A Multimodal Discourse Analysis of Selected Caricature Images Associated with Artificial Intelligence Technology

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Abstract

Our age is witnessing a rapid growth of artificial intelligence (AI) technology. This fast AI growing has resulted in its pervasive presence in various aspects of our daily lives. Thus, our age is described as 'the age of AI'. Being a current issue of society, AI technology attracts many caricaturists to represent it in several ways in their caricatures to deliver its visual messages. Hence, the current study examines the visual representation of AI technology in a corpus of editorial cartoons published on the global online platform, Cartoon Movement. With the aim of identifying the visual communicative functions, thematic foci, and discursive practices employed by caricaturists in depicting AI-related issues, the study employs a multimodal discourse analysis approach. To achieve the aim of the study, eleven caricature drawings published between 2023 and 2024 were purposively selected for semiotic analysis. Utilizing Kress and Van Leeuwen's (2006) model of visual social semiotics, the study examines the representational, interactive, and compositional meanings conveyed by the selected cartoons. Additionally, for analyzing visual metaphors in the study, Lakoff and Johnson's (2008) conceptual metaphor theory is employed. The significance of the study lies in its contributions to the understanding of how AI is visually represented as well as its potential implications for society. The analysis reveals three thematic foci in the representation of AI: AI dominance, the end of humanity, and AI's effects on various aspects of human society, including knowledge, intelligence, civilization, creativity, jobs, truth, and politics. These themes are used to present a predominantly negative portrayal of the 'age of AI' and its potential consequences. Furthermore, the study identifies discursive strategies employed by cartoonists to convey their implicit ideologies about AI technology.

Keywords: multimodal discourse analysis; artificial intelligence (AI); visual modality; social-semiotics

Introduction

Nowadays, AI is not only considered a powerful tool but, more importantly, a transformative force due to its power to reshape society. AI infiltrates every aspect of our lives, becoming an integral part of society's fabric, including education, communication, healthcare, and transportation. AI is embedded in many products used daily, such as autocorrect features, smart assistants, social media monitoring tools, healthcare management systems, and navigation tools (Ghazvineh, 2024). This integration demonstrates AI's pervasive influence and its role in transforming modern life. Thus, AI represents a source of attraction for many cartoonists across the world to represent its themes in several ways in their cartoons to deliver its visual messages.

Analyzing and understanding visual messages given by cartoons in a systematic way can be provided by Multimodal Discourse Analysis (MDA). It sets up a systematic way of analyzing not only the language of various texts but also their various semiotic modes such as images, photographs, diagrams or graphics (Çoskun, 2015). It must be asserted semiotic modes for communication are important for creating meaning. However, the value of these semiotic modes in the process of meaning creation has been neglected and provided in what O'Halloran (2011) referred to as an impoverished view within the field of discourse analysis.

Cartoons, also referred to as caricatures, are considered as one of the various moods of human communications in which meanings are given in a form of visual communication. For Samson and Huber (2001), a cartoon is considered as "a joke told in a picture (drawing, painting, etc.)" (p.1). Cartoons "are produced in reaction to social phenomenon" (Al-Momani et al., 2017). Kuipers et al. (2008) argue that editorial cartoons are not merely used for amusement but serve as satirical tools with social and ideological purposes, as they "are satire,

not humor" (p.40). Thus, caricatures reflect societal issues and raise awareness regarding these issues. The current study focuses on the visual representation of AI related issues in selected editorial cartoons form Cartoon Movement website and its potential implications for society via the utilization of Kress and Van Leeuwen's (2006) model of visual social semiotics and Lakoff and Johnson's (2008) conceptual metaphor theory. The following section provides the readers with the objectives of the study.

Objectives of the Study

The current study is an attempt to analyze selected caricature images associated with artificial intelligence technology with main aim of identifying (1) the visual communicative functions, (2) thematic foci, and (3) discursive practices employed by caricaturists in depicting AI-related issues.

Research Questions

To achieve the goals of the study, the present study attempts to answer the following questions:

1- What are the visual communicative functions given in cartoons of AI-related issues?
2- What are the main thematic foci evident in the cartoons regarding AI-related topics?
3- What are the discursive strategies employed by caricaturists to engage with and comment on AI-related issues within the visual medium?

Statement of Research Problem

Despite the fast-growing environment of artificial intelligence (AI), there is a notable lack of scholarly research on how AI is visually represented in media, particularly editorial cartoons. This research gap is significant because such representations can have a substantial impact on public perception as well as comprehension of AI technology. The study problem, then, is to address this paucity by examining the visual representation of AI in editorial cartoons.

Method of Analysis

Theoretical Framework

Utilizing Kress and Van Leeuwen's (2006) model of visual social semiotics, the study explores the representational, interactive, and compositional meanings conveyed by the cartoons. Kress and Van Leeuwen's (2006) model of visual social semiotics is selected for the current study because it has been considered a pioneering framework for both of examining and understanding the visual grammar of images (Hussain, 2019). Additionally, Lakoff and Johnson's (2008) Conceptual Metaphor Theory is employed to analyze visual metaphors in the study.

Data Collection and Procedures

A small cartoon corpus comprised of 11 caricature drawings, published between 2023 and 2024, has been selected from a specialised cartoons website entitled 'Cartoon Movement'. It is a global platform for editorial cartoons and comics journalism. The website is https://www.cartoonmovement.com/

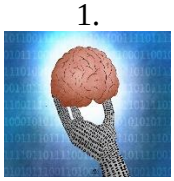
The rationale behind selecting this website is that it is a worldwide online platform that brings together editorial cartoonists from all over the globe to publish content that keeps up to date with the latest events related to AI's topics in different societies around the world.

The chosen cartoons were produced by cartoonists from different nations around the world, including Western countries (e.g., Spain, Austria, France, Norway, and Italy), Latin American countries (e.g., Cuba and Costa Rica), Arabic countries (e.g., Saudi Arabia) Southeast Asian countries (e.g., Indonesia) and Islamic countries (e.g., Turkey).

The caricatures focus on satirical visual representation of AI technology (from 2023 to 2024).

The rationale behind choosing these eleven cartoons to analyze the depiction of AI's issues is that the satirical language/representation of these editorial cartoons may play an influential role in representing the social construction of reality based on the cartoonists' attitudes and assumptions toward AI technology. One can say that the 11 selected editorial cartoons are the ones that appeared to have most meat for the analysis.

Eleven caricature drawings represent the data of the current study:

1. 

2. 

3. 

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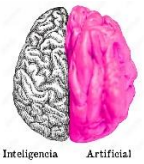
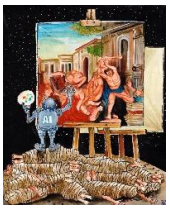
5. 

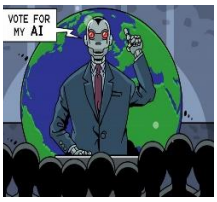
6. 

7. 

8. 

9. 

10. 

11. 

Note: Cartoons will be shown in larger scale later on.

Literature Review

Kress and van Leeuwen's Multimodal Discourse Analysis (MDA)

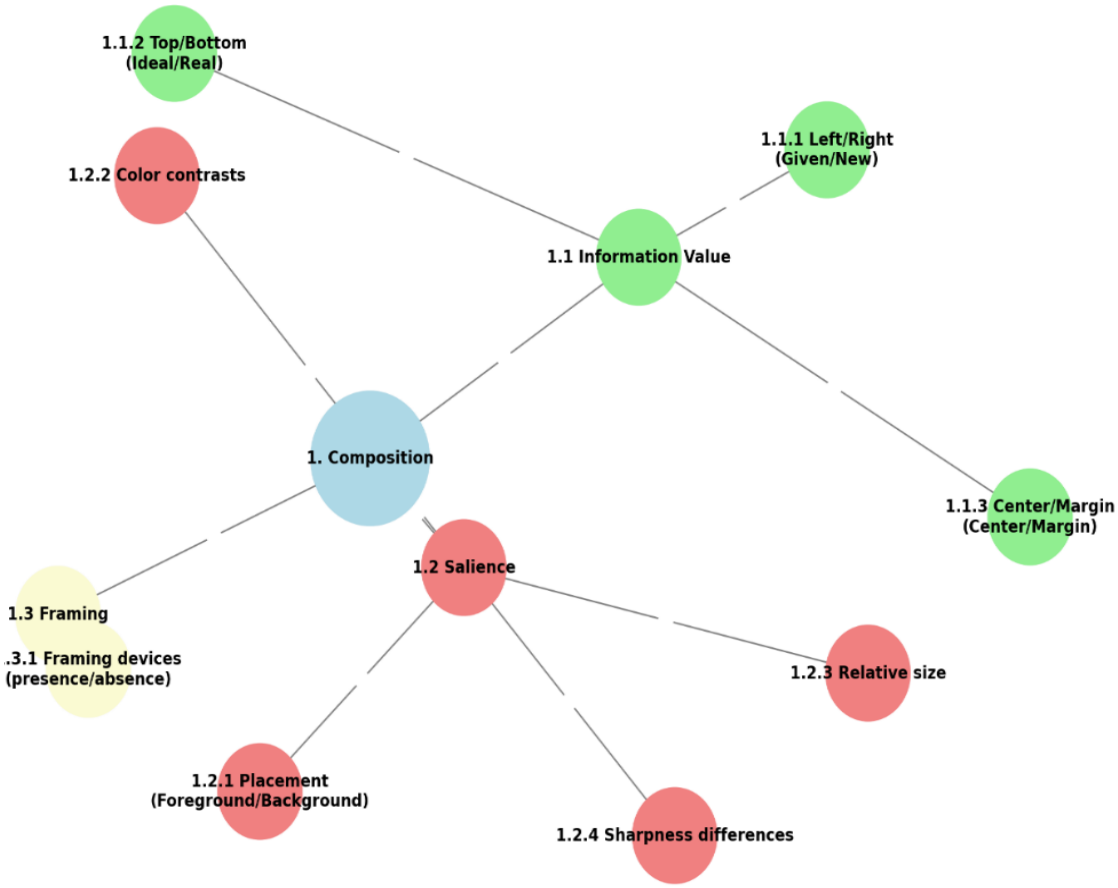
Kress and van Leeuwen (2006) introduce the concept of the 'semiotic landscape', which emphasises the role of context in describing the visual mode. They assert that the role of visual communication in a particular community cannot be understood without considering the variety of public communication forms or modes available in that society, as well as their uses and evaluations. Based on Halliday's systemic functional linguistics (SFL), Kress and van Leeuwen's MDA approach demonstrates how different semiotic modalities (such as images, diagrams, photographs, caricatures and graphics) interact constructively to form implicit or indirect meanings communicated by texts. Significantly, the current SFL is employed as the basis for key texts in multimodality, particularly in the work of Kress and van Leeuwen, who argue that the analysis should begin with Halliday's metafunctions to define the underlying system of each example of communication (Ledin & Machin, 2019, p.498). Kress and van Leeuwen (2006) state that all images perform Halliday's metafunctions in three ways: the representational patterns corresponding to ideational metafunction, the interactive patterns corresponding to interpersonal metafunction and the compositional patterns corresponding to

the textual metafunction. The representational patterns, the first way of performing Halliday's metafunctions, index the visual resources in the image such as people, places and things. In addition to that, these patterns point out the representation of interactions as well as conceptual relations between them. As for the interactive patterns, they are mainly concerned with pointing out the resources that construct relationships between the viewer, the maker of the visual texts and also those who represented in the texts. As for the last way, i.e., the compositional patterns, these patterns indicate the ways in which both representational and interactive patterns integrate to create a meaningful whole.

According to Kress and van Leeuwen (2006), representation forms a visual 'syntax' of an image and is realized by participants (e.g., people, things or figures) with the aim of relating participants to each other. Thus, visual structures of a representation can be either (1) *narrative* or (2) *conceptual*. Narrative representation presents actions and events, processes of change and transitory spatial arrangements, on the other hand, conceptual representation represents participants from the point of view of their more generalized and more or less stable and timeless essence, from the point of view of class, meaning or structure (Kress & van Leeuwen, 2006, p.79). Interaction representation consists of three types. These are (1) contact, (2) social distance and (3) attitude. Contact has two types of image acts: demand (gaze at the viewer) and offer (absence of gaze at the viewer) (Kress & van Leeuwen, 2006; Torres, 2015). The categorization is based on presence or absence of eye contact. Social relations can be realized by varying the size of a frame; thus, three types can be identified: (1) close-up shots (displaying head and shoulders of the subject), (2) medium shots (showing the body of the represented participant approximately down to the knees), and (3) long shots (showing the whole figure while occupies about half the height of the frame) (Kress & van Leeuwen, 2006; Hu & Luo, 2016). Attitude (point of view) is divided into two types of visuals: (1) objective (without presepective) and (2) subjective (with central presepective); furthermore, there is a degree of involvement and power with the subjective features, thus there is angle of representation which is further subdivided into two types: horizontal and vertical (Kress & van Leeuwen, 2006; Yao & Zhuo, 2018). As for compositional representation, it relates the representational and interactive meanings of the cartoon to each other via three associated principles: (1) information value, (2) salience, (3) and (3) framing. Below is a graphical representation of composition and its divisions as well as subdivisions.

Graph1

Composition



Lakoff and Johnson's (2008) Conceptual Metaphor Theory

Metaphors are not just linguistic expressions but fundamental to both human thought and understanding (Lakoff & Johnson, 2008; Garello, 2024) According to Lakoff and Johnson, metaphor is defined as "understanding and experiencing one kind of thing in terms of another" (2008, p. 5). Thus, Lakoff and Johnson's Conceptual Metaphor Theory (CMT) is considered as a fundamental framework in cognitive Linguistics. It proposes that our experience and our understanding of the world are shaped significantly by metaphorical thinking (Lakoff & Johnson, 2008). 'Metaphors as conceptual tools' is one of the key concepts of the theory (Lakoff & Johnson, 2008; Lakoff, 1993). This is mainly because metaphors shape how we perceive, think, and act (Lakoff & Johnson, 2008; Lakoff, 1993; Clark, 2024). Metaphors are not merely decorative language but essential for (1) understanding abstract concepts through more concrete terms, and (2) structuring our experience (Lakoff & Johnson, 2008; Lakoff, 1993; Ritchie, 2006; Garello, 2024). Furthermore, many conceptual metaphors are rooted in our physical as well as our social experiences. For example, the metaphor "LOVE IS A JOURNEY" helps us to understand relationships in terms of travel, with all its ups and downs (Lakoff, 1993, p.5). This idea of embodied experience is another key point in the theory (Lakoff & Johnson, 2008). A third key point in CMT is source and target domains. Metaphor consists of two main components in CMT: the source domain and the target domain. The concept from which we draw metaphorical expressions is the source domain while the concept we are trying to understand is the source domain. For example, in the metaphor 'Time is money', the source domain is 'money' and the target domain is 'time'. A fourth key point in CMT is the idea that conceptual metaphors are systematic as they form coherent systems of thought (Lakoff &

Johnson, 2008). A fifth key point is that metaphors can shape reality as they can influence our perceptions as well as our actions. Metaphors help in the processes of creating and restructuring our understanding of the world (Lakoff & Johnson, 2008; Kövecses, 2016). To sum up, CMT highlights the impact of conceptual metaphors on our cognition as well as our daily life. Additionally, CMT demonstrates that metaphors are integral to how people make sense of the world.

Previous Studies

Various studies have interpreted different forms of visual communication via the utilization of Kress and Van Leeuwen's (2006) model of visual social semiotics (Al-azzawi & Kadhim, 2024; Wang, 2024; Hameed & Ejam, 2022; Şimşek & Bozdağ, 2024, among others). Although, these studies have utilized Kress and Van Leeuwen's (2006) model of visual social semiotics to analyze and interpret different forms of visual communication, they did not tackle the topic of AI. Additionally, societal perception of AI has been examined in various studies (Moravec et al., 2024; Seth, 2024; Wen & Chen, 2024; Kanzola et al., 2024; among others). Seth (2024) investigates societal attitudes towards AI by examining public perception of AI across ten countries via a global survey. The study concludes that while many view AI as a transformative tool, there is also a strong sentiment advocating for regulation due to concerns about job displacement as well as societal risks. In their study, Moravec et al., (2024) reach the conclusion that AI awareness is influenced by gender, age, and education level; thus, younger individuals and those with lower education levels show less familiarity with AI applications. Wen and Chen (2024 investigate public perceptions of AI in Taiwan. The focus of the study is on the roles of political ideology, science news consumption, and knowledge. The study reaches the conclusion that (1) political ideology has limited impact on AI benefit perceptions and that (2) science news consumption and knowledge influence AI perceptions significantly. Kanzola et al., (2024) examine public attitudes towards AI in Greece. The study reaches the conclusion that social identity factors (including economic and political standings) significantly influence public attitudes towards AI. Although the above-mentioned studies have examined societal perception of AI, they (these studies) did not apply Kress and Van Leeuwen's (2006) model of visual social semiotics as well as Lakoff and Johnson's (2008) metaphor model to editorial cartoons. No single study to date has examined the visual representation of AI technology in editorial cartoons. Thus, the present study aims to fill this gap. The aim is to identify the visual communicative functions, thematic foci, and discursive practices employed by caricaturists in depicting AI-related issues.

Data Analysis, Results and Discussion

In this section, **eleven** editorial cartoons that depict AI will be listed. Furthermore, the analyses of the multimodal manifestations of each cartoon will be given. The cartoons are classified according to three major themes: (1) AI dominance, (2) the end of humanity, and (3) AI's effects on various aspects of human society, including knowledge, intelligence, civilization, jobs, truth, and politics. The focus of the analysis is on the interpretation of the various semiotic resources employed in the selected cartoons to realize particular forms of meaning: representational meaning, interactive meaning, and compositional meaning. The 11 cartoons are numbered from 1 to 11. Then, a table will be given which provides the readers with analysis of source domain, target domain, metaphor and discursive strategy used in visual

domain related to each cartoon following the framework of Lakoff and Johnson's (2008) conceptual metaphor theory.

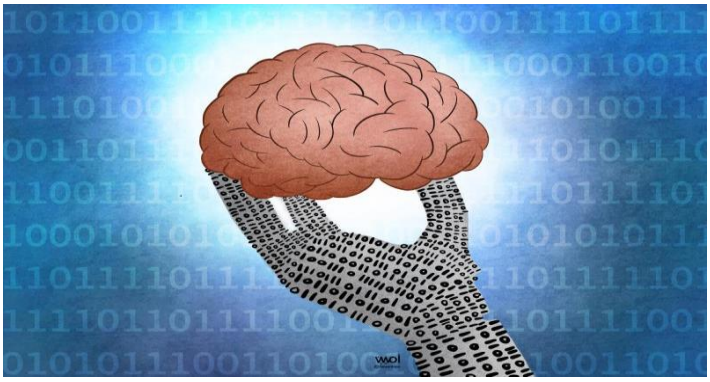
AI dominance

The analysis of Cartoon (1)

The following cartoon (Figure 1), entitled "Artificial intelligence", was published by a cartoonist from KSA on 29 January 2023.

Figure1

Cartoon published by Ameen Alhabarah (KSA) on CM, 29 January 2023



The cartoon shows several elements: **a brain**, **a hand**, **a binary code** and **a blue background**. It depicts the brain and the hand connected by binary code against the blue background. Obviously, each element in the cartoon adds to the overall meaning of the image, which will be examined using Kress and Van Leeuwen's model of visual social semiotics as given below.

Representational Meaning. The representational meaning of the cartoon refers to the story or narrative that it tells (Kress & van Leeuwen, 2006). In this cartoon, the story, which represents the representational meaning, is about a robotic hand holding a brain and the hand itself is made up of binary code. Thus, the cartoon has a narrative process. The participants are the actor (the binary hand which represents AI) and the goal (the brain which symbolizes human intelligence, knowledge and consciousness). The action process is indicated by the hand's gesture of holding the brain. This image indicates AI control and suggests its potential to manage human intellect. The cartoon is set against a blue background. Obviously, in the cartoon, the binary code (robotic) hand is doing something which is holding the brain. This holding suggests that the hand is controlling and manipulating the brain. **The blue background** is significant for the main elements of the cartoon because it reflects a neutral backdrop for them. Thus, it allows them to stand out and be the focus of attention. As for the color blue, it is often associated with technology. Thus, the cartoon intends to convey the idea that AI technology is increasingly controlling and manipulating human beings. In other words, AI dominates the life of human beings.

Interactive Meaning. It refers to the way in which the cartoon engages the viewer (Kress & van Leeuwen, 2006). In the cartoon, this engagement is created by causing the viewer to think about the relationship between AI technology and human beings and also the future of AI technology and its impact on human beings. As for contact analysis, there is no direct gaze from the participants; thus, no demand is made from the viewer. The position of the viewer is as observer. As for social distance, the viewer is placed at a close, personal distance which allows for a more intimate understanding of the relationship between AI and the brain. As for perspective, we can say that the frontal angle of the image positions the viewer directly in front

of the hand and brain. Therefore, it suggests an equal relationship between the viewer and the subjects. Thus, the viewer should critically engage with the concept of AI.

Furthermore, the interactive meanings of the cartoon can be explained in terms of (1) brain-hand connection, (2) binary code as a bridge, and (3) engagement with the viewer. The connection between the brain and the hand suggests a two-way interaction. The brain directs the actions of the hand. On the other hand, the hand provides the brain with information about the world. In this interaction, the interdependence of thought and action is highlighted. The binary code acts as a bridge between the brain and the hand. It represents the language of thought that is translated into physical action. This suggests that communication and understanding are essential for effective interaction. The cartoon invites the viewer to contemplate the relationship between the brain, the hand, and the binary code. Furthermore, in the cartoon, questions about several points are raised. These are the nature of thought, action, and communication. Obviously, the cartoon encourages the viewer to engage with the ideas presented.

Compositional Meaning. The compositional meaning of the cartoon is the way in which the elements are arranged to create meaning (Kress & van Leeuwen, 2006). Four dimensions will be discussed. These are: Information value, salience, framing, and color and light. As for information value, we can say that the most salient element in the image is the brain as it is positioned in the top center of the image. This indicates its importance as the central message of intelligence. The binary hand is placed lower than the brain to signify its role in upholding or controlling the brain. Thus, despite being critical, it plays a supportive role. The analysis of salience indicates that the brain is made visually prominent through its central positioning as well as the contrast in color against the blue background. The binary code hand is also salient due to its unique symbols (0 and 1) and the way it holds the brain. For framing, the cartoon shows a strong sense of unity between the hand and the brain, with the binary hand framing and holding the brain. The last point is the use of color and light which is significant. This is mainly because, the use of blue signifies technology and the use of natural colors for the brain highlights its human aspect. The bright light in the background suggests a new dawn brought by AI. The arrangement of the cartoon's elements creates a sense of tension as well as unease. The way the hand is holding the brain suggests that the hand is controlling and manipulating the brain. Furthermore, the binary code hand is also a reminder that technology, represented by AI, is increasingly controlling and manipulating human beings. The cartoon is likely intended to convey the idea that technology is increasingly controlling and manipulating human beings.

The End of Humanity

The Analysis of Cartoon (2)

The following cartoon (Figure 2), entitled "The age of AI", was published by a cartoonist from Costa Rica on19 January 2024.

Figure2

Cartoon published by Arcadio Esquivel (Costa Rica) on CM, 19 January 2024

The cartoon employs various semiotic elements to express its message. Obviously, it shows a man and an hourglass being replaced by artificial intelligence (AI). This image highlights concerns about humanity's future, particularly in light of quickly developing AI technology.

Representational Meaning. Three elements are given: **human face** (adult figure/man), **hourglass**, and **AI** (AI figure). **The human face** represents humanity, thus, the human face symbolizes the potential for intelligence, emotion and creativity. The gradual replacement of human face by AI suggests that, in near future, the human characteristics are no longer valued. **The hourglass** can be analysed as a symbol for the limited time that remains for humanity for its adaption to the rise of AI. The use of this symbol is crucial since it represents the passing of time. Furthermore, it produces a sense of urgency and impending doom. This sense refers to the possible outcomes of inaction. **The AI**, AI figure, is shown as a cold, mechanical entity. Thus, it is devoid of human emotions. Furthermore, its presence shows growing dominance in the image. This suggests its growing power and its influence over human lives. There is no clear vector (or dynamic action line) that drives a specific story or sequence of events. Thus, the cartoon depicts a conceptual process, specifically a symbolic relationship between the two figures in which the adult figure appears to be observing the AI figure, which represents the passage of time. Additionally, the analytical process is asserted by the hourglass-like frame which surrounds the figures. It suggests a sense of measurement (or evaluation).

Interactive Meaning. The interaction here in this cartoon between the human face and the AI is one of displacement or replacement. This is mainly because the gradual disappearance of the human face implies that AI is taking over the role of the man. This raises concerns about the potential for human obsolescence. As for the engagement with the viewer, the cartoon directly addresses the viewer, posing the question "Does AI spell the end of humanity?". Thus, the viewers are asked to consider the ramifications of AI advancement. In addition, they are urged to ponder the probable future of human existence. As for the emotional impact of the cartoon, it evokes a sense of fear as well as uncertainty regarding the future. This is further asserted by the use of high modality which is represented by color gradients in the background. This high modality underscores the seriousness as well as the urgency of the message.

Compositional Meaning. The focus of analyzing compositional meaning will be on (1) the placement of elements and (2) the use of color and light in the cartoon. The human face and the hourglass are positioned prominently in the center of the image. Thus, this placement draws attention to the human element at stake. The AI is placed slightly behind despite the fact that it is dominant in the cartoon. This placement suggests its growing influence but not yet complete dominance. The employment of a limited color palette, with predominantly dark and muted tones, creates a somber and serious atmosphere. This asserts the sense of impending

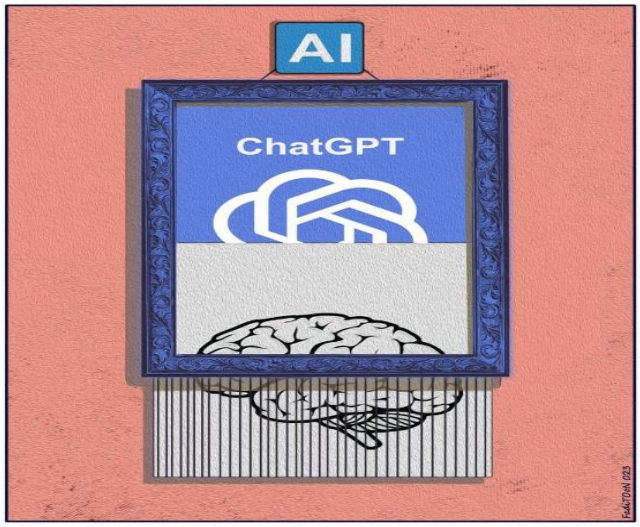
danger and the potential for a bleak future if humans fail to adapt. The light around the human face represents the fading presence of humanity. On the other hand, the darker tones near the AI figure suggest an ominous future dominated by AI.

The Analysis of Cartoon (3)

The following cartoon (Figure 3), entitled "Artificial Intelligence", was published by a cartoonist from Norway on18 July 2023.

Figure3

Cartoon published by Fadi Abou Hassan (Norway) on CM, 18 July 2023



Representational Meaning. Obviously, four elements are in the image: **the mind**, **the ChatGBT logo**, **the AI label** and **the frame**. This cartoon presents a conceptual depiction where the ChatGPT logo and the mind symbolize a symbolic connection. The mind, representative of human intelligence, appears closed off to the ChatGPT emblem. Such an image provokes anxiety about the potential threats that AI may pose to human consciousness. The ChatGBT logo is shredding the human brain. This is a symbol for the destructive impact of AI.

Interactive Meaning. As for the gaze of the viewer, it is directed towards the shredding brain and the ChatGBT logo. Thus, the viewer is invited for a reflective and contemplative response. The social distance which is depicted in the cartoon is impersonal in which the elements within the frame presented as objects of analysis rather than personal interaction. Concern about the implications of AI technology is the overall attitude conveyed.

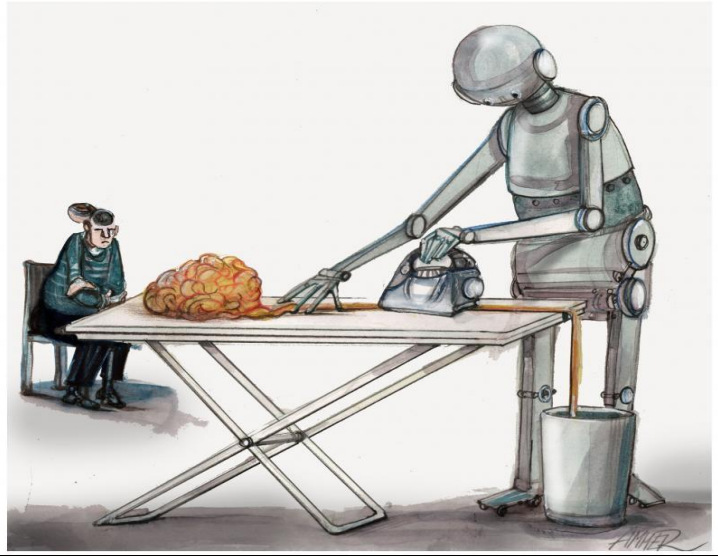
Compositional Meaning. The position of the AI label at the top represents the given information (i.e., the current and emerging influence of AI). The new information is represented by the brain being shredded (i.e., the potential future where human intellect is destroyed by AI). The ChatGPT logo centralizes the AI's role in this process, as it positions it as a critical player in the destruction of humanity. The composition of the caricature is balanced. This is because of the existence of the ChatGPT logo and shredding brain in central and prominent position within the frame. The use of contrasting colours produces visual tension while emphasizing the thematic contrast between AI and human intelligence. The framing of the brain image within the ChatGPT logo emphasises both the symbolic relationship and the potential tension between the two.

AI's Effects on Various Aspects of Human Society, including Knowledge, Intelligence, Civilization, Jobs, Truth, and Politics

Human Intelligence

The Analysis of Cartoon (4). The following cartoon (Figure 4), entitled "Smooth Ironing", was published by a cartoonist from Austria on 16 August 2023.

Figure 4
Cartoon published by Wolfgang Ammer (Austria) on CM, 16 August 2023



On an ironing board, a robot is shown while ironing a human brain of a man who is sitting by looking helpless and bewildered. This image can be considered as a striking metaphor for the potential dangers technology poses particularly AI technology to human intelligence and autonomy.

Representational Meaning. In this the cartoon, several key elements are woven together to deliver its message. Thes are: **a man**, **an ironing board**, **a brain**, and **a robot**. This cartoon represents a narrative process as it portrays a robot ironing a large, irregular-shaped brain. This is a symbol for the robot's attempt to "smooth out" or control human thought processes. It can be considered as a metaphorical act of simplifying human intellect. In the cartoon, the robot acts as the 'actor', and the brain is the 'goal' or recipient of its actions. The ironing board serves as a tool for shaping and controlling, in this case, the human brain. Thus, this setup suggests the potential for technology to manipulate human thoughts to fit its own agenda. Furthermore, the man is helpless. The helpless man symbolizes humanity, with his bewildered expression and passive posture. This highlights the fear that humans might become subservient to technology. The symbolic component of the scene warns that technological intervention could negatively impact human cognition and intelligence.

Interactive Meaning. Obviously, the direction of the man's gaze is downward. Thus, it indicates disengagement or resignation towards the robot's actions. The robot appears as focusing on its task and thus maintaining an impersonal and mechanical demeanor. Additionally, its gaze is straight ahead. In the cartoon, the man and robot are shown in close proximity, which is supposed to be an indication of an intimate social distance but their lack of eye contact and the robot's task-oriented focus imply a functional rather than personal interaction. The overall attitude is one of concern about the implications of technology interfering with natural human intelligence processes.

Compositional Meaning. The robot and the brain are positioned centrally and they represent the given information (i.e., the current state where AI and machines are actively shaping human thought). The new information is represented by the human figure who is sitting passively in the background (i.e., the potential future where human intellect might be overly simplified due to overreliance on technology). The cartoon's composition is balanced: the robot and the man are occupying equal vertical space within the frame. Thus, they are the most salient elements in the image. The ironing action draws the viewer's attention to the metaphorical act of simplifying human intellect. The robot is given in shades of gray and the human in muted tones. This use of contrasting colors visually distinguishes the two elements. The robot's active intervention, with the brain as its focus, suggests a power dynamic that disrupts the natural order.

Knowledge

The Analysis of Cartoon (5). The following cartoon (Figure 5), entitled "Artificial intelligence", was published by a cartoonist from Cuba on 29 January 2024.

Figure 5

Cartoon published by Alfredo Martirena (Cuba) on CM, 29 January 2024

Representational Meaning. Several key elements are woven together in the cartoon to represent its meanings. These are (1) **a robot**, (2) **a brain**, (3) **a bicycle**, (4) **a road** and (5) **sky**. The cartoon shows a narrative structure as it depicts AI as a robot riding a bicycle on top of a human brain. It symbolizes the idea that AI is navigating and controlling human intellect. Thus, doubts are raised about the scope and extent of human knowledge and intelligence particularly when influenced by AI. The actor is the robot on the bicycle. It represents AI technology. The goal is the human brain which symbolizes human knowledge and intelligence. In the cartoon, AI is metaphorically riding the human brain. This suggests AI's active influence on human thought. The action process identified here is the action of the robot riding the bicycle across the brain. It represents the way AI navigate and manipulate human knowledge. Thus, this cartoon raises concerns about the extent to which AI influences human intellectual freedom.

Interactive Meaning. Interactive meaning in the cartoon is represented by the analysis of these elements: contact, social distance, attitude (perspective), and modality. In spite being engaged in action, the robot does not establish a direct contact with the viewer. Therefore, the viewer is positioned as an observer whose role is to observe AI's interaction with human knowledge. Furthermore, the lack of direct gaze gives chance to the viewer to focus on the metaphorical relationship between AI and human intellect. The analysis of social distance shows that the middle distance of the scene is significant as it suggests an observational stance. The viewer is invited to consider the implications of AI's influence on human knowledge

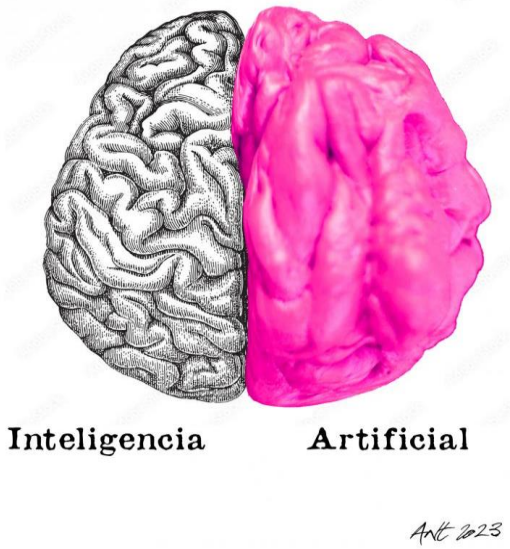
without being personally involved .The perspective given is elevated one which places the viewer in a position to see both the brain and the robot's actions clearly. It emphasizes the idea that AI is possessing a significant influence over human intellect. This perspective suggests that the viewer should critically assess the role of AI particularly in shaping human knowledge. A lower modality is shown in the cartoon by the simplified and cartoonish depiction of the robot and its bicycle and the brain. This depiction is making the concept more accessible and emphasizing the metaphorical rather than the literal interpretation of AI's influence on human knowledge.

Compositional Meaning. The given information is represented by the robot and its bicycle atop the brain (i.e., the current and growing influence of AI on human knowledge). The new information is the brain which the base upon which the robot moves (i.e., the compromised state of human intellect under the influence of AI). The robot and its bicycle are the most salient elements due to two reasons: (1) their position at the top and (2) their contrasting color (orange and white) against the grey brain. The brain provides a foundational frame for the scene. It symbolizes the bedrock of human knowledge upon which AI is operating. The contrast between the colorful robot and the grey brain is significant. It highlights the difference between the dynamic, possibly disruptive nature of AI (represented by the movement of the bicycle) and the more static, traditional concept of human knowledge (represented by the brain). Furthermore, the simplicity in color choice serves to focus the viewer's attention on the core message of AI's impact on human intellect.

The Analysis of Cartoon (6). The following cartoon (Figure 6), entitled "AI Gum", was published by a cartoonist from Spain on 27 November 2023.

Figure 6

Cartoon Published by Anthony Garner (Ant) (Spain) on CM, 27 November 2023



In the cartoon, the viewers can see a human brain on the left side and a piece of pink chewing gum on the right side, with the words "Inteligencia" (intelligence) and "Artificial" given above each side, respectively. This cartoon can be considered as a humorous commentary on the relationship between human intelligence and artificial intelligence (AI). It suggests that AI, despite its advancements, still falls short of the capabilities and complexity of the human brain.

Representational meaning. Several elements are given in the cartoon: **brain**, **chewing gum** and **black and white text**. **The brain** embodies human intelligence. It displays intricate connections of neurons which signify the intricate processes of thinking, acquiring knowledge,

remembering, and being innovative (Siddique et al., 2023). The brain's location to the left in the cartoon implies its association with logical reasoning, language, analytical thinking, etc. **Chewing gum** symbolizes artificial intelligence (AI), its basic and manufactured ingredients hinting at its constraints when compared to the intricate human brain. Also, pink chewing gum is often associated with sweetness, and artificiality. This relation amplifies the cartoon's discussion on AI's restrictions when compared to the complexities of human intellect. **The black and white text** above the brain and gum draws attention, highlighting the difference between human intellect and artificial intelligence. The black text above the brain signifies its seriousness and depth, whereas the white text above the gum represents its artificiality and simplicity. There is no doubt that the message of the cartoon is clearly communicated through the terms "Inteligencia" and "Artificial". Using the Spanish word "Inteligencia" adds humor and cultural importance to the depiction.

To explore the relationship between human intelligence and artificial intelligence, the cartoon employs a conceptual approach. The editorial cartoon presents a symbolic visualisation of this relationship. It depicts the human brain and AI as two distinct as well as contrasting entities. The organic, natural intelligence of the human brain is represented by the left side. On the other hand, the artificial, synthetic nature of artificial intelligence is represented by the right side. Further reinforcement of the symbolic juxtaposition between the two halves is the placement of the labels "Inteligencia" (intelligence) and "Artificial" below the respective brain halves.

Interactive Meaning. No human figure is given in the cartoon; therefore, there is no interactive element. The image presents the two concepts as disembodied representations. Additionally, a sense of detachment is created by the lack of direct human gaze or contact. Thus, the viewer is invited to engage with the conceptual relationship between the two elements. The overall attitude conveyed here is one of analysis and contemplation rather than personal or emotional engagement.

Compositional Meaning. Since the human brain and the AI are occupying equal visual space within the frame, the composition of the cartoon is balanced. A strong visual distinction between the two elements is created by the use of contrasting colors (muted grayscale tones for human brain and vibrant pink for artificial intelligence), thus attracting the viewers' attention. Colours "frequently attract the instant attention of the recipients" (Al-azzawi &Kadhim, 2024). The symmetrical placement of labels is significant as it further reinforces the conceptual nature of the representation and the sense of contrast between the two types of intelligence.

Civilization

The Analysis of Cartoon (7). The following cartoon (Figure 7), entitled "Artificial Intelligence", was published by a cartoonist from Indonesia on 21August 2023.

Figure7

Cartoon Published by 7August Widodo/GUZ WID (Indonesia) on CM, 21 August 2023

In the cartoon, there is a man lying on the ground (surrounded by a pile of books) and there is a large red box which is locked by a lock. Also, there is a chain and a hammer. The cartoon serves as a powerful warning regarding the potential dangers of AI and its negative impact on human freedom, creativity, intelligence and civilization. This mainly because AI makes human lazy to think.

Representational Meaning. The cartoon represents a conceptual process showing the relationship between AI and human knowledge. Several elements are detected: **a man**, **a red box**, **a lock**, **a pile of books**, **a chain** and **a hammer**. The man represents humanity, with his helpless posture and expression of despair symbolizing the potential for humans to become passive and subservient to AI. There is a chain that binds a hammer to the red box, which is full of human brains. This is a symbolic representation indicating that there is a tool (a hammer) available for the man to break the chain and unlock or liberate the human brains from the AI control. AI makes human lazy, particularly, it makes human lazy to think. Thus, it is very dangerous for human civilization. The red box represents AI, with its sleek and modern design suggesting its advanced capabilities and potential for innovation. However, its large size and imposing presence suggest its potential to overwhelm and dominate human intelligence. The lock on the box symbolizes the control that AI can exert over human thought and behavior. The books represent human knowledge, creativity and civilization. However, their presence next to the man as neglected items suggests that human knowledge, creativity and civilization may be under threat from the advancements of AI. Thus, AI is a threat to human civilization.

Interactive Meaning. A sense of detachment is created by the absence of human gaze. Thus, the viewers are invited to critically engage with the conceptual relationship between AI and Human civilization. The overall attitude conveyed is one of apprehension about the implications of AI's influence on human cognitive processes that leads to laziness of humanity to think. The overall result is a threat to human civilization.

Compositional Meaning. The AI cabinet is positioned centrally and at the top; therefore it represents given information (i.e., the emerging power of AI), while the new information is represented by the man who is lying passively on the books (i.e., the potential future where

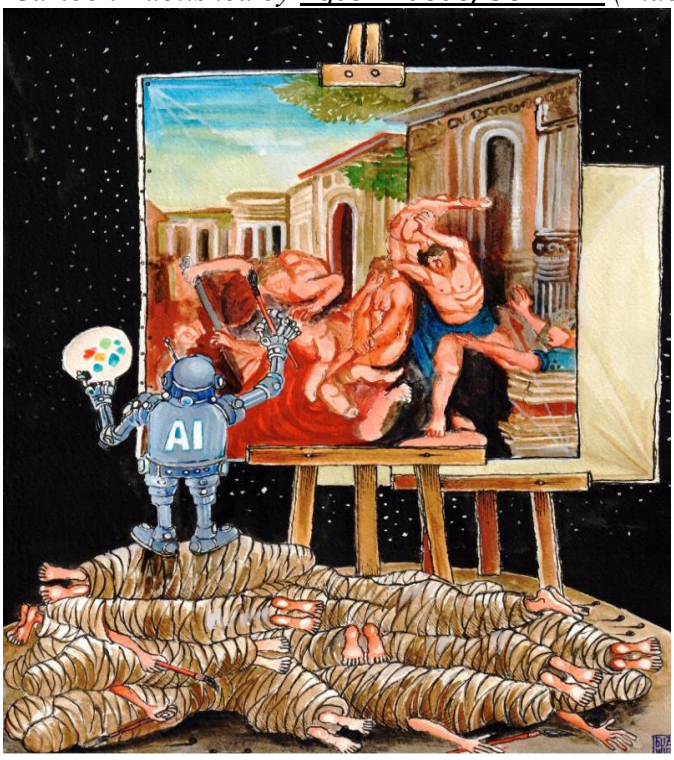
human intellectual engagement is diminished, and knowledge is left unused). The red box and the chain are the most salient elements because of their bright color and central positioning. The use of contrasting colors, i.e., the vibrant red of the AI device and the muted tones of the books, creates a visual hierarchy which draws the viewers' attention to the technological element, i.e., AI. The placement of the books on the ground as neglected items further reinforces the idea that AI may be undermining the traditional methods of learning and intellectual development. Thus, it is a threat to human civilization.

Creativity

The Analysis of Cartoon (8). The following cartoon (Figure 8), entitled "creative death", was published by a cartoonist from Indonesia on 12 August 2023.

Figure 8

Cartoon Published by Agus Widodo/GUZ WID (Indonesia) on CM, 12 August 2023



The cartoon serves as a powerful metaphor for the dual nature of AI because of its depiction of a robot which is standing on a pile of dead bodies while painting a battle scene on a canvas. The image highlights AI's potential for both creation and destruction.

Representational Meaning. This cartoon presents a narrative structure because of the act of painting in which the robot is actively engaged in. In the cartoon, **an AI figure** (a robot with 'AI' labeled on its back) and **a painting** are given; furthermore, the viewers can see **canvas**, **dead bodies**, and **battle scene**. The robot represents artificial intelligence. Its modern design hints at its potential for innovation. On the other hand, its location among a stack of dead bodies indicates the possibility of AI being employed for harmful intent, resulting in fatalities and aggression. The painting showcases AI's capacity for producing fresh concepts; thus, highlighting its creative potential. Yet, the painting's portrayal of a war scenario implies that AI's artistic abilities have the potential to contribute to negative outcomes, promoting strife and aggression. Actually, the painting done by the robot indicates that AI possesses the ability to generate fresh storylines and viewpoints, which could be utilized for both beneficial and

harmful intentions. The corpses (dead bodies) symbolize the possibility of AI leading to harm and devastation. The fact that they are under the robot's feet indicates that the progress of AI may have serious consequences, such as causing harm and pain.

Interactive Meaning. The AI figure's gaze is directed towards the painting. Thus, it suggests an analytical or evaluative attitude. The social distance depicted is impersonal because the AI figure and the artistic elements are occupying separate spaces within the frame.

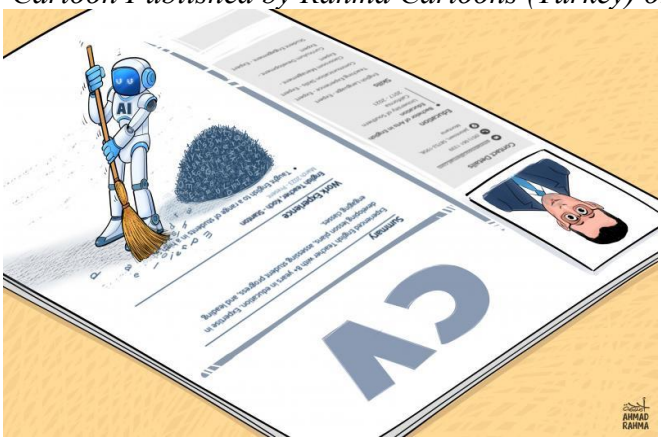
Compositional Meaning. The given information is the painting, as it is placed centrally in the image. It represents the emerging reality where AI is involved in creative processes. On the other hand, the new information is the dead bodies representing the idea that human creativity is rendered obsolete. The painting itself which is created by AI robot serves as a bridge between the given and the new pieces of information. Thus, it illustrates the transformation of human creativity by AI. In the cartoon, salience is represented by the AI figure and the painting as they are the most salient elements due to their central position within the image. The painting's bright colors draw the viewers' attention to the creative process given in the artwork. Also, the use of contrasting colors, the muted tones of the AI figure and the vibrant hues of the painting, creates a visual hierarchy that draws the viewers' attention to the creative process. The placement of the discarded canvases in the foreground further emphasizes the sense of disruption or potential loss associated with the AI's presence.

Jobs

The Analysis of Cartoon (9). The following cartoon (Figure 9), entitled "Artificial intelligence...the danger coming from the future", was published by a cartoonist from Turkey on 22 January 2024.

Figure 9

Cartoon Published by Rahma Cartoons (Turkey) on CM, 22 January 2024



In the cartoon, there is **a robot** labelled AI. The robot is sweeping up **information** from **a CV** (Curriculum vitae) related to human figure by using **a broom**. Using Kress and Van Leeuwen's model of visual social semiotics, we can analyze the image through three main meanings: representational, interactive, and compositional.

Representational Meaning. The cartoon creates a narrative by showing the robot in action as it is sweeping the contents of the CV. This represents the process of AI taking over (or modifying) human jobs as well as personal information. Furthermore, the cartoon has a conceptual element. This is mainly because it represents the idea that AI has impact on the process of employment. Obviously, in the cartoon, the CV which is a symbol of personal and professional identity is altered by the robot. This suggests that AI has the potential to either reshaping or replacing human jobs. The robot is the actor as it is actively engaged in sweeping.

The goal of the action is the content of the CV which symbolizes both personal and professional data. It is being swept away by the robot.

Interactive Meaning. Three points will be discussed related to the interactive meaning of the cartoon: (1) contact and gaze, (2) social distance and (3) attitude and information value. For the first point, obviously, there is no direct gaze from the robot towards the viewer. This implies an absence of direct interaction or acknowledgment of the audience. Regarding social distance, the cartoon presents a close-up view. This emphasizes the action and details of the CV. Furthermore, it creates a sense of intimacy which highlights the personal nature of the information being affected. As for attitude and information value, the robot is shown from a frontal perspective. This can be interpreted as offering information rather than demanding something from the viewer. The robot is slightly bent over the CV. This position of the robot shows engagement and focus on the task. Thus, it indicates the thoroughness and meticulous nature of AI's work.

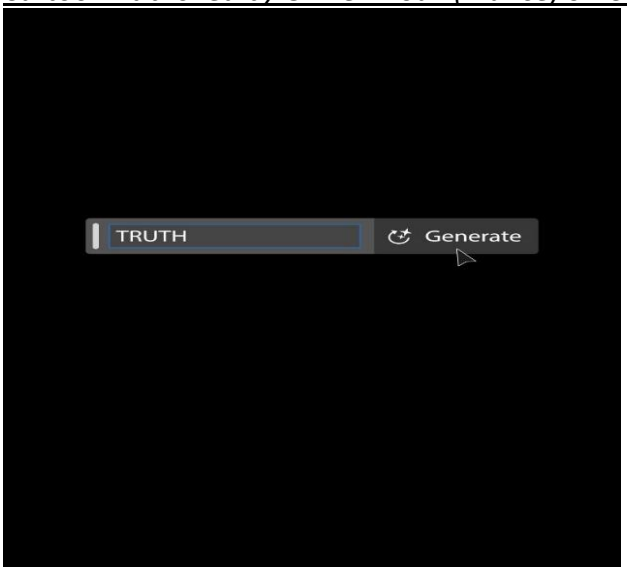
Compositional Meaning. Three points will be discussed here. These are (1) value, (2) salience and (3) framing. For the first point, we can say that the central of focus in the cartoon is given to the robot and the CV. This is mainly because of their prominent place in the cartoon. In addition to that, the robot's position which is over the CV is significant. It signifies its dominance over the situation. For salience, the use of color as well as the positioning makes the robot and the CV stand out. This draws the viewer's attention to these elements in the cartoon. Furthermore, the CV's details (photograph and the text being swept by AI) are highlighted in the cartoon to emphasize what is being affected by AI. As for framing, the cartoon is framed in a way that obviously isolates the scene from any background, thus, all focused attention is given to the interaction between the robot and the CV.

Truth

The Analysis of Cartoon (10). The following cartoon (Figure 10), entitled "AI", was published by a cartoonist from France on 26 October 2023.

Figure 10

Cartoon Published by Olivier Ploux (France) on CM, 26 October 2023



The cartoon features a simple graphic of a text box labeled "TRUTH" and a button labeled "Generate".

Representational Meaning. Obviously, the image does not depict a clear narrative in the traditional sense. This because it lacks characters or a sequence of events. However, it suggests a narrative through the idea of generating (or seeking) "TRUTH". Thus, we can say that the text "TRUTH" in the box serve as the Actor. It is an abstract concept which is the focus of the cartoon. The "Generate" button implies an action that can be taken; thus, it suggests a process of seeking or producing truth. Additionally, the cartoon uses a conceptual representation to depict the idea of truth generation or discovery. It symbolizes the notion that truth can be created or revealed through a process. This possibly hints at the ease or mechanization of such a process in the digital age. The use of a text box and a button symbolizes the digital interface which is often associated with search engines, forms, or data input systems. This symbolic use highlights the theme of searching for or generating truth. Thus, this perhaps refers to the contemporary reliance on digital tools for information.

Interactive Meaning. Contact is not established in the cartoon as there is no direct gaze or human figures. However, there is an indirect invitation for the viewers for interaction created by the use of the text "Generate" and "TRUTH". The design which resembles a digital interface suggests close social distance as it akin to how one would interact with a personal device like a smartphone. The cartoon conveys a neutral as well as functional attitude because of user interface elements used. The cartoon presents an action to be taken represented by the use of the text "Generate" and thus invites the viewers for contemplation on the act of truth-seeking.

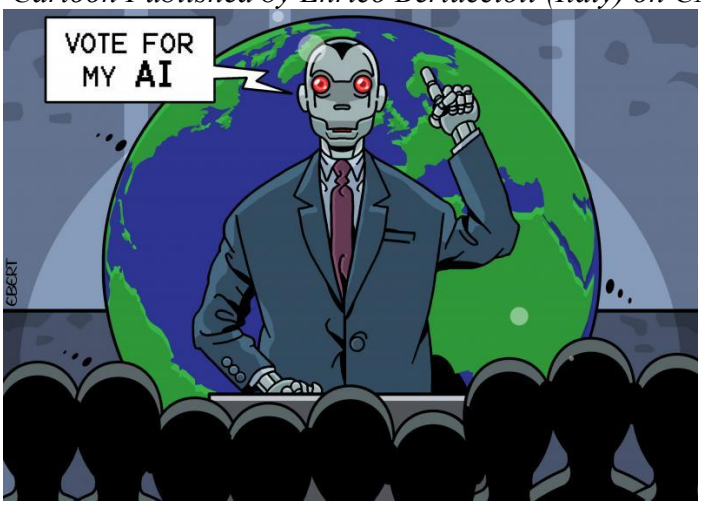
Compositional Meaning. The central placement of the key elements (text box and button) emphasizes the concept of truth and the act of generating it as focal points in the cartoon. The text "TRUTH" is salient due to its position within the input box. The "Generate" button also stands out as a call to action. Thus, it encourages the viewers to consider the implications of generating truth.

Politics

The Analysis of Cartoon (11). The following cartoon (Figure 11), entitled "Politician of the future", was published by a cartoonist from Italy on 8 May 2023.

Figure 11

Cartoon Published by Enrico Bertuccioli (Italy) on CM, 8 May 2023



The potential dangers of AI-powered political influence can be considered as the message in this cartoon in which we can see **AI figure** (with red eyes), **speech bubble** ('Vote for my AI'), **crowed**, and the **Earth**.

Representational Meaning. The cartoon shows a narrative scene because viewers can see a robot-like figure, representing AI, being addressed by a group of people as a political

leader. This interaction represents an action process. So, the "actor" is the AI figure, and the "goal" is the public because they are the recipients of the action. Furthermore, there is a sense of non-human qualities expressed in the cartoon by the AI figure and its robotic qualities as well as impersonal characteristics. The idea that AI is actively seeking political power and influence is highlighted by the slogan "Vote for my AI" given in the speech bubble.

Interactive Meaning. The gaze of the AI figure is directed towards the crowd. Thus, this gaze establishes a direct "demand" for their attention as well as their support. The social distance depicted is impersonal. The AI figure is addressing the crowd from an elevated position. Therefore, a sense of separation and potential power imbalance is created. The overall attitude conveyed is one of concern. The AI figure's political ambitions are presented in a manner that challenges the traditional notion of human-led governance.

Compositional Meaning. The crowed in the foreground serves as a bridge between the given information which is represented by the AI figure (i.e., the emerging idea of AI taking on significant political roles) and the new information which is represented by the Earth in the background (i.e., the potential global impact of AI's influence if it were to take on leadership roles). The AI figure is the most salient element. This is because of its central position, large size, and the contrast between its dark suit and the bright background in the image represented by the green-blue Earth. Its glowing red eyes further draw attention of the viewers and emphasize the AI figure's ominous role. The speech bubble is also salient as it directly communicates the AI figure's intention and urges for action. The use of colors is significant in creating the compositional meaning of the image. The use of dark colors for the AI figure and bright colors for the background manages to create a strong contrast. It can be considered as a symbol for potential conflict between human and AI leadership.

Source Domain, Target Domain, Metaphor, Discursive Strategies in Visual domain and Conclusion

The following table shows the analysis of each cartoon following the framework of Lakoff and Johnson's (2008) Conceptual Metaphor Theory (CMT). For each cartoon, **source domain**, **target domain**, **metaphor** and **discursive strategy** used in visual domain are given and also a conclusion is given in the last column for each cartoon.

Table1

Analysis Following CMT

Cartoon	**Source Domain**	**Target Domain**	**Metaphor**	**Discursive Strategy**	**Discursive Strategies in the Visual Domain**	**Conclusion**
1.	Grasping (Robotic hand)	AI's influence over human cognition	**AI controls human intelligence**	AI holds significant influence over human thought processes.	Robotic hand made of binary code holding a human brain, symbolizing control.	AI exerts substantial control over human cognitive functions.

Cartoon	Source Domain	Target Domain	Metaphor	Discursive Strategy	Discursive Strategies in the Visual Domain	Conclusion
2.	Hourglass	Transition from human to AI dominance	**Time is a transition between human and AI**	AI's rise represents a significant shift from human dominance.	Hourglass with human face and AI, symbolizing the transition of eras.	AI marks a critical transition from human-dominated to AI-dominated eras.
3.	Shredding machine	AI's impact on human intelligence	**AI is a shredder of human intelligence**	AI could destroy human cognitive functions and creativity.	AI logo shredding a human brain, symbolizing the destructive impact of AI.	AI has the potential to destroy human intellectual capabilities.
4.	Ironing	AI's role in cognitive processes	**AI flattens human cognition**	AI diminishes human complexity and critical thinking.	Robot ironing a brain, symbolizing the simplification and potential dulling of human thought.	AI may reduce the richness and complexity of human cognition.
5.	Biking	AI's navigation of human cognition	**AI is a navigator of human cognition**	AI explores (and influences) human thought processes.	Robot biking on a brain, symbolizing AI's exploration of human cognition.	AI actively navigates and shapes human cognitive landscapes.
6.	Natural vs. Artificial	Human intelligence vs. AI	**AI is chewing gum**	AI is an artificial, inferior version of human intelligence.	Contrasting natural brain with artificial, gum-like	AI lacks the depth and authenticity of human

Cartoon	Source Domain	Target Domain	Metaphor	Discursive Strategy	Discursive Strategies in the Visual Domain	Conclusion
					AI, highlighting the perceived inferiority and artificiality.	intelligence.
7.	Locked cabinet	AI's control over human knowledge	**AI is a locked cabinet**	AI restricts access to human cognitive processes.	Locked cabinet labeled "AI" with human brains inside, symbolizing restriction.	AI may limit human access to cognitive and knowledge processes and may make human lazy to think
8.	Painting	AI's role in creative processes	**AI is an artist**	AI's involvement in art could lead to the death of human creativity.	Robot painting while standing on a pile of dead bodies, symbolizing the demise of human creativity.	AI's artistic role may stifle human creativity and innovation.
9.	Sweeping	AI's impact on employment	**AI is a cleaner of jobs**	AI eliminates human job opportunities, leading to loss of identity.	Robot sweeping away a CV, symbolizing job displacement and identity loss.	AI could lead to significant job displacement and identity loss.

Cartoon	Source Domain	Target Domain	Metaphor	Discursive Strategy	Discursive Strategies in the Visual Domain	Conclusion
10.	Search engine	AI's provision of information	**AI is a generator of truth**	AI's role in determining factual information and its implications for authenticity.	Search bar with "TRUTH" and "Generate" button, symbolizing AI's role in creating knowledge.	AI's role in generating truth raises questions about authenticity and reliability.
11.	Politicians and elections	AI's role in governance	**AI is a politician**	AI in political leadership could dehumanize governance and centralize power.	Robot politician with a backdrop of the Earth, symbolizing AI's influence in global politics and governance.	AI in leadership roles could dehumanize politics and centralize power.

Conclusion. From the table, analyzing the eleven cartoons with Lakoff and Johnson's (2008) Conceptual Metaphor Theory shows that visual metaphors are effective for addressing the intricate connection between AI and humanity. The analysis clearly shows that AI is portrayed as a power that can streamline, regulate, and possibly dehumanize human activities and experiences in different areas like cognition, creativity, employment, knowledge, and governance. Although AI shows potential for improving efficiency and broadening capabilities, these cartoons highlight the importance of maintaining a balance between technological progress and human traits. The ways of communicating in images effectively showcase the two-sided effects of AI, prompting a critical examination of the moral and social consequences of incorporating AI into different parts of life. Every cartoon focuses on various possible risks and advantages, concluding that a careful and intentional incorporation of AI is vital for protecting both human values and abilities.

Significance of the Study

For societal perceptions of AI, the significance of the current study lies in the following points:

(1) raising public awareness on AI Impacts. By visually representing AI as a powerful and sometimes threatening force, the cartoons shape public discourse and encourage critical

reflection on how AI affects various aspects of life, such as jobs, personal identity, and human cognition.

(2) shaping societal narratives on technology. AI's portrayal in editorial cartoons reveals the dominant narratives about AI in society (i.e., fears of AI dominance and the potential dehumanization of society). By representing AI in a negative light, the cartoons contribute to (1) shaping public perception and possibly (2) influencing societal attitudes toward AI technologies.

(3) encouraging ethical reflection on AI. The cartoons encourage viewers, through employing various discursive strategies, to contemplate the risks of AI. The necessity of maintaining human control as well as values in the face of rapid technological development is asserted. This reflection on ethics and societal values is crucial as AI continues to evolve.

(4) promoting global conversations. The study underscores the global nature of concerns surrounding AI because the editorial cartoons are taken from various countries. The widespread depiction of AI's dominance and threats across different cultures highlights how AI is a shared issue that transcends national borders. The study contributes to promoting international discourse on the societal implications of AI. It also indicates that the conversation is not limited to a single country or region but is relevant globally.

To sum up, the study provides valuable insights into how visual media, particularly editorial cartoons, shape societal perceptions of AI, fostering greater awareness and encouraging thoughtful discourse on the ethical integration of AI in society.

Conclusion

This study examines how editorial cartoons in a corpus of eleven cartoons depict artificial intelligence (AI). Adopting visual social semiotic approach, the study's main aim is to highlight (1) the visual communication functions, (2) main themes, and (3) discursive techniques employed by cartoonists from various countries across the globe. First, from the analyses of some cartoons, the visual representations show that AI is commonly portrayed as a powerful entity. This is mainly because of its ability of manipulating human thought. This can be seen in the incorporation of visual metaphors like a mechanical hand grasping a brain (cartoon 1). This asserts AI dominance and reinforces the superiority of AI over human intelligence. This imagery shows the power dynamics between AI and human cognition in the visual narrative. Also, the main themes of the cartoons mostly show AI in a negative way. The analysis reveals three thematic foci. These are (1) AI dominance, (2) the end of humanity, and (3) AI's effects on various aspects of human society, including knowledge, intelligence, civilization, creativity, jobs, truth, and politics. Finally, the discursive strategies employed by the cartoonists expose fundamental beliefs about AI. Exaggerated visual elements, like an AI figure brushing aside a human CV, emphasize the expected impact of AI on jobs as well as personal identity. This deliberate use of visual representation aims to emotionally involve the viewer. Therefore, it leads to a thoughtful consideration of the societal impacts of AI technology. To sum up, analyzing and understanding visual messages given by cartoons in a systematic way can be provided by Multimodal Discourse Analysis (MDA) and this is mainly because of its systematic way of analysis related to both language and various semiotic modes. Cartoonists employed various visual metaphors and discursive strategies in their representation of editorial cartoons related to AI. The aim of this employment is to show the risks of AI and to advocate for a careful integration into society by viewers. Thus, it is important to take into account (1) both the advantages and possible dangers of AI as it progresses, and to make sure that (2) technological progress does not diminish human values and control.

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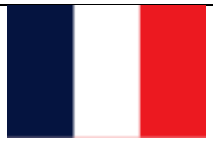
Appendix

Table 2
Cartoons Used in the Study

Figure	Theme	Caricature- Description	Cartoonist	link	date
1	**Artificial intelligence**	**Artificial intelligence**	 Ameen Alhabarah KSA	Artificial intelligence | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/0F9F4261-F96F-47C5-8FF4-60E713457E54.jpeg?itok=zl9LVSyT	29 January 2023
2	**The age of AI**	**The age of AI** Does AI spell the end of humanity?	 Arcadio Esquivel Costa Rica	The age of AI | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/El%20tiempo%20dela%20AI.jpg?itok=-6J-ykkh	19 January 2024
3	**Artificial Intelligence**	**Artificial Intelligence** AI shows us how we will destroy our humanity	 Fadi Abou Hassan Norway	Artificial Intelligence | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/AI_1.jpg?itok=_SPgw-UD	18 July 2023
4	**Smooth Ironing**	**Smooth Ironing** Intervention in nature. Whether machines, robots or artificial intelligence - it seems as if we are getting more and more stupid the more we use them. The image is a call to consciously use the possibilities that lead us into the future we wish for ourselves.	 Wolfgang Ammer Austria	Smooth Ironing | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/Smooth%20ironing.jpg?itok=LQEkqwHk	16 August 2023

5	**Artificial intelligence**	**Artificial intelligence** Artificial Intelligence raises doubts about human knowledge and its scope	 Alfredo Martirena Cuba	Artificial intelligence | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/Influence%20of%20artificial%20intelligence%20on%20humans.jpg?itok=Ww67n3iJ	29 January 2024
6	**AI Gum**	AI Gum	 Anthony Garner (Ant) Spain	AI Gum | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/AIGum.jpg?itok=j6_1JDCH	27 November 2023
7	**Artificial Intelligence**	**Artificial Intelligence** AI is modern technology that makes humans lazy, lazy to think, this is very dangerous for human civilization.	 Agus Widodo/GUZ WID Indonesia	Artificial Intelligence | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/pindai1408232.jpg?itok=FLlEybdx	21 August 2023
8	**creative death**	**creative death** the emergence of artificial intelligence is like two sides of a coin, it can be positive or negative, because humans will be able to create works more instantly using sophisticated AI technology	 Agus Widodo/GUZ WID Indonesia	creative death | Cartoon Movement image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/pindai1100823.jpg?itok=amJR3_cN	12 August 2023
9	Artificial intelligence...the danger coming from the future	Artificial intelligence...the danger coming from the future	 Rahma Cartoons Turkey	Artificial intelligence...the danger coming from the future | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/%D8%A7%D9%84%D	22 January 2024

				8%B0%D9%83%D8%A7%D8%A1%20%D8%A7%D9%84%D8%B5%D9%86%D8%A7%D8%B9%D9%8A.jpeg?itok=sBuIWeh1	
10	AI	AI	 Olivier Ploux France	AI | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/IA_HD.jpg?itok=ip_0L1sC	26 October 2023
11	**Politician of the future**	**Politician of the future** Let's give him a chance...	 Enrico Bertuccioli Italy	Politician of the future | Cartoon Movement Image link: https://s3-eu-central-1.amazonaws.com/cartoons-s3/styles/product_detail_image/s3/Politician%20of%20the%20future_1.jpg?itok=tnkR_PEZ	8 May 2023