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News Coverage of Artificial Intelligence in Online News: Frames and Tones from Al Jazeera English, CNA and CNN

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Abstract

Objectives: This study aims to frame the content of news stories about artificial intelligence (AI) in journalism on the news websites of Al Jazeera English, CNA, and CNN, as well as to examine the tone used in these stories.

Methods: Using a content analysis approach, a total of 44 news stories related to the topic were identified. The dataset included 10 articles from Al Jazeera English, 19 from CNN, and 15 from CNA.

Results: According to Nisbett's framing classification, the findings revealed that the "economic development and competitiveness" frame was commonly used in news articles by Al Jazeera English and CNA. Meanwhile, the "ethics and values" frame was most frequently employed in CNN articles. A neutral tone was predominantly used in news stories on Al Jazeera English and CNA, whereas a negative tone was more prevalent in CNN's coverage.

Conclusions: The study recommends that news organizations publish more stories about AI in journalism, emphasizing successful adoption cases while addressing ethical, legal, and social concerns. It also suggests that researchers pay greater attention to content analysis studies of news organizations, focusing on the impact of such stories on journalists' adoption or rejection of AI.

Keywords: Artificial intelligence; framing; news coverage; content analysis; Al Jazeera English; CNN; CNA

التغطية الإخبارية للذكاء الاصطناعي في الأخبار عبر الإنترنت: الأطر والنغمات في الجزيرة الإنجليزية و CNA و CNN

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ملخّص

الأهداف: تهدف هذه الدراسة إلى تأطير محتوى القصص الإخبارية حول الذكاء الاصطناعي في الصحافة في مواقع الإخبارية لقناة الجزيرة الإنجليزية و CNA وCNN، وكذلك اللهجة المستخدمة في القصص الإخبارية.

المنهجية: بناءً على منهجية تحليل المحتوى، تم العثور على ما مجموعه 44 قصة إخبارية تتعلق بموضوع الدراسة، تم استخراج 10 مقالات من الجزيرة الإنجليزية، و19 من CNN ، و15 من CNA.

النتائج: بناءً على تصنيف نيسبيت، وجدت النتائج أن إطار التنمية الاقتصادية والقدرة التنافسية كانا شائعين في المقالات الإخبارية لدى الجزيرة الإنجليزية وقناة CNA . وفي الوقت نفسه، كان إطار الأخلاق والقيم هو الأكثر استخدامًا في CNN. كانت اللهجة المحايدة هي الأكثر استخدامًا في القصص الإخبارية لدى الجزيرة الإنجليزية و CAN، بينما كانت اللهجة السلبية هي الأكثر استخدامًا في قصص CNN.

الخلاصة: توصي الدراسة بأن تنشر المؤسسات الإخبارية المزيد من القصص الإخبارية حول الذكاء الاصطناعي في الصحافة والتركيز على القصص الناجحة في تبني الذكاء الاصطناعي، مع معالجة المخاوف الأخلاقية والقانونية والاجتماعية. توصي الدراسة الباحثين بإيلاء المزيد من الاهتمام لدراسات تحليل المحتوى للمؤسسات الإخبارية والتركيز على تأثير هذه القصص الإخبارية على تبني الصحفيين للذكاء الاصطناعي أو رفضهم له.

الكلمات الدالة: الذكاء الاصطناعي، التأطير، التغطية الإخبارية، تحليل المحتوى، الجزيرة الإنجليزية، CNN، CNA

Introduction

Journalism has increasingly relied on technological innovations like websites, social media platforms, and data journalism (de-Lima-Santos & Mesquita, 2021). Artificial intelligence (AI) is poised to revolutionize journalism, impacting journalists' tasks and performance significantly (Broussard et al., 2019). AI has not only entered written press through automated textual news but is also involved in all stages of news production (Túñez et al., 2021). The news media industry, like many others, has adopted AI to boost efficiency and accuracy (Munoriyarwa et al., 2023). Major news organizations, such as the British Broadcasting Corporation, The Guardian, Forbes, The Washington Post, Los Angeles Times, and The New York Times, have assigned tasks like weather reports, stock market movements, corporate performance, and sports stories to computers due to their ability to provide comprehensive coverage (Underwood, 2019).

AI advancements in journalism are part of the rapidly approaching technological revolution. Monti (2019) suggests that AI journalism will undergo significant changes due to the Fourth Industrial Revolution, introducing new technologies like augmented reality, AI, the Internet of Things, and the use of robots across various fields. In the future, AI journalism will profoundly impact the media industry. Research on AI indicates that it will bring about a new era, shaping the future of journalism in a unique manner (Hansen et al., 2017; Jordan, 2019; Biswal & Gouda, 2020; Díaz-Noci, 2020). Meanwhile, numerous news websites and media organizations publish stories about AI in journalism, discussing its various uses in the news process and the potential positive and negative impacts on journalism (Marconi, 2020). News reporting has evolved from simply presenting information to adopting a more storytelling approach with factual representation (Gamson, 2015).

Communication involves frame-emerging, frame-building, and frame-setting processes (De Vreese, 2005). Framing, as suggested by Afzal and Harun (2020) and Andsager (2003), is how journalists shape an event or issue to guide readers' understanding. Therefore, analyzing framing involves studying the messages conveyed by news producers, how media structures information, and how people perceive the message and information (Kapuściński & Richards, 2016; Mason, 2019). The stories journalists read on news websites about AI and its impact on journalism play a crucial role in influencing their decisions to adopt or reject AI. Many news websites have increased their coverage of AI in journalism, which can have both positive and negative effects due to the tone and frame they carry.

As news organisations shape societal opinions (Plaisance et al., 2012) and rely on being viewed as credible sources (Haim & Graefe, 2017), it is crucial for people to trust journalists' published content. However, the perception of AI-generated news content remains underexplored in research (Hofeditz et al., 2021). There is still a lack of systematic or experimental studies on media coverage of AI (Brennen et al., 2022). This study examines news stories about AI in journalism on the websites of three international news organizations: CNN (Cable News Network), Al Jazeera English, and CAN (Channel NewsAsia). This research aims to address two main research questions:

1: How news stories about AI are framed in the by CNN, Al Jazeera English, and CNA?

2: What tone is used in these selected news stories by CNN, Al Jazeera English, and CNA?

2. literature Review

2.1 Framing the Media on Artificial Intelligence

The news stories about AI innovations in journalism have increased, and how these technologies can create a huge revolution and even threaten human jobs. However, these news stories can influence the decisions of individuals and journalists and steer them towards adopting AI (Nguyen & Hekman, 2022). Framing the news is important in a stage where the public needs to obtain accurate and neutral information that does not carry any positive or negative bias (Zaragoza, 2023). The use of media channels will impact how people perceive new technologies and controversial issues. Cui and Wu (2021) found that Chinese media coverage generally portrays a positive image of AI.

AI is a groundbreaking technological advancement of the 21st century that has garnered significant attention from various news media outlets such as television news networks, newspapers, and magazines. However, some coverage tends to adopt an alarmist tone (Frost & Carter, 2020). Recent headlines include: “The good news - we’ve reached 'peak human'. The bad news - now AI will destroy our ability to work and learn” [Diginomica], “AI Poses ‘Risk of Extinction,’ Industry

Leaders Warn" [The New York Times], and "AI poses new threats to newsrooms, and they're taking action" [CNBC]. Thus, academics, researchers, and news writers are becoming more and more interested in the topic of the interaction between AI and journalism (Zaragoza, 2023).

Furthermore, prominent scientists and technologists who voice worries about the possible risks of AI, such as Elon Musk, Bill Gates, and Stephen Hawking, are often quoted in publications regarding AI. Apprehension seems to be a recurring pattern in media coverage of the issue, despite some pieces discussing the advantages of AI in industries like industry and medical and others weighing both the pros and drawbacks of this technology. Although this alarmist coverage of AI may increase views, clicks, reading, and ratings, it may also make it harder for the general people to see AI as a potential new technology. While Musk, Gates, and Hawking have all called for caution in the development of AI, news reports have misconstrued their positions, which has caused the public to worry needlessly. During a Fortune magazine interview, Musk explained, "I'm not saying that we should stop developing AI or that any of the inflated promises that have been made should be abandoned. I certainly think AI has a lot to offer (Korosec, 2017).

Entman (1993) popularized frame analysis as a technique for examining how journalists cover stories in the media. According to Entman, when material in texts is either purposefully or accidentally emphasized or deleted, "frames" are formed. Studies examining how AI is framed in the media, however, have shown that favorable rather than negative news coverage of AI has been seen (Chuan et al., 2019; Garvey & Maskal, 2020). Nisbet (2009) created a taxonomy of eight frames for classifying scientific communication in the media by using framing theory. Different approaches to identifying and characterizing science-related topics are described in each frame. The following frames are part of Nisbet's typology: Public Accountability and Governance; Pandora's Box/Frankenstein's Monster/Runaway Science; Morality and Ethics; Scientific and technical uncertainty; Economic Development and Competitiveness; Social Progress; Middle Way/Alternative Path; and Conflict and Strategy (Frost & Carter, 2020). In this study, the researchers applied the Nisbet classification to analyze the content coverage of AI-related stories on CNN, Al Jazeera English and CNA. Some studies have applied a relative frame to frame media coverage. For example, Frost and Carter (2020) used it in their study to analyze the content of AI news coverage in the field of medicine. Similarly, Obozintsev (2018) used the frame to explore the nature and effects of AI media coverage. In addition, Sondlo (2018) used it to provide a general idea of how electronic newspapers capture astronomy news in terms of framing and tone.

2.2 The Selection of Al Jazeera English, CNA, and CNN

Al Jazeera English Channel was founded in 2006 and is based in Doha, the capital of Qatar, funded by the Qatari government. Its broadcast reaches over 350 million homes in more than 150 countries around the world, providing reliable news content and continuous news coverage (Kosárová, 2020). Meanwhile, CNN (Cable News Network) is a television network founded in 1980. CNN broadcasts news around the clock and covers a wide range of topics, including political, economic, sports, cultural, and technological news. It is one of the most famous and influential news networks in the world, with nearly 1000 offices worldwide in over 80 countries. The channel has over 100 million followers on social media platforms (Zhang & Luther, 2020). As for CNA, it stands for Channel NewsAsia, a multi-national news channel in Singapore owned by Mediacorp, Singapore's public broadcaster. It broadcasts locally in Singapore and internationally as a subscription-based TV channel in 29 regions across Asia and the Pacific. CNN, Al Jazeera English, and CNA share the English language on their websites, as well as collaborate on multimedia features such as news articles, photos, videos, and social media posts. As major news outlets nationally, they publish articles written by their journalists or guest columnists, which internet users can access for free (Figenschou, 2014).

The three news organizations were chosen for several reasons. Firstly, geographical diversity, where the English Al Jazeera represents a global Arab perspective, CNN represents a Western American perspective, and CNA represents an Asian perspective. This geographical diversity allows for the analysis of news stories about AI from a comprehensive global perspective, taking into account different cultural viewpoints. The three news organizations also differ in their target audience, with Al Jazeera targeting the Arab audience in English, CNN targeting the American and Western audience, and CNA targeting the Singaporean and East Asian audience. Additionally, the three organizations share many characteristics

such as influence and reputation, as they are widely spread regionally and have a large following due to their high credibility in information dissemination. Furthermore, the three news organizations share diversity in presenting news, whether through their satellite broadcasts or their online platforms. They also provide free access to news and data for the audience (CNA, 2024; Morales, 2021; Satti, 2020).

3. Methodology

Media practices have a significant impact on conveying importance in the text, affecting how the story is presented to the audience and shaping their perception of reality (Estupinan, 2017). Frame analysis is a widely used method for analyzing content in communications. It involves applying interpretive orientations to structural elements, revealing underlying ideological orientations and assumptions in news materials (Gamson & Modigliani, 1994). In contrast to common bias analysis, frame analysis allows for the discovery of these hidden aspects (Hackett, 1984). The media plays a crucial role in influencing people's image and impressions regarding AI (Zaragoza, 2023). The period for obtaining news stories was selected to be part of the study sample, and the period was set for two years, where everything published on the news websites of Al Jazeera English, CNN, and CNA from March 1, 2022, to March 1, 2024. This period was chosen for several reasons, including the increased use of AI in journalism and the emergence of many new applications in journalism. For example, AI techniques were used for writing news articles, creating images and videos, analyzing data, and identifying misleading information (Brennen et al., 2022).

Additionally, awareness of AI increased in 2022 among people, leading to more interest in the publication of news stories about AI (Munoriyarwa et al., 2023). Moreover, the reliance on AI increased in the period between 2022 and 2024 in news organizations (Zaragoza, 2023; Moravec et al., 2024; Simon, 2024). Archives of Al Jazeera English, CNN, and CNA were searched online for news related to the keywords "artificial intelligence journalism" and "artificial intelligence and journalists." The articles were selected from the websites of news institutions, which consist of www.aljazeera.com, www.cnn.com, and www.channelnewsasia.com. A total of 44 news stories related to the study topic were found, with 10 articles extracted from Al Jazeera, 19 from CNN, and 15 from CNA. Subsequently, news articles were coded and categorized into topics.

The eight Nisbet (2009) classifications can be explained as follows:

1. **Social Progress**: A method for developing a life skill or addressing issues.
2. **Economic Development and Competitiveness**: An economic investment involves risks and potential market benefits, contributing to global, national, or local competitiveness.
3. **Morality and ethics**: a question of what is right or wrong, or if boundaries, thresholds, or limitations are respected or disregarded
4. **Uncertainty in science and technology**: A matter of specialist understanding or debating over what is known vs unknown.
5. **Pandora's box, Frankenstein's monster, or runway science**: the need to take preventative measures or act when a disaster or uncontrollable repercussions may occur
6. **Public accountability and governance**: policy or research that is either serving special interests or the public interest; it emphasizes concerns of ownership, control, transparency, involvement, and responsiveness; it also discusses the appropriate use of science and expertise in decision-making.
7. **Middle-way/alternative path**: An alternative choice that links conflicting or compatible viewpoints.
8. **Conflict and strategy**: A game among the cream of the crop, such as who is triumphant or losing the debate

The study relied on agreed-upon coding to reduce contradictions and improve the accuracy of the analysis by two different programmers. At the same time, studies have found that news reports consist not only of agenda-setting topics but also tones. There are several tones for news in newspapers, including positive, negative, and neutral, each with a specific meaning (Lyytimäki et al., 2021).

4. Results

The seven relative Nisbet (2009) classifications were chosen to frame the news stories, with the conflict and strategy classification excluded due to its inconsistency with any news story. The analysis focused on the headline and content of the news story. Table 1 shows the results of analyzing the news stories within the Nisbet classifications (2009).

Table 1: The Analysing of the News Stories within the Nisbet Classifications

Nisbet classifications	**Al Jazeera**	**CNN**	**CAN**
Social Progress	0	3	1
Economic Development and Competitiveness	4	2	5
Morality and ethics	3	8	3
Uncertainty in science and technology	0	1	2
Pandora's box, Frankenstein's monster, or runway science	1	2	1
Public accountability and governance	1	2	1
Middle-way/alternative path	1	1	2
Total	**10**	**19**	**15**

The content analysis results revealed that the economic development and competitiveness frame were commonly featured in news articles on Al Jazeera English and CNA websites, with 4 and 5 stories, respectively. This framework explores the impact of AI on journalism by improving news production processes, increasing global competitiveness through technological advancements, such as enhancing news delivery, automating reporting, and generating new journalistic services and employment prospects. For example, Al Jazeera published an article titled "*Google touts AI for news, insists journalists can't be replaced*" highlighting Google's efforts to create AI tools for journalists to enhance their work and productivity. Another news story by Al Jazeera, "*AI-generated news presenter appears in Kuwait*" explores how AI is transforming journalism, potentially leading to more innovation and creativity in news presentation. While, CNN, a news story was published titled "*Microsoft partners with Semafor for AI-assisted news content*" The report mentioned that Microsoft and Semafor are collaborating to enhance the responsible use of AI in news gathering and business practices. Semafor is set to introduce "Signals," a breaking news feed, which journalists can utilize alongside tools from OpenAI and Microsoft to offer readers analysis and insights on breaking news stories. Additionally, CNA released a news story titled "*Associated Press, OpenAI partner to explore generative AI use in news*" where the Associated Press emphasizes that AI is a competitive tool for major media organizations, not just a tool to help journalists.

The CNN content analysis revealed that the morality and ethics frame was the most common theme in news stories, appearing in 8 stories. This frame delves into the ethical concerns surrounding AI in journalism, including algorithmic bias, potential dissemination of fake news through AI, and the threat of AI replacing human journalists. For instance, a news story titled "*How Microsoft is mishandling news production by replacing staff with AI*" highlighted errors and ethical breaches by AI at Microsoft following employee layoffs and increased reliance on AI. The story exposed AI's ethical lapses, such as spreading misinformation like falsely claiming President Joe Biden slept during a moment of silence for Maui wildfire victims and publishing an obituary for a deceased NBA player that described him as "worthless". Another example of stories framed in terms of morality and ethics at CNN is a news story titled "*Plagued with errors: A news outlet's decision to write stories with AI backfires*" discusses how CNET corrected numerous articles, including some deemed "substantial," due to errors generated by an AI tool used for writing. The articles were found to have ethical violations, including instances of plagiarism.

The morality and ethics frame ranked second in both Al Jazeera English and CNA reports. For instance, an Al Jazeera article titled “Fake Pentagon explosion photo goes viral: How to identify an AI-generated image” discussed the spread of a fabricated image depicting a large explosion near the Pentagon on social platforms, leading to a temporary stock market decline and heightened confusion among social media users. In contrast, a CNA story titled “Axel Springer to shut down Upday in move towards AI-driven news” reported that 80 out of 150 Upday employees were laid off as part of a shift to explore AI opportunities. Table 2 presents the tone analysis results of news stories from Al Jazeera, CNA, and CNN.

Table 2: The Tone Used in News Stories

The Tone	Al Jazeera	CNN	can
Positives	3	5	5
Negatives	3	9	4
Neutral	4	4	6
Total	**10**	**19**	**15**

The study findings show that Al Jazeera and CNA maintained a neutral tone in their news coverage of AI in journalism, whereas CNN predominantly adopted a negative tone. Out of 10 news stories on Al Jazeera English, 4 had a neutral tone. One such story, titled "*What future for journalism in the age of AI?*", discussed AI impact on journalism impartially. It examined both the advantages and drawbacks of AI in journalism and included interviews with individuals holding optimistic and pessimistic views on the subject. Another neutral news story published in Al Jazeera English titled "*Google emphasizes AI for news, emphasizes journalists' irreplaceability*" neutrally discussed the potential benefits of AI in news reporting while also addressing ethical concerns and implications for journalists.

In CNA, 6 out of 15 news stories were found to maintain a neutral tone. One such story titled *"News firms advocate for transparency and collective negotiation regarding AI's use of their content*" highlighted ethical concerns related to AI using media content without permission. Despite discussing violations and consequences, the article refrained from criticizing AI companies directly. Instead, it emphasized the role of governments and policymakers in implementing regulations to ensure these companies respect agreements and refrain from unauthorized use of news content. Another news story in CNA article titled "*After jobs warning, Germany's Axel Springer says AI can liberate journalists*" the discussion centered on AI's impact on journalism. It touched on concerns like job displacement and ethics, while also exploring the influence of AI on newspaper trends. The article maintained a neutral stance, refraining from expressing overtly positive or negative viewpoints on the matter.

CNN used a negative tone in 9 out of 19 news stories. One news story, titled “*Disney, The New York Times and CNN are among a dozen major media companies blocking access to ChatGPT as they wage a cold war on AI*” conveyed a critical perspective. It discussed major AI companies unethically using newspaper content and referred to the outcomes of AI news production as “garbage,” as per an anonymous source. The story also scrutinized how governments are handling newspapers' calls to regulate AI misuse and raised concerns about the potential impact on newsrooms and journalists if legal actions are not taken against AI in journalism. Another example of a news story that used a negative tone in CNN is a news story titled “*News industry off to brutal 2024 starts as mass layoffs devastate publishers, raising questions about the future of journalism*” The story focused on the negative effects of AI in journalism, and presented examples to many institutions. The journalist who laid off her employees due to adopting AI. He also presented the trends of some other newspapers in their intention to abandon more journalists due to AI. The news story also reported a decline in the percentage of profits and returns from advertising to AI companies, and it was also described that newspapers, magazines, and television are on their way to being negatively affected by AI. At the same time, the news story did not present the positive aspects of AI in the journalism industry nor did its present viewpoints that could defend the accusations mentioned in the article.

5. Discussion

The economic development and competitiveness frame was the most used in the news stories by Al Jazeera English and CNA. This frame focuses on the economic impact of AI in journalism, such as creating job opportunities, stimulating innovation, increasing productivity, and enhancing the ability of countries and companies to compete in these industries. These results can be interpreted by the interest of Arab countries like Qatar and Asian countries like Singapore in economic development, where these countries seek to diversify their economies and at the same time see AI as a good opportunity to improve the work of news institutions. Furthermore, AI is a global competition among different countries, and if countries like Qatar and Singapore are interested in competition, they should focus on the success stories of AI and its role in creating new job opportunities. The current study's findings align with Nguyen and Hekman (2022), which focused on how news media portray AI in four renowned news institutions: The New York Times, The Guardian, Wired, and Gizmodo. They found that the economic factor was one of the most prominent topics covered in the news reports. The findings further aligned too with Sarisakaloglu (2021), who analyzed the content of two widely circulated Turkish news institutions which are (Sabah and Hürriyet) to discover how AI is framed in media discourse. The results found that the economic benefit frame topped the frames in news stories.

Similarly, Al Jazeera English and CNA share a neutral tone that was used in most news stories, which can be explained by the fact that despite their focus on competitive advantage and AI capabilities, they did not go towards a positive tone in storytelling, but rather remained neutral. Additionally, there is much uncertainty about the future of AI in journalism, so many news institutions tend to follow a neutral tone if there is some mystery surrounding the subject. This result contradicts Frost and Carter's (2020) study, which found that news institutions tend to use a cautionary tone in their news reports about AI.

Most of the news stories on CNN are framed in the moral and ethical frame. This frame focuses on the ethical implications of AI transgressions and algorithmic biases. The results can be interpreted as there is much controversy surrounding the ethical issues committed by generative, especially after the arrival of CHat GPT (Zagorulko, 2023), which prompts news organizations to address such issues. Additionally, CNN focuses more on news than reports (Zhang & Luther, 2020) often focusing on sensitive issues related to AI and considering ethical concerns on the scale of those issues. These findings align with Wartiainen's (2020) content analysis, showing that American newspapers tend to focus on themes like ethics, discrimination, and accountability in their coverage of AI news. On the other hand, the results of the current study did not align with the findings of Ali and Gill's (2022) study, which found that the human-interest frame received the most media attention for AI news stories, while the ethical frame received less attention.

Furthermore, the most commonly used tone in news stories on CNN is negative. This can be interpreted as when discussing ethical issues, these stories often adopt a negative tone as they focus on ethical transgressions and irresponsibility in content use. The impact of news stories with a negative tone is greater than that of news stories with a positive tone (Jonkman et al., 2020). Moreover, van Antwerpen and Fielding (2023) also explain the reason for that, as despite objectivity being considered a cornerstone of quality and professionalism in Western media, there are criticisms of journalists who neglect to adhere to neutrality and objectivity. The findings of the current study contradict several studies that found that framing news stories about artificial intelligence carries a positive tone (Chuan et al., 2019; Garvey & Maskal, 2020; Cui & Wu, 2021; Sarisakaloglu, 2021).

6. Limitations and Rrecommendations

This study is limited in scope, as it only focused on three news organizations, so it is difficult to generalize the results to all news organizations. It is also limited in terms of time as shown in the study period. The interactive nature of media organizations is one of the limitations of this study, because news organizations interact with current events and do not necessarily focus on a specific issue on a regular basis.

The study recommends that news organizations should publish more news stories about AI in the press and focus on successful stories in adopting AI while addressing ethical, legal, and social concerns. The study recommends that researchers pay more attention to content analysis studies of news organizations and focus on the impact of these news stories on journalists' adoption or rejection of AI. Findings from this study contribute to the body of knowledge on AI practices particularly in journalism.

REFERENCES

Afzal, N., & Harun, M. (2020). News framing of the Arab Spring conflict from the lens of newspaper editorials. *International Journal of English Linguistics, 10*(1), 352-365. https://doi.org/10.5539/ijel.v10n1p352

Al Jazeera English. (2015). Mission statement. Retrieved from http://www.aljazeera.com/aboutus/

Ali, S. A., & Gill, D. A. (2022). Media framing and agenda setting (tone) in news coverage of Hurricane Harvey: A content analysis of the New York Times, Wall Street Journal, and Houston Chronicle from 2017 to 2018. *Weather, Climate, and Society, 14*(2), 637-649. https://doi.org/10.1175/WCAS-D-21-0009.1

Andsager, J. L. (2003). *Framing public life: Perspectives on media and our understanding of the social world*. https://doi.org/10.1086/374577

Biswal, S. K., & Gouda, N. K. (2020). Artificial intelligence in journalism: A boon or bane? In *Optimization in machine learning and applications* (pp. 155-167). Springer, Singapore. https://doi.org/10.1007/978-981-15-0994-0_10

Brennen, J. S., Howard, P. N., & Nielsen, R. K. (2022). What to expect when you're expecting robots: Futures, expectations, and pseudo-artificial general intelligence in UK news. *Journalism, 23*(1), 22-38. https://doi.org/10.1177/1464884920947535

Broussard, M., Diakopoulos, N., Guzman, A. L., Abebe, R., Dupagne, M., & Chuan, C. H. (2019). Artificial intelligence and journalism. *Journalism & Mass Communication Quarterly, 96*(3), 673-695. https://doi.org/10.1177/1077699019859901

Chuan, C. H., Tsai, W. H. S., & Cho, S. Y. (2019, January). Framing artificial intelligence in American newspapers. In *Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society* (pp. 339-344). https://doi.org/10.1145/3306618.3314285

CNA. (2024, March 7). About us. *CNA*. Retrieved from https://www.channelnewsasia.com/about-us

Cui, D., & Wu, F. (2021). The influence of media use on public perceptions of artificial intelligence in China: Evidence from an online survey. *Information Development, 37*(1), 45-57. https://doi.org/10.1177/0266666919893411

De Vreese, C. H. (2005). News framing: Theory and typology. *Information Design Journal + Document Design, 13*(1), 51-62. https://doi.org/10.1075/idjdd.13.1.06vre

de-Lima-Santos, M. F., & Mesquita, L. (2021). Data journalism beyond technological determinism. *Journalism Studies, 22*(11), 1416-1435. https://doi.org/10.1080/1461670X.2021.1944279

Díaz-Noci, J. (2020). Artificial intelligence systems-aided news and copyright: Assessing legal implications for journalism practices. *Future Internet, 12*(5), 85. https://doi.org/10.3390/fi12050085

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication, 43*(4), 51-58. https://doi.org/10.1111/j.1460-2466.1993.tb01304.x

Estupinan, J. D. (2017). The coverage of China in the Latin American press: Media framing study. *Cogent Arts & Humanities, 4*(1), 1287319.

Figenschou, T. U. (2014). *Al Jazeera and the global media landscape: The South is talking back*. New York, NY: Routledge.

Frost, E. K., & Carter, S. M. (2020). Reporting of screening and diagnostic AI rarely acknowledges ethical, legal, and social implications: A mass media frame analysis. *BMC Medical Informatics and Decision Making, 20*, 1-10. https://doi.org/10.1186/s12911-020-01353-1

Gamson, W. A. (2015). News as framing: Comments on Graber. *American Behavioral Scientist, 33*(2), 157-161. https://doi.org/10.1177/0002764289033002006

Garvey, C., & Maskal, C. (2020). Sentiment analysis of the news media on artificial intelligence does not support claims of negative bias against artificial intelligence. *Omics: A Journal of Integrative Biology, 24*(5), 286-299. https://doi.org/10.1089/omi.2019.0078

Haim, M., & Graefe, A. (2017). Automated news: Better than expected? *Digital Journalism, 5*(8), 1044-1059. https://doi.org/10.1080/21670811.2017.1345643

Hansen, M., Roca-Sales, M., Keegan, J. M., & King, G. (2017). Artificial intelligence: Practice and implications for journalism.

Hofeditz, L., Mirbabaie, M., Holstein, J., & Stieglitz, S. (2021, June). Do you trust an AI-journalist? A credibility analysis of

news content with AI-authorship. In *ECIS*. Retrieved from http://ensovoort.co.za/index.php/2020/07/02/friend-or-foe-how-online-news-outlets-in-south-africa-frame-artificial-intelligence/

Jonkman, J. G., Boukes, M., Vliegenthart, R., & Verhoeven, P. (2020). Buffering negative news: Individual-level effects of company visibility, tone, and pre-existing attitudes on corporate reputation. *Mass Communication and Society, 23*(2), 272-296. https://doi.org/10.1080/15205436.2019.1694155

Jordan, M. I. (2019). Artificial intelligence: The revolution hasn't happened yet. *Harvard Data Science Review, 1*(1), 1-9. https://doi.org/10.1162/99608f92.f06c6e61

Kapuściński, G., & Richards, B. (2016). News framing effects on destination risk perception. *Tourism Management, 57*, 234-244. https://doi.org/10.1016/j.tourman.2016.06.017

Korosec, K. (2017, August 4). Elon Musk thinks governments should study artificial intelligence. *Fortune*. Retrieved from http://fortune.com/2017/08/04/elonmusk-ai-government/

Kosárová, D. (2020). Al Jazeera and Al Arabiya: Understanding media bias. *Politické vedy, 23*(4), 87-108. https://doi.org/10.24040/politickevedy.2020.23.4.87-108

Marconi, F. (2020). *Newsmakers: Artificial intelligence and the future of journalism*. Columbia University Press. https://doi.org/10.7312/marc19136

Mason, A. (2019). Media frames and crisis events: Understanding the impact on corporate reputations, responsibility attributions, and negative affect. *International Journal of Business Communication, 56*(3), 414-431. https://doi.org/10.1177/2329488416648951

Monti, M. (2019). Automated journalism and freedom of information: Ethical and juridical problems related to AI in the press field. *Opinio Juris in Comparatione, 1*, 2018.

Morales, P. S. (2021). Mind the (cultural) gap: International news channels and the challenge of attracting Latin American audiences. *Media, Culture & Society, 43*(4), 648-663. https://doi.org/10.1177/0163443720972307

Moravec, V., Hynek, N., Skare, M., Gavurova, B., & Kubak, M. (2024). Human or machine? The perception of artificial intelligence in journalism, its socio-economic conditions, and technological developments toward the digital future. *Technological Forecasting and Social Change, 200*, 123162. https://doi.org/10.1016/j.techfore.2023.123162

Munoriyarwa, A., Chiumbu, S., & Motsaathebe, G. (2023). Artificial intelligence practices in everyday news production: The case of South Africa's mainstream newsrooms. *Journalism Practice, 17*(7), 1374-1392. https://doi.org/10.1080/17512786.2021.1984976

Nguyen, D., & Hekman, E. (2022). The news framing of artificial intelligence: A critical exploration of how media discourses make sense of automation. *AI & Society*, 1-15. https://doi.org/10.1007/s00146-022-01511-1

Nisbet, M. (2009). Communicating climate change: Why frames matter for public engagement. *Environment, 51*(2), 12. https://doi.org/10.3200/ENVT.51.2.12-23

Plaisance, P. L., Skewes, E. A., & Hanitzsch, T. (2012). Ethical orientations of journalists around the globe: Implications from a cross-national survey. *Communication Research, 39*(5), 641-661. https://doi.org/10.1177/0093650212450584

Sarisakaloglu, A. (2021). Framing discourses in Turkish news coverage regarding artificial intelligence technologies' prospects and challenges. *Türkiye İletişim Araştırmaları Dergisi, (37)*, 20-38. https://doi.org/10.17829/turcom.803338

Satti, M. A. (2020). Al Jazeera Arabic and Al Jazeera English websites: Agenda-setting as a means to comparatively analyze online news stories. https://doi.org/10.15581/003.33.36535

Simon, F. M. (2024). *Artificial intelligence in the news: How AI retools, rationalizes, and reshapes journalism and the public arena*.

Sondlo, A. (2018). An analysis of the coverage of science news and the use of newspapers in the science classroom. In *XVIII IOSTE Symposium: Future educational challenges from a science and technology perspectives* (pp. 13-17). Malmo, Sweden.

Túñez-López, J. M., Fieiras Ceide, C., & Vaz-Álvarez, M. (2021). Impact of artificial intelligence on journalism: Transformations in the company, products, contents, and professional profile. *Communication & Society, 34*(1), 177-193. https://doi.org/10.15581/003.34.1.177-193

Underwood, C. (2019, November 17). Automated journalism – AI applications at New York Times, Reuters, and other media

giants. *Emerj Artificial Intelligence Research*. Retrieved from https://emerj.com/ai-sector-overviews/automated-journalism-applications/

van Antwerpen, N., & Fielding, V. (2023). Constructive journalism: Techniques for improving the practice of objectivity. *Journal of Media Ethics*, *38*(3), 176-190. https://doi.org/10.1080/23736992.2023.2228313

Volkmer, I. (1999). *News in the global sphere: A study of CNN and its impact on global communication*. Indiana University Press.

Volkmer, I. (2003). Journalism and political crises in the global network society. In *Journalism After September 11* (pp. 253-264). Routledge. https://doi.org/10.4324/9780203218136-23

Wartiainen, M. (2020). Media frames of artificial intelligence: A comparative study between USA and China.

Zagorulko, D. I. (2023). ChatGPT in newsrooms: Adherence of AI-generated content to journalism standards and prospects for its implementation in digital media. *Vcheni zapysky TNU imeni VI Vernadskoho*, *34*(73), 1. https://doi.org/10.32782/2710-4656/2023.1.2/50

Zhang, X., & Luther, C. A. (2020). Transnational news media coverage of distant suffering in the Syrian civil war: An analysis of CNN, Al-Jazeera English, and Sputnik online news. *Media, War & Conflict*, *13*(4), 399-424. https://doi.org/10.1177/1750635219846029