٢١: A new design for the Dymatic pocket lighter in the same style as designer Dieter Rams, embodying his principles.

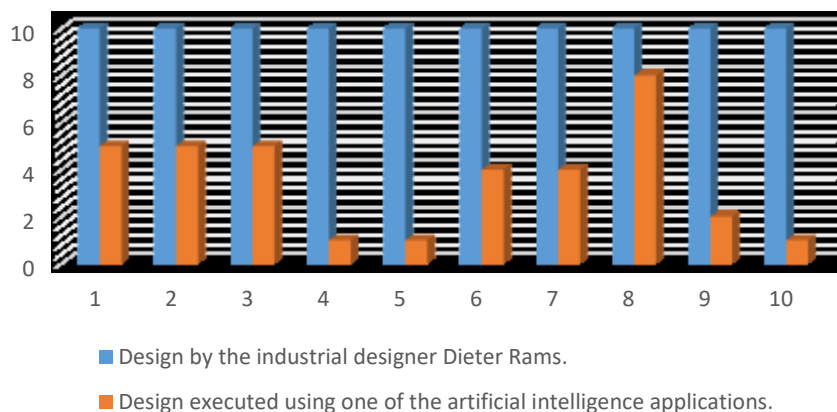
## Third



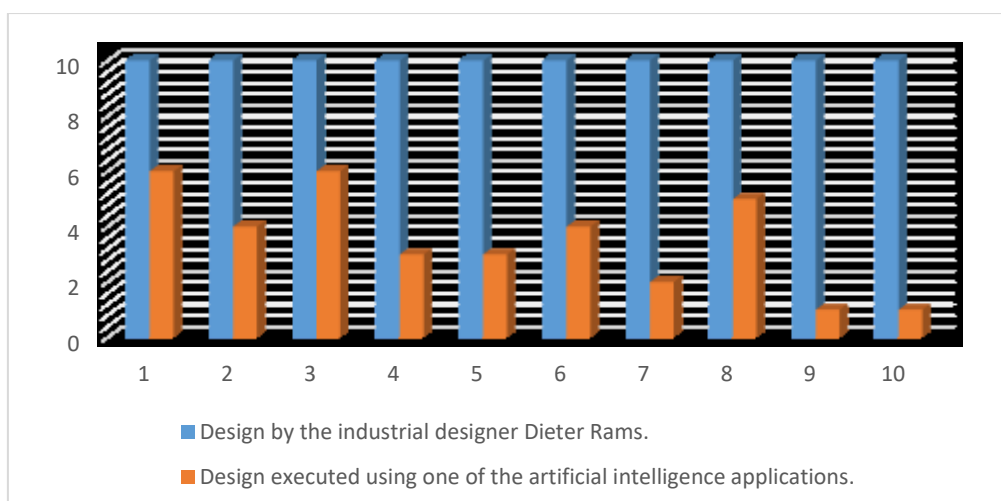
Shape ٢٢: The Braun cylindrical lighter (١٥:p1)



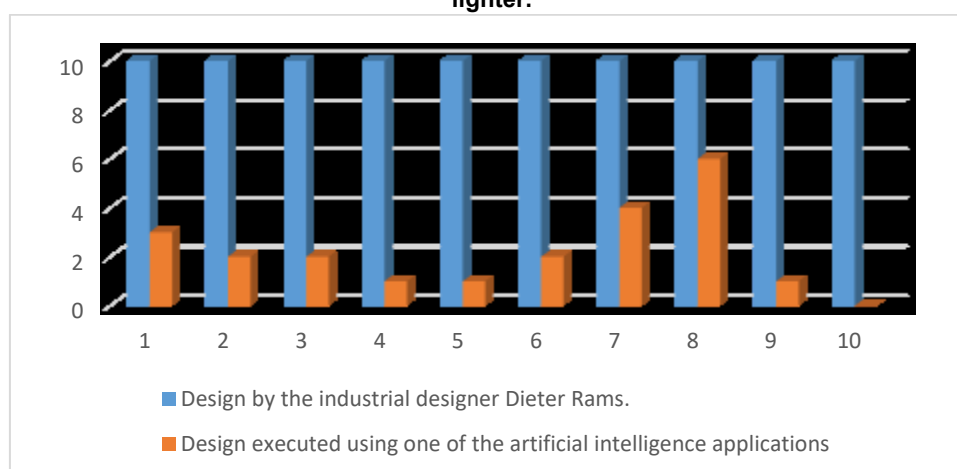
Shape ٢٣: A new cylindrical lighter design that mimics the Dieter Rams lighter.



Shape ٢٤: The extent to which Dieter Rams' principles are achieved in the pocket radio design.



Shape ٢٠: The extent to which Dieter Rams' principles are realized in the design of the Braun Dynamic lighter.



Shape ٢١: The extent of achieving Dieter Rams' principles in the design of the cylindrical lighter.

When visually comparing the designs executed by artificial intelligence with those of the industrial designer Dieter Rams that achieve the ten principles of good design, we find that:

The designs executed by artificial intelligence fail to achieve the good design principle as they do not meet the following principles:

1. **Makes the product understandable:** They have many complex and unclear details.
2. **Does not disturb:** AI designs are visually disturbing.

3. **Honesty:** They do not convey functionality in a direct and simple manner.
4. **Environmentally friendly:** These designs are not environmentally friendly because they contain many complex parts that cannot be reused after the product's life cycle ends.
5. **Minimal design:** AI designs are overly complicated, which contradicts the principle of simplicity and directness in achieving the required function.

From the above, we can conclude that although AI designs have an

attractive visual appeal, achieving good design—creative design that fulfills human needs—cannot ignore the importance of the human designer’s role, even with the vast technological advancements represented by AI. Creativity is a gift that God has endowed to humans, and humans were able to design and implement AI technologies to simplify and facilitate their life tasks across various fields. However, AI should not replace humans, as nothing can replace the human creator. God created humans to remain.

#### Research Findings:

1. The ethical philosophy is a critical framework that cannot be ignored in the design process, especially when using artificial intelligence.
2. AI applications can never replicate human creativity.
3. The creative industrial designer utilizes AI applications to serve and support the design process while respecting intellectual property rights.
4. Ethical artificial intelligence is one of the most important means of respecting intellectual property rights in AI applications.
5. Industrial design is pure human creativity, supported by AI tools.

#### Research Recommendations:

1. Encourage industrial designers to apply the principles of ethical artificial intelligence.
2. Integrate ethical philosophy as a fundamental aspect of industrial design education.

3. Emphasize that creativity is a gift from God to humans, and no machine can replace human creativity.
4. Reaffirm the centrality of the human in the design process.
5. Develop the ethical awareness of designers towards humans and the environment.

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**ملخص البحث:**

يهدف البحث إلى تسليط الضوء على الدور المحدد للذكاء الاصطناعي في التصميم من منظور الفلسفة الأخلاقية، وتوضيح أنه ليس بديلاً عن المصمم البشري، بل هو مجرد أداة متطورة تُستخدم لتعزيز الإبداع الإنساني. ويدعي البحث أن المصمم المبدع هو من يستطيع تطوير الأدوات المتاحة، مثل الذكاء الاصطناعي، ليعبر عن رؤيته الإبداعية الخاصة، مما يؤكد أن الذكاء الاصطناعي هو وسيلة لدعم العملية التصميمية وليس لاستبدالها.

الفلسفة الأخلاقية هي أحد فروع الفلسفة، والتي تتضمن تنظيم المفاهيم لكلا من السلوك الصائب والسلوك الخاطيء وأهمية اتباع السلوك الصائب.

إن الأخلاق هي القضية الأساسية للفلاسفة على اختلاف العصور فمهما اختلف المعنى والتصور لكل منهم ثبت الهدف المطلوب تحقيقه فالأخلاق هي السلوك. السلوك نوعان صائب وخاطيء السلوك الصائب ينتج من طريق قيم الحق والخير، أما السلوك الخاطيء ينتج من التذبذب الحياتي الذي يموه المعنى الصريح للحق والخير.

للذكاء الاصطناعي العديد من الاستخدامات الخاطئة للذكاء الاصطناعي والتي تشكل خطراً فكرياً وعلمياً على البشرية. **الذكاء الاصطناعي الأخلاقي** هو تطوير ونشر أنظمة الذكاء الاصطناعي بطريقة تُعطي الأولوية للعدالة، والشفافية، والمساءلة، واحترام خصوصية المستخدم واستقلاليته. ويتضمن ذلك إنشاء ذكاء اصطناعي لا يقتصر فقط على أداء المهام بفعالية، بل يتماشى أيضاً مع القيم المجتمعية والمعايير الأخلاقية. يهدف الذكاء الاصطناعي الأخلاقي إلى ضمان ألا تساهم هذه الأنظمة في إحداث ضرر أو ظلم، وأن تُستخدم لخدمة المجتمع.

الملكية الفكرية هي إبداعات العقل، كل شيء سواء كان ينتمي إلى المصنفات الفنية أو الاختراعات أو برامج الكمبيوتر أو العلامات التجارية وغيرها من العلامات في المجال التجاري.

والإستخدام الخاطيء للذكاء الاصطناعي أثناء مراحل العملية التصميمية وعدم الإلتزام بما تنصه الفلسفة الأخلاقية الخاصة بالتصميم وعدم إحترام قوانين الملكية الفكرية سيؤوول دون الوصول إلي إبداع تصميمي محققاً لعوامل التصميم الناجح. الذكاء الاصطناعي هو مجرد أداة داعمة للتصميم الصناعي من خلال تقليل وقت عمليات التصميم والتطوير، وتحليل بيانات الإستخدام وسلوك المستهلك. لكن الإستخدام الخاطيء للذكاء الاصطناعي وعدم الإلتزام بضوابط الفلسفة الأخلاقية سيؤدي إلي سرقة الأفكار، بيمحي الإبداع الإنساني المتميز في تحقيق إحتياجات الإنسان المرجوة.

وتعد الفلسفة الأخلاقية إطاراً حاسماً لا يمكن إغفاله في ممارسات التصميم الصناعي المعتمد على الذكاء الاصطناعي، إذ يسهم الإلتزام بها في توجيه العملية التصميمية نحو إنتاج حلول ذكية تُعزز العدالة الاجتماعية، وتحترم القيم الإنسانية، وتحد من المخاطر الأخلاقية المرتبطة بالتحيز، والتجريد من المسؤولية، والانفصال عن السياقات الثقافية. فيحاول الذكاء الاصطناعي الأخلاقي تحقيق هذا الإطار ولكنه مازال في مرحلة البحث والتطوير. ولكي يتم تنفيذه علي الشكل الصحيح سوف يحتاج جهوداً تكاملية من المطورين، الشركات، الحكومات، الجمهور، والمؤسسات الأكاديمية. كما أن تعزيز التعليم والوعي المجتمعي يعد ركيزة أساسية للتمكين والمساءلة. من خلال الإلتزام بالمبادئ الأخلاقية والتعاون المشترك، يمكننا توجيه الذكاء الاصطناعي ليكون أداة للعدالة والنفع العام. ومما سبق نجد أنه علي الرغم من الإظهار البصري الجاذب لتصميمات الذكاء الاصطناعي إلا ان تحقيق التصميم الجيد أي التصميم المبدع المحقق للإحتياج الإنساني لا يمكن أن نغفل فيه عن أهمية دور المصمم البشري حتي في ظل وجود هذا التطور التكنولوجي الهائل المتمثل في تكنولوجيا الذكاء الاصطناعي لأن الإبداع هي هبة حبا بها الله الانسان دون عن غيره واستطاع تصميم وتنفيذ تكنولوجيا الذكاء الاصطناعي بهدف تبسيط وتسهيل أموره الحياتية علي مختلف المجالات وليس إحلالها محل الإنسان لأن لا يوجد أبداً ما يمكن أن يحل محل الإنسان المبدع. فقد خلق الله الإنسان ليبقي.

وان المصمم الصناعي المبدع يطوع تطبيقات الذكاء الاصطناعي بما يخدم ويدعم العملية التصميمية في ظل إحترام حقوق الملكية الفكرية.

**الكلمات الدالة:** الفلسفة الأخلاقية، الذكاء الاصطناعي، التصميم الصناعي، الملكية الفكرية