

Understanding the Impact of Artificial Intelligence on Media Content Production from a Technical Logic Perspective: Post-Print

Authors: Zhang Hongzhong

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Abstract

The entire media industry currently harbors a panic-stricken attitude toward AI+. Concerns abound: Will the emergence of writing robots render journalists obsolete? While AI brings new speed and experiences to journalism, can it deliver truth and interpretation? In reality, AI has become sufficiently sophisticated to threaten our profession without needing consciousness. Such pervasive sentiments have bred widespread fear of artificial intelligence.

Full Text

How to Understand the Impact of AI on Media Content Production from a Technical Logic Perspective

Author: Zhang Hongzhong, School of Journalism and Communication, Beijing Normal University

The entire media industry currently harbors a panic-stricken attitude toward AI+. Concerns abound: Will the emergence of writing robots render journalists obsolete? While AI brings new speed and experiences to journalism, can it deliver truth and interpretation? In reality, AI has become sufficiently sophisticated to threaten our profession without needing consciousness. Such pervasive sentiments have bred widespread fear of artificial intelligence.

AI was first proposed in the 1950s, but remained confined to algorithmic concepts. Consequently, the waves of the 1960s, 70s, and 80s never truly materialized. It is only today, with big data providing vast raw materials and cloud computing offering essential infrastructure, that AI has become a practical reality. AlphaGo's victory over human players in 2017 marked a watershed moment. Tencent's official entry into AI, the development of autonomous vehicles, the establishment of four major national AI platforms, and the rise of BAT, iFlytek,

and Sophia have all delivered significant shocks to the media industry. How, then, should the media industry understand and respond to these changes?

I. The Media Landscape in the AI+ Era

Disruption of Content Production Processes

AI is fundamentally disrupting contemporary media content production workflows. The traditional process involved journalists and editors conducting research, writing, and editing to create finished products. Today, we have production models where machines analyze and process information to generate content—a machine-dominant, human-assisted process. Historically, our workflows were based on newspaper industry models, and all journalism and communication education was built upon this foundation. Even with the later advent of television, which maintained a linear communication model, we established our journalistic theories, concepts, and production modes upon this basis. However, this model is now being dismantled. For instance, the British sports media outlet GiveMeSport uses AI technology to scan Twitter every second, filter content, verify information, and finally generate articles—representing a revolutionary transformation of the process. Similarly, Authors.me conducts behavior-based analysis, extracting keywords and mapping emotional curves from our reading behaviors to generate content through machines. In the AI era, our production processes have already fundamentally changed; continuing to produce content using newspaper-era logic will inevitably leave us behind.

Exponential Improvement in Content Production Efficiency

Machines excel at induction and synthesis, while humans specialize in deduction and association. Robots are adept at producing news briefs, whereas humans excel at in-depth topics. A quality article from a century ago remains quality today, but machines iterate at a pace of one technological revolution per year. Contemporary AI can already write comprehensive articles. According to Turing Test standards, a product is considered to possess human-like attributes when it can fool 30% of people—such technology is no longer rare today. In film production, where editing once required extensive time commitments of 10-30 days for manual work, modern editing technology can produce a rough cut in approximately 20 hours. These technologies have dramatically enhanced media production efficiency.

Changes in Gatekeeper Rules

The transformation of production processes entails a transformation of gatekeeper rules. Traditional gatekeepers—journalists and editors—conducted manual verification, editing, and publication, which was time-consuming and inefficient. Each individual possesses their own cognitive framework; the same shot can yield different effects depending on framing, introducing numerous biases that challenge objectivity. Moreover, human energy and time are limited. The AI era enables countless netizens to employ AI for these tasks, like countless

flashlights illuminating the night sky rather than a single beam. The Washington Post's TruthTeller application analyzes politician speech videos on news websites in real-time, judging statement veracity and providing source links. Reuters' News Tracer assigns news value scores, prioritizes stories, and provides confidence ratings on likelihood of truth.

II. Will AI Replace Humans?

We currently understand AI as a productivity enhancement. From manual writing to computer-assisted writing to machine writing, writing efficiency has gradually improved as machines help us process materials—this represents normal technological iteration rather than human replacement. At present, AI remains in its infancy. We can divide AI development into three stages: First, the specialization stage—dedicated technologies such as intelligent voice and recognition technologies—where we have only just begun. Second, the generalization stage, where systems can perform multiple functions: cleaning, dishwashing, news reporting, singing. Third, the emotionalization stage, as depicted in *West-world*, which remains in the realm of imagination and represents a different logic altogether, still far in the future. We are currently only in the specialization stage—essentially a phase of technological iteration.

III. How Media and Technology Interface

Regarding the integration of technology and media, newspapers and television have been repeatedly marginalized during previous technological waves. Traditional media failed to seize opportunities during both the first internet era and the second mobile era. As we enter the intelligent stage today, traditional media must first avoid conceptualizing AI through the lens of Hollywood films and instead approach it from the perspective of technological iteration and tools. Second, we must understand AI through technical logic; current AI remains in the first stage, and we must learn how to utilize it technically. Third, media's confusion stems from confusion about new technology, while the industry's development depends on asking the right questions. For AI technological iteration, media must first truly understand AI technology, then propose product requirements and seek partnerships with cutting-edge technology companies—only then can they genuinely enter the frontier of communication technology.

Security General Theory Publication Announcement

Book Description: This work establishes a unified foundational theory for cyberspace security. Within the scope of science and engineering (excluding psychology, sociology, economics, management, etc.) and under virtually unrestricted conditions (e.g., not limited by devices, environments, or personnel), it reveals several fundamental laws of hacker attack-defense dynamics and security

evolution. These laws are applicable across major branches of cyberspace security. Specifically, this book discovers the universal existence of system security meridians, the discrete random variable nature of hackers, the core objective of security entropy maintenance by red teams, the achievable limits of red team versus hacker confrontations under various scenarios (one-on-one, one-versus-many, many-versus-one, many-versus-many), the mathematical characteristics of macroscopic and mesoscopic dynamic behaviors in security attack-defense, the evolutionary laws of direct and indirect confrontations between red teams and hackers, and the quantitative laws of ecological development in cyberspace security. Additionally, it reveals the diffusion dynamics of various software represented by computer viruses, discovers patterns of online rumor propagation and refutation, and uncovers precise evolutionary patterns of online public opinion. Just as information theory serves as the unified foundational theory for the “Information and Communication Engineering” discipline, this book’s *Security General Theory* aspires to become the unified foundational theory for the “Cyberspace Security” discipline, serving as a required foundational course for all teachers, students, and practitioners in “Information Security” and “Cyberspace Security” majors. This book can not only refresh readers’ security perspectives but also help overcome the current global security community’s status quo of “treating symptoms in isolation and failing to see the whole picture,” allowing readers to gain a bird’s-eye view of the entire cyberspace security landscape. Readers are encouraged not to be intimidated by the numerous mathematical formulas, because if one ignores the specific mathematical proofs (i.e., assuming their correctness), all security professionals can understand this book and benefit from it. (Note: This book has been officially published by Electronic Industry Press and is now selling well on Dangdang and JD.com.)

Authors: Yang Yixian, Niu Xinxin

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Note: Figure translations are in progress. See original paper for figures.

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