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## **THIRTEEN WAYS OF LOOKING AT AN ALGORITHM: HOW JOURNALISM FRAMES THE DISRUPTIVE POTENTIAL OF GENERATIVE AI**

Fritz Kessler  
American University

Gabriel Ponniah  
American University

Chelsea Butkowski  
American University

Aram Sinnreich  
American University

Patricia Aufderheide  
American University

Over the past three years, “generative AI” (GAI) services like ChatGPT, Dall-E, and Gemini have burst into the public eye, and have been integrated into foundational communications and media platforms ranging from social media to productivity software. Yet despite its ubiquitous presence and potentially transformative nature, the public conversation about GAI has been fragmented and disconnected. News stories touting its magical powers and speculating about machine consciousness appear alongside laments about the devaluation of human labor and accusations of massive intellectual property theft. There is very little “connective tissue” reconciling these different perspectives and addressing GAI’s role structurally or comprehensively across its various instantiations (Crawford, 2021; Sinnreich & Gilbert, 2024).

In this article, we aim to identify some of the most prevalent frames and tropes surrounding GAI, examining how dominant media outlets—national news media and professional trade publications—framed and discussed generative AI, particularly in relation to education and media production, during the first year of GAI’s widespread rollout, from November 2022-October 2023.

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We employ framing analysis for its focus on how journalists' understanding of emerging technologies shapes news coverage, which ultimately informs public opinion (D'Angelo, 2017; Tewksbury & Scheufele, 2009). We developed emerging frames using qualitative discourse analysis (Fairclough, 2010), recognizing that initial media coverage serves as a proxy for broader public understanding, within key professions, of issues and problems surrounding the widespread adoption of new technologies.

Once we developed our emergent taxonomy of common frames, we employed a novel, GAI-based technique for framing analysis. We used iterative prompt engineering on open source LLM DeepSeek to investigate not only the discursive frameworks but also the emotionally valent (positive vs. negative) subframes included in each news article, taking care to validate its outputs through intercoder reliability testing (see Table 1).

Frame	Subframe
Intellectual Property	Positive: Increase volume/variety of creative work
	Negative: Theft of creative work
Labor	Positive: Cost-savings and efficiency
	Negative: Job losses and lower wages
Information Use	Positive: Synthesis and integration of multiple data sources
	Negative: Disinformation, stereotypes, plagiarism
Surveillance	Positive: Personalization and customization
	Negative: Erosion of privacy
Climate	Positive: Innovations in sustainable energy
	Negative: Resource overuse and climate change

*Table 1: Emergent Frames and Subframes in Media Coverage of GAI*

Our working hypothesis (data collection and analysis are ongoing) is that media coverage, especially within trade periodicals aimed at business executives, exhibits a bias toward concern for ownership and productivity, rather than potential risks to rights, privacy, and quality of life for creators and employees in media industries and education.

This emphasis contrasts with the lived reality of most creatives, who rarely benefit from rents from ownership of their creative work, via copyright, and the great majority of whom work in support positions in the generation of new creative products. We draw this hypothesis from research on copyright policy (Aufderheide & Jaszi, 2018; Sinnreich, 2013; Sprigman, 2018), on media industries analysis (Cunningham & Craig, 2018; Ardit, 2023), and on labor issues in media technology (Roberts, 2019, Jarrett, 2022).

Because of their high stakes and complex industrial ecologies, both capital and labor within these fields have demonstrated resistance to industrialization and automation in previous eras. Corporate interests are frequently framed in terms of challenges to *property relations*, as exemplified in battles over media “piracy.” Labor concerns are more frequently framed in terms of challenges to *employment relations*, as seen in strikes and industrial accords around introduction of new technology. Generative AI potentially disrupts both owner and labor relations, in wide-ranging ways.

We focused on two professional arenas within the U.S.: higher education and the film industry. Both fields were immediately affected—higher education because of the implications for plagiarism and information integrity, and the film industry because of the WGA/SAG strike in 2023. To learn how these challenges were framed in journalistic coverage of generative AI in these two areas, and what the patterns imply for public knowledge and discourse we ask:

RQ1: What are the emergent frames and emotionally-valent subframes about the role that AI will have in transforming creative industries?

RQ1a: How do these frames and subframes differ between mainstream news outlets and trade-oriented publications?

We also add to recent scholarship which incorporates generative AI-based methodologies in a framing analysis (e.g. Alonso del Barrio et al., 2024) and pose an additional question:

RQ2: Can well-prompted generative AI conduct a framing analysis that is reliable and consistent with human coders?

## **Methods**

Our research methods focus on conducting an emergent frame analysis of news articles about GAI and the creative industries that compares coding capabilities of humans to those of a GAI platform. We first used the Nexis Uni database to gather a corpus of 3,770 newspaper articles from creative industries-relevant publications, including *The New York Times*; film industry trade magazines *Hollywood Reporter* and *Variety*, as well as industry blogs Deadline and Indiewire; policy and industry-facing publications *The Atlantic*, *The Hill*, *Politico*, and *McKinsey & Company*; and technology magazine *Wired* as well as technology blog *Techdirt*. We further isolated our corpus for analysis by searching for specific terms related to AI (e.g. ChatGPT, deepfake, chatbot, LLM) and potential impacts or harms to creative industries (e.g., copyright, labor, privacy, plagiar\*). We use the one-year timeframe November 2022-October 2023, from the launch of ChatGPT to the resolution of the Hollywood strikes.

Next, we engaged in a qualitative discourse analysis through an iterative process alternating between immersion in the corpus and group discussion (Kuckartz, 2014). This process enabled us to identify five major frames: “Intellectual Property,” “Labor,” “Information Use,” “Surveillance,” and “Climate.” We divided each frame into two subframes, a positive-valence subframe (e.g. “generative AI will make production more

efficient” for the “Labor” frame) and a negative-valence subframe (e.g. “Generative AI will lower job security”), creating 10 subframes altogether.

These frames are the basis of our codebook for a manual quantitative content analysis and our prompt for the GAI platform DeepSeek. As a team of four coders, we are currently in the process of manually coding a subsample of documents. We will use Krippendorff’s alpha to calculate our intercoder reliability at a standard of  $\leq .70$ . Our initial training practice has shown promising results. We plan to develop rigorous inter-coder reliability among the human coding team and to test our inter-coder reliability with a GAI platform examining the same series of articles.

Analyzing the articles with GAI stands to enhance the breadth of our analysis while also providing an alternate perspective on the corpus. We selected DeepSeek, a Chinese GAI platform that offers similar functionality to ChatGPT, because it is open source, provides an account of its “thought process” or rationale when making judgments, and consumes less environmental resources than other popular GAI platforms. After several rounds of prompt engineering, we have written a prompt that will allow DeepSeek to code frames in the article corpus using the same coding scheme that we are employing for the manual human content analysis. We will compare its outputs with those of the human coders.

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