

# ARTIFICIAL INTELLIGENCE FOR THE GENERATION OF SATIRICAL ARTICLES - AN EXPLORATORY APPROACH

Eduard C. GROSS<sup>1</sup>

**Abstract:** *The year 2022 has represented a real technological breakthrough in the creative industry with digital art generators. Particularly notable art generators were Dall-E 2 and Midjourney, which were used to generate the covers of publications such as The Atlantic and The Economist, and Cosmopolitan. This paper aims to explore how this technology can be used in the context of satirical material or internet hoaxes. DailyWrong's articles and Website contents quantitative and qualitative analysis reveals that Artificial Intelligence can be used to generate humorous material, although still in its incipency.*

**Keywords:** *DALL-E 2, Artificial Intelligence, Satire, Generated Art, Internet Hoax*

## 1. Introduction

The emergence of Artificial Intelligence is set to change most fields of activity that have a tangential connection with the technological field. There are now AI-enabled software tools that can generate text and images that can mislead people about the veracity of their origin. This paper will look at the satirical publication *DailyWrong* which combines both text and image generation via Artificial Intelligence. For text generation GPT-3 (Generative Pre-trained Transformer) is used, a program developed by the *OpenAI* company, based on machine learning that requires the input of a text sample to generate a relevant and context-aware whole text (Schmelzer, 2021). For the generation of the images with which the articles are illustrated, Dall-E 2 is used, a program that is still in the testing stage, where access is gained after months of waiting (Romero, 2022). However, the software has gone viral, gaining traction in the media, being used by content creators, and being featured in press articles in publications such as Vox, The Guardian, and Cosmopolitan.

In the latter, an entirely AI-generated creation served as the cover image accompanied by the text "And it only took 20 seconds to make it" (Liu, 2022). Reduced working time, lack of need to learn software and technical skills in terms of design styles, or lack of

---

<sup>1</sup> *Babeş-Bolyai University, [eduard.gross@ubbcluj.ro](mailto:eduard.gross@ubbcluj.ro), corresponding author*

knowledge of copywriting or creative writing are thus partially offset by the emergence of technology. This paper aims to present how these technologies have influenced the creative and artistic sector, the possibilities they offer, and the potential dangers. In a digital landscape belonging to the "post-truth" era, knowledge of the mechanisms potentially damaging to the credibility of journalistic materials (including satire) is a necessary component, as users find themselves having to learn a new set of digital literacy components. The present study is an exploratory effort to investigate the culture of the internet and new trends in the creative field.

The first part of the paper will present theoretical concepts related to Artificial Intelligence in the creative field, what satire and memes mean on the internet and how they intersect with fake news, followed by a case study of the publication to understand how a satirical page operates mediated only to a small extent by a human component. Hence, this paper will answer the following research questions:

RQ1: What is the average of words used in the headline and text of posts on DailyWrong?

RQ2: What are the main categories and topics addressed by this publication?

RQ3: What is the general layout of the publication?

RQ4: Is the content satire or hoax oriented?

### **1.1. Artificial Intelligence and the creative industries**

Changes are natural, but it seems that they can rarely be accepted simply as such. The emergence of new technologies in the creative field seemed distant, given that creativity is associated with something human. What is Artificial Intelligence for an artist? A threat, a new medium or a complementary to already existing tools? These are the questions this paper will address and answer in the following. Niklas Hageback (2021) defines creativity as closely related to heuristics, specifically, brief cognitive shifts that, though rare, manage to evoke a new perspective that no one has thought of. As the author further elaborates, there are two types of creativity, namely primary creativity, which manifests itself as described above, and secondary creativity, which refers to finding new inventive ways of using existing technologies.

This paper examines secondary creativity. This paper will further develop the ideas outlined in the introduction, e.g how technology facilitates the process of writing and illustrating materials. In the case of writing, the technology is called Natural Language Processing (NLP), which in short aims to replicate human language so that it appears natural. Currently, these tools are used for describing feelings in a text and translating or summarizing long texts. The idea of NLP is not a new one, with the first attempts dating back to the 1950s, but it has seen substantial improvements to the stage it has reached today, namely GPT-3 (Hageback & Hedblom, 2022).

In terms of images and Artificial Intelligence, Hageback and Hedblom (2022) discuss how Artificial Intelligence is already assisting digital art, from filters that turn photographs into paintings or surreal paintings to Dall-E software that can generate an image from the use of simple text. The latter is the program this paper will focus on. To exemplify how this program works, a satirical image will be generated from a text

prompt such as "a UFO in an oil painting from the renaissance period". The algorithm compiles the images already in the database and visually represents a UFO in the Renaissance style of painting. Adding a text about ancient evidence for the existence of UFOs dating back to the Renaissance period would make a satirical news story illustrated with some convincing photos and perhaps some would come to believe the information.

### 1.2. On automatic fake content generation via Artificial Intelligence

This part the paper will outline how programs are used to generate automatic content. Like many inventions that started with good purposes, for example, nuclear fission, plastic, and the internet, and ended up being used for harmful purposes (Google Arts & Culture, n.d) so is the fate of Artificial Intelligence that came as a solution to detect fake news. One such software is *Grover*, which can both generate and detect fake news. The way this program works is simple; the user enters a headline and the program generates an entire text around that headline, all while keeping track of the design of the text so that it appears to be produced by the *New York Times* or other well-known publication (Wilson, 2019).

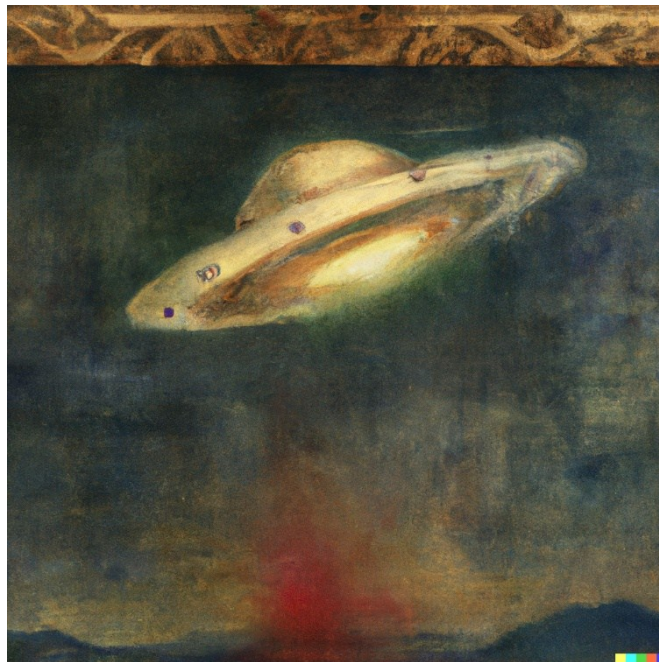


Fig. 1. Image generated for exemplifying purposes with the software *Dall-E 2* using the prompt "a UFO in an oil painting from the renaissance period"

As Wilson (2019) elaborates, at the time of the program's conception, it was intended to track machine-generated news, having been trained with over 120 gigabytes of data

gathered from over 5000 news publications. The program became able to detect computer-generated fake news over human-made news with 73% accuracy. The program does a good job when it comes to its own generated news, managing to detect it 92% of the time, which means it fools itself 8% of the time. As Gagiano et al. (2021) found, changing a single character will cause the program to fail in correctly classifying the news.

The future looks worrisome for such news, as in the technological field, program errors are constantly being refined. This postulates the possibility that the software will learn to deliberately make mistakes to make the articles appear human. There is more to how this technology will impact the media sector than fake news and satire. As John Naughton (2022) exemplifies, publications such as *The Atlantic*, *Cosmopolitan*, and *The Economist* are already using AI-based software such as *Dall-E* and *Midjourney* to create covers and illustrate articles. These practices are reminiscent of times such as the dropping of photojournalists and videographers, when for economic reasons *The Times Herald-Record* and *Chicago Sun-Times* discontinued their photography departments (Andersen, 2013).

As Giachanou et al. (2022) argue, the interaction between humans and machines is becoming increasingly difficult due to disinformation. Software designed to detect misinformation is slowed down by the diversity of topics and the multitude of languages in which it can be posted on social media. According to the authors, the fact-checking approach focuses on political statements, news detection in an automated way is dependent on the data the program is trained with, and the newest threat in the disinformation sector comes from NLP technology that can generate fluent fake news on a large scale.

### **1.3. Satire, internet hoaxes, and fake news**

There are multiple facets of disinformation and online falsehoods. For that purpose, this part of the paper is going to outline what satire, internet hoaxes, and fake news mean to differentiate between them. At a basic level, according to the Merriam-Webster Dictionary, satire means "a literary work holding up human vices and follies to ridicule or scorn" (Merriam-Webster, n.d) or "trenchant wit, irony, or sarcasm used to expose and discredit vice or folly" (Merriam-Webster, n.d). As Burgers and Brugman (2021) point out, satire is a phenomenon that can be found in multiple areas of activity and can be expressed through many media channels, such as TV series, films, literature, video games, visual art, and news. Satirical news itself diversifies into different forms such as television, print, and online media. Satire is a form of criticism. According to Abrahams (2022), satire differs from other forms of criticism by misrepresentation and humor.

According to the Merriam-Webster Dictionary, a hoax is "an act intended to trick or dupe" or "something accepted or established by fraud or fabrication" (Merriam-Webster, n.d). This type of parasitic information did not emerge with social media, the first example of the hoax goes back to 1835, when the event now known as *The Great Moon Hoax* occurred, when Richard Adams Locke, a reporter working for the *New York*

Sun published a series of lithographs claiming to have been made by an astronomer named John Herschel from his observatory in South Africa, which served as proof that there was life on the moon (Lacković, 2020). As Lacković (2020) elaborates, in addition to the descriptions of life on the moon, which included descriptions of bat-winged humans and unicorns, the article also included several technical details of the telescope, creating a mix of fact and fiction.

The term **fake news** is used in excess, often as an umbrella term that describes the whole phenomenon of spreading erroneous information through social media. The structure erroneously incorporates both misinformation and disinformation (Greene & Murphy, 2021). It is necessary to see where the use of the term false news started and when this phenomenon became widespread. According to Axel Gelfert, the first systematic use of "fake news" dates back to the early 2000s and is related to fake news programs such as Colbert Report (2004-2015), which increasingly satirizes prejudice and political speeches without facts from the United States, especially during the presidency of George W. Bush. The implicit goal was to draw attention to biased reports and make viewers sensitive to the prejudices, errors, and shortcomings of traditional online and cable news.

However, this concern about media literacy quickly disappeared. Since 2014, the term has been slowly applied to false or misleading statements, mainly (though not specifically) posted on websites created specifically for the following purposes. During the 2016 U.S. presidential campaign, such sites gained fame and were accused of selling false statements about political actors (especially about Democratic candidate Hillary Clinton), whether as clickbait (e.g., attention-grabbing online Content) Internet traffic, generating revenue from online advertising) or for political purposes. Some website operators have been found to have links to foreign lobbyists (for example, the Internet Research Agency, believed to be operated by a Russian oligarch with the support of the Kremlin), despite the precise scope of Election interference, and its possible role played in the election of the controversial president Donald Trump (Gelfert, 2021).

Although there is much theory debating the meaning of the term false news, there are similarities between these definitions. A recent study divides the term into two dimensions:

1. fake news genre, describing the deliberate creation of pseudo-journalistic disinformation
2. fake news label, describing the political instrumentalization of the term to delegitimize news media. (Egelhofer & Lecheler, 2019)

Furthermore, the authors define this phenomenon as follows: „[...]a message should only be studied as 'fake news' when it is low in facticity, was created to deceive, and is presented in a journalistic format (Egelhofer & Lecheler, 2019, p.98)“

However, sometimes, under the umbrella of satire, some publications have started publishing fake news, lies, and conspiracies. As Levi et al. (2019) argue, platforms' efforts to reduce users' exposure to misinformation have also led to the mislabeling of satire articles as fake news.

## 2. Methodology

To answer the research questions, this paper used a quantitative content analysis of the total articles of the publication (n=23) followed by a qualitative content analysis of the DailyWrong website format. For data collection, a Google Forms Document was created to enter the date of the post, the category (categories are taken exactly as listed on the website), whether the post involves a conspiracy narrative as classified by Brotherton et al. (2013), what type of conspiracy (if any), the number of words in the headline, the number of words in the text, and finally the full headline and text.

After data collection, the data were processed into a Microsoft Excel (.xls) document and entered into the SPSS statistical analysis program and Atlas.Ti qualitative analysis program. Data collection was done manually in chronological order from 26 June to 6 September 2022.

### 2.1. Data analysis

The layout of the DailyWrong website mimics that of a regular news publication, with a search bar for articles, a scrolling list of the latest news, and a newsfeed. In addition to these, the publication also has an archive managed by month and the categories into which the posts fall. The difference between a daily news publication and a satire page is differentiated starting with the publication's logo (The Daily Wrong) and tagline (AI-Generated Lies Every Day). Readers of the publication know what to expect, namely AI-generated lies, this is made obvious by the publication's tagline itself. The name The Daily Wrong mimics the names of serious news publications (e.g. The Guardian, or The New York Times), but suggests the incorrect content of the news. In this regard, the humorous nature of the publication is self-explanatory. In the About section of the Website, the following warning to readers is displayed, namely, readers are encouraged



**THE DAILY WRONG**  
AI-Generated Lies Every Day

not to believe anything they read on the Website, except the description, which is also the only part written by a human (DailyWrong, 2022).

Fig.2. Logo and slogan from *The Daily Wrong* Website



The context in which the adjective "sure" occurs often reinforces certain ideas, as in the case of the toothbrush that is "sure to revolutionize the oral care industry". A recurring theme of the publication is NASA and extraterrestrial life on the moon, introduced together with the Artemis mission, which is part of the space program planning to send humans to the moon again, rekindling the moon landing conspiracy and tangentially related to the moon hoax mentioned in the literature review. Other themes that appear frequently in the publication are economic collapse often addressed in an ironic way, such as in one article the extinction of dinosaurs is the cause of the economic collapse, followed by shocking discoveries such as human clones hidden by the government in a secret facility. Other posts are trivial and refer either to food (e.g. a pizzeria selling pizza with unusual mold patterns) or absurd inventions such as a razor blade for children.

### **3. Conclusions, limitations, and further research**

The topic of artificial intelligence used for satirical purposes is a relatively new one, and according to the author not many studies have been done on this subject. These findings represent a first step in understanding how artificial intelligence can be used for satirical or malicious purposes to produce false information. The Daily Wrong is by no means a publication on the scale of The Onion and by no means has the resources and audience of The Onion, but it is one of the few publications that has begun to use the new technology for both illustration and text generation, with minimal human input that is strictly limited to the choice of topics covered.

The Daily Wrong publication represents an attempt to use artificial intelligence for creative purposes, and from the way it presents itself, it does not seem to have an intention to deliberately mislead people, but rather aims to entertain them. At times the publication touches on recurring topics that are labeled as conspiracies, such as the secret keeping of information and the existence of extraterrestrial life. These topics connect with the well-known narratives that we have also discussed in the theoretical part of this paper, but the content does not focus on these issues, with only four posts falling under conspiracy theories. The general nature of the posts is absurd and hard for anyone to believe.

From this point of view, the content of the publication is more like satire than internet hoaxes, but unlike satirical content, the articles featured in the publication do not aim to critique a pressing problem in society, except for the criticism of certain absurd inventions, meant to make people's life easier, being presented innovatively, but at the same time ending up making it more difficult.

This research faces multiple limitations and cannot fully explain the phenomenon of artificial intelligence used to generate journalistic material, satire, or internet hoaxes. Research of this type should focus on a larger number of articles generated entirely by artificial intelligence. Considering that the year 2022 marked a huge breakthrough for artificial intelligence in the creative field, the near future could come with multiple examples. It cannot be ruled out that serious newsrooms will also use certain practices to write evergreen articles or generate illustrations for their materials. Creativity, which



has seemed to be a human element until now, is becoming widely accessible to everyone through new technologies, leaving room for everyone to use its power as they see fit.

Other approaches should include ethical implications, intellectual property issues regarding data collection and methods of training art and text generators, and the economic implications this invention will have on the creative sector. The detection of automatically generated fake news by artificial intelligence-based programs will require the development of a new set of technical and digital skills for safe surfing in an otherwise uncertain internet environment in the foreseeable future. In the latest guide for educators on combating digital disinformation published by the European Commission (2022) Artificial Intelligence is briefly mentioned in a few paragraphs. The guide draws attention to the fact that most students know how to use digital devices, but not responsibly. For illustration comes the example of artificial intelligence that can be used both to combat disinformation and to create deep fakes (European Commission, 2022). Therefore, future research should focus on the already existing literature on Artificial Intelligence and use proactive measures to include the basics of text generation through Artificial Intelligence in the curriculum, so students and learners can prepare the necessary skills.

#### 4. Data availability

The data for this research is publicly available at: <https://bit.ly/3dAWXOz>

The author is not responsible for the deletion of articles. Data were collected until 20 September 2022.

#### References

- Abrahams, D. (2020). *A philosophical approach to satire and humour in social context* (Doctoral dissertation, University of Glasgow).
- Anderson, M. (2013, November 11). *At newspapers, photographers feel the brunt of job cuts*. Pew Research Center. Retrieved September 2, 2022, from <https://www.pewresearch.org/fact-tank/2013/11/11/at-newspapers-photographers-feel-the-brunt-of-job-cuts/>
- Burgers, C., & Brugman, B. C. (2021). How satirical news impacts affective responses, learning, and persuasion: A three-level random-effects meta-analysis. *Communication Research*, 009365022110321. <https://doi.org/10.1177/00936502211032100>
- Egelhofer, J. L., & Lecheler, S. (2019). Fake news as a two-dimensional phenomenon: A framework and research agenda. *Annals of the International Communication Association*, 43(2), 97–116. <https://doi.org/10.1080/23808985.2019.1602782>
- Gagiano, R., Kim, M. M. H., Zhang, X. J., & Biggs, J. (2021, December). Robustness analysis of grover for machine-generated news detection. In *Proceedings of the The 19th Annual Workshop of the Australasian Language Technology Association* (pp. 119-127).
- Gelfert, A. (2021). What is fake news? *The Routledge Handbook of Political Epistemology* (pp. 171–181). Essay. Routledge.

- Giachanou, A., Zhang, X., Barrón-Cedeño, A., Koltsova, O., & Rosso, P. (2022). Online information disorder: Fake news, bots and trolls. *International Journal of Data Science and Analytics*, 13(4), 265–269. <https://doi.org/10.1007/s41060-022-00325-0>
- Google. (n.d.). *The darker side of Invention - Google Arts & Culture*. Google. Retrieved August 31, 2022, from <https://artsandculture.google.com/story/-QWx8cSx6BC7LQ?hl=en>
- Greene, C. M., & Murphy, G. (2021). Quantifying the effects of fake news on behavior: Evidence from a study of COVID-19 misinformation. *Journal of Experimental Psychology: Applied*. <https://doi.org/10.1037/xap0000371>
- Guidelines for teachers: Tackling disinformation and promoting digital literacy. (2022, October 11). In *European Education Area*. European Commission. Retrieved October 15, 2022, from <https://education.ec.europa.eu/news/guidelines-for-teachers-tackling-disinformation-and-promoting-digital-literacy>
- Hageback, N. (2022). *Ai for creativity*. CRC Press, Taylor & Francis Group.
- Lacković, N. (2020). Postdigital living and algorithms of desire. *Postdigital Science and Education*, 3(2), 280–282. <https://doi.org/10.1007/s42438-020-00141-4>
- Levi, O., Hosseini, P., Diab, M., & Broniatowski, D. A. (2019). Identifying nuances in fake news vs. satire: using semantic and linguistic cues. *arXiv preprint arXiv:1910.01160*.
- Liu, Gloria (2022, June 21). *Dall-E 2 made its first magazine cover*. Cosmopolitan. Retrieved August 22, 2022, from <https://www.cosmopolitan.com/lifestyle/a40314356/dall-e-2-artificial-intelligence-cover/>
- Merriam-Webster. (n.d.). Hoax. In *Merriam-Webster.com dictionary*. Retrieved September 22, 2022, from <https://www.merriam-webster.com/dictionary/hoax>
- Merriam-Webster. (n.d.). Satire. In *Merriam-Webster.com dictionary*. Retrieved September 21, 2022, from <https://www.merriam-webster.com/dictionary/satire>
- Naughton, J. (2022, August 20). *Ai-generated art illustrates another problem with computers | John Naughton*. The Guardian. Retrieved September 2, 2022, from <https://www.theguardian.com/commentisfree/2022/aug/20/ai-art-artificial-intelligence-midjourney-dall-e-replacing-artists>
- Romero, A. (2022, June 16). *Dall-E 2, explained: The promise and limitations of a revolutionary AI*. Medium. Retrieved August 22, 2022, from <https://towardsdatascience.com/dall-e-2-explained-the-promise-and-limitations-of-a-revolutionary-ai-3faf691be220>
- Schmelzer, R. (2021, June 11). *What is GPT-3? everything you need to know*. SearchEnterpriseAI. Retrieved August 22, 2022, from <https://www.techtarget.com/searchenterpriseai/definition/GPT-3>
- These articles are lies illustrated by dall-e*. The Daily Wrong. (2022, June 26). Retrieved September 23, 2022, from <https://dailywrong.com/sample-page/>
- Wilson, M. (2019, August 16). *This AI generates fake news about anything you want. try it!* Fast Company. Retrieved August 31, 2022, from <https://www.fastcompany.com/90390287/this-ai-generates-fake-news-about-anything-you-want-try-it>