

Artificial Intelligence Tools in International Relations Research: A Critical Examination of its Application and Implications



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Abstract:

This research paper examines the extent to which artificial intelligence tools can be integrated as methodological aids in preparing research and academic papers within the discipline of International Relations. It specifically investigates their capacity to revolutionize traditional research methodologies and, consequently, reshape the writing of research and manuscripts in the field of International Relations. This study concludes that integrating artificial intelligence tools into research preparation in International Relations could open new frontiers in the discipline and move beyond traditional research methods, given the effectiveness of these tools in efficiently managing large datasets and enhancing multiple stages of the research process. Nevertheless, numerous ethical and technical challenges arise from the misuse of these tools, which may expose researchers to risks such as plagiarism and content fabrication

Keywords: Artificial intelligence; International Relations; Research Methodology.

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Introduction:

"The extensive integration of artificial intelligence tools in recent years, particularly the advent of natural language processing bots trained on vast datasets and leveraging machine learning, reinforcement learning, deep learning techniques, and other sophisticated algorithms, has profoundly impacted the domains of scientific research and academic writing due to their remarkable capacity and speed in processing and managing large-scale data.

Academic writing presents a confluence of challenges, including publication pressures often framed by the 'publish or perish' paradigm, concurrent demands for scholarly originality and creativity under stringent deadlines, and the necessity for structural coherence amidst competing professional responsibilities. Further complicating this process are the multi-stage nature of peer review and the complexities inherent in synthesizing interdisciplinary research. In response to these multifaceted challenges, Artificial Intelligence has become essential. (Mohamed & Mona, 2024, p. 2)

This study highlights several important intelligent tools that researchers in International Relations can rely upon as supportive instruments in preparing their academic papers. Five tools have been selected that are considered particularly valuable for scholars in this field: **ChatGPT**, **Gemini**, **Perplexity**, **Research Rabbit**, and **Paperpal**. This study also provides practical steps and applications illustrating how to effectively benefit from these tools.

Accordingly, this study addresses the central issue of integrating artificial intelligence tools into the study of International Relations. The following research question is posed: How can AI tools be used as auxiliary research tools in the field of International Relations, and what are the potential concerns associated with their use ?

This study seeks to test the hypothesis that, given AI tools' capacity to process large volumes of data and inputs with precision and speed, they can be leveraged to study and analyze International Relations phenomena—characterized by dynamism, complexity, and interconnectedness—by serving as aids in data collection and analysis, identifying trends in events, and enabling the development of innovative research methodologies.

1. Artificial Intelligence- Exploring Implications and Functions

a. The Concept of Artificial Intelligence

The term of "Artificial Intelligence" is a composite of two key concepts: "intelligence" and "artificial." According to Webster's Dictionary, intelligence signifies the ability to comprehend new or changing conditions; in a broader context, it encompasses the processes of perceiving, understanding, and adjusting to unfamiliar situations, with perception, comprehension, and learning serving as

its fundamental characteristics. The term "artificial" signifies constructs produced through human agency in contrast to phenomena arising independently in nature. Thus, artificial intelligence can be defined as the human-derived replication of intelligent behavior within machines or computers, effectively transferring cognitive capabilities originally inherent to humans into artificial systems. (Naziha, 2025, p. 50)

Similarly, **the European Commission** (2018) defines AI as systems capable of exhibiting intelligent behavior by analyzing their environment and autonomously undertaking actions to achieve designated objectives. (Boucher, 2020, p. 1)

Google Cloud adopts a broader perspective, describing AI as an interdisciplinary field spanning computer science, data analytics, engineering, linguistics, neuroscience, philosophy, and psychology. Operationally, AI in business contexts is primarily associated with machine learning and deep learning technologies, which facilitate data analytics, predictive modeling, object classification, natural language processing, recommendation systems, and intelligent information retrieval. (Cloud, n.d.)

Recent discourse in 2024 has been dominated by advancements in generative AI (GenAI), a transformative subset of AI capable of autonomously generating novel text, images, videos, and other content modalities. Comprehending Generative Artificial Intelligence requires a profound understanding of their underlying technological frameworks: machine learning and deep learning.

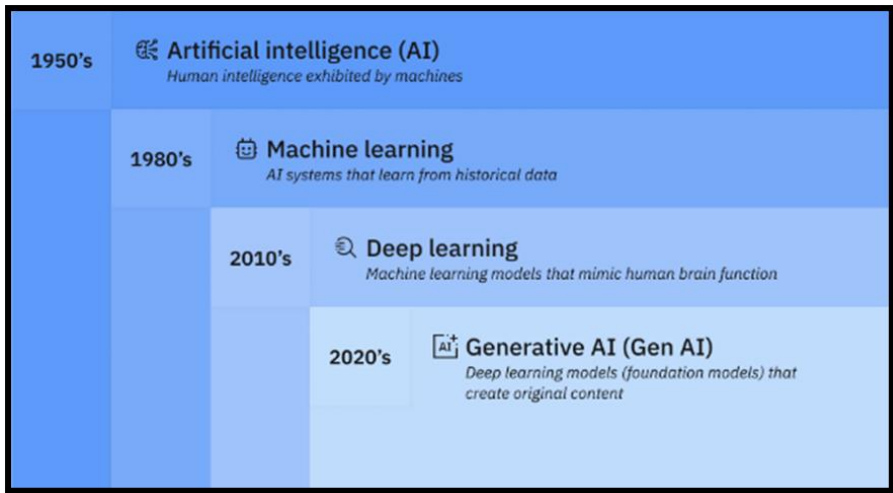
Machine learning sits at the heart of artificial intelligence, though it operates quite differently from traditional programming. Instead of writing step-by-step instructions, we feed algorithms data and let them uncover patterns on their own (Cole & Eda, 2024). Over time, these systems refine their predictions through experience rather than explicit coding. This field focuses on creating algorithms that can access and study data to get better. Machine learning systems depend heavily on data to function effectively. This creates a significant demand for computational resources. The process requires substantial processing power to handle complex algorithms. The learning process involves repeating training to improve decision-making. Machine learning systems can also be trained automatically when new data are available, helping them find new patterns and update themselves. (Subhadip, 2019, p. 10)

Deep learning, a further specialization within ML, utilizes multilayered neural networks—deep neural networks—which more closely approximate the intricate decision-making processes of the human brain. This paradigm enables large-scale, automated learning and excels in complex tasks such as natural language processing and computer vision, where rapid and accurate pattern

recognition in extensive datasets is essential. Generally, the most AI applications in our time runs on deep learning. (Cole & Eda, 2024)

Generative AI represents a significant leap forward, leveraging learned patterns and structures from extensive training data to synthesize original content. GenAI systems, such as DALL-E 2 (for image generation) and ChatGPT (for text generation), exemplify this capability. These models are trained on vast datasets—ChatGPT, for instance, utilizes a corpus comprising internet text, articles, and books—enabling them to produce outputs that are novel yet reflective of their training data. (MARR, 2024, pp. 3-4).

Figure 1: How artificial intelligence, machine learning, deep learning and generative AI are related



Source: <https://shorturl.at/HMT45>

b. The Evolution of Artificial Intelligence: From Symbolic Systems to Prospects of Superintelligence

Understanding artificial intelligence (AI) necessitates tracing its development through three distinct waves, each of which is characterized by different methodologies and capabilities.

First Wave: Symbolic Artificial Intelligence

Symbolic AI, often called rule-based or expert systems, depends on rules that human experts program directly into system. These rules, usually in the form of if-then-else statements, allow computers make decisions using clear, logical steps. Since the AI's knowledge comes straight from human expertise, people often say that symbolic AI keeps the human in the loop. This clarity makes it easier to

understand how AI makes decisions, spots mistakes, and make updates. (Boucher, 2019, p. 1)

Second Wave: Data-Driven Machine Learning

The second wave constitutes a paradigm shift toward machine learning (ML), in which algorithms learn to perform better automatically by learning from data, rather than relying on pre-coded rules. This exponential growth in data availability has been one of the main driving forces behind ML's recent success, more than basic algorithmic advances by themselves. ML systems learn to recognize patterns and infer decision-making rules via training, then generalize to new inputs.

Artificial neural networks (ANNs), based on the neural architecture of the human brain, are a fundamental ML technology. ANNs operate on inputs using multilayered, interconnected nodes, with each layer capturing increasingly sophisticated features. Deep learning, an ML subfield, uses large multilayered neural networks that are particularly adept at image recognition, natural language processing, and autonomous control. These networks improve iteratively through exposure to extensive datasets, refining their capacity to detect intricate patterns. (Boucher, 2019, pp. 2-3)

Third Wave: Toward Artificial General and Superintelligence:

While first- and second-wave AI systems are often categorized as "weak" or "narrow" AI -effective within limited domains- "strong" or artificial general intelligence (AGI) aspires to human-like versatility across diverse contexts. AGI remains hypothetical but represents a qualitative advance in AI power.

Beyond AGI is the notion of artificial superintelligence (ASI) that would exceed human intellectual capabilities in all areas. Theoretical constructs such as the technological singularity envisage a point where AI autonomously self-improves beyond human control, triggering rapid, exponential advancement. Debates persist over the possibility and timing of AGI and ASI development. Some believe that incremental improvements, in line with Moore's Law or AI-assisted design of successor machines, may lead to AGI. Others highlight fundamental limitations in current technologies and caution against overoptimism. (Boucher, 2020, pp. 13-14)

2. Using Ai Tools As Research Assistants—Practical Applications in International Relations

a. AI Tools and the Reshaping of Research Structures in International Relations

Artificial Intelligence (AI) is a new field, especially when compared to older fields such as philosophy, neurobiology, evolutionary biology, psychology, economics, political science, sociology, anthropology, control engineering, statistics, and others that have studied intelligence for a long time. AI can be thought of as "synthetic psychology," "experimental philosophy," or

"computational epistemology," which means the study of knowledge. In this context, AI serves as a methodological framework to explore the nature of knowledge and intelligence, employing sophisticated and powerful experimental tools than those traditionally available. (David L & Alan K, 2023, p.12)

In January 2023, a notable controversy arose when ChatGPT was listed as a co-author on several scientific and medical publications, as reported by Nature. At least four articles—including both preprints and peer-reviewed papers—credited the AI tool as an author, prompting widespread ethical debate. The consensus that has since emerged among academic journals and research institutions is unequivocal: AI models and language tools are not eligible for authorship. This position is grounded in the recognition that such systems cannot assume responsibility for content, contribute original intellectual input, or provide final manuscript approval—criteria central to established authorship guidelines. (Ahmed S, 2023, p. 1154)

Recent studies indicates that international relations is experiencing a structural transformation driven by rapid AI advancements. The emergence of generative AI technologies marks the beginning of a new epoch for diplomacy, radically changing the way states communicate, negotiate, and interact. In a complex and interconnected global landscape, the demand for sophisticated analytical tools has grown. AI now plays a critical role, enhancing data analysis and predictive modeling, and enabling diplomats to make informed decisions based on extensive and heterogeneous datasets. Through the use of advanced algorithms and machine learning techniques, diplomatic actors can identify trends, anticipate conflicts, and adapt negotiation strategies, thereby increasing the precision and effectiveness of diplomatic practice. (Najla, 2024)

Large language models (LLMs) such as GPT-4, BERT, LLaMA, and Bard (Gemini) have recently gained prominence, offering user-friendly and powerful methodologies for language analysis. These models utilize deep learning, large-scale computational resources, and large amounts of training data to produce contextually relevant and coherent text that is characterized by predictive functionality. The public release of ChatGPT and similar LLMs has sparked intense debate about their use applications and misuses in political science and international relations. (Álvaro & Tomasa, 2025, p. 3)

The ability of AI to process and analyze large datasets that are produced by complex global interactions—and to uncover hidden patterns—positions these technologies as new epistemological tools. Just as the behavioral revolution of the 1960s introduced quantitative and statistical methodologies grounded in positivist epistemology, it is credible that the coming scientific revolution in international relations will be driven by intelligent tools capable of fundamentally reshaping our understanding of global phenomena. AI's capacity to analyze big data, predict trends, detect real-time dynamics, and facilitate rapid, data-driven decision-making

calls for an urgent reconsideration of international relations' epistemological and methodological foundations amidst the current AI revolution.

b. Applied Models for Using Chatbots in Academic Writing in International Relations

The integration of artificial intelligence (AI) technologies into academic writing holds significant promise for scholars in international relations (IR). One of the main challenges is the efficient application of AI tools throughout IR subdisciplines -such as conflict studies, foreign policy, and international cooperation- and determining the most suitable tools for examining specific international phenomena. This challenge is compounded by the limited technical expertise many IR researchers possess regarding advanced AI applications.

Among the various AI tools that can be applied to IR research, we will discuss the following tools:

- **ChatGPT:** the Chatbot Generative Pre-trained Transformer (ChatGPT), developed by OpenAI, is a form of artificial intelligence (AI) software specifically designed to simulate human-like conversations. Indeed, ChatGPT holds significant potential as a valuable tool for tasks such as automated draft creation, article summarization, and language translation—functions that can improve the efficiency and simplicity of academic writing. However, its application in scientific authorship raises important ethical concerns, underscoring the need for clear guidelines and regulatory oversight. (Michele, Fabio, & Alberto, 2023, p. 1)

Thus, Researchers in the field of International Relations can effectively use ChatGPT as a research assistant. For instance, when prompted to propose new research topics in geopolitics, the output was as illustrated in the figure below.

Figure 3: The main fields of research in geopolitics

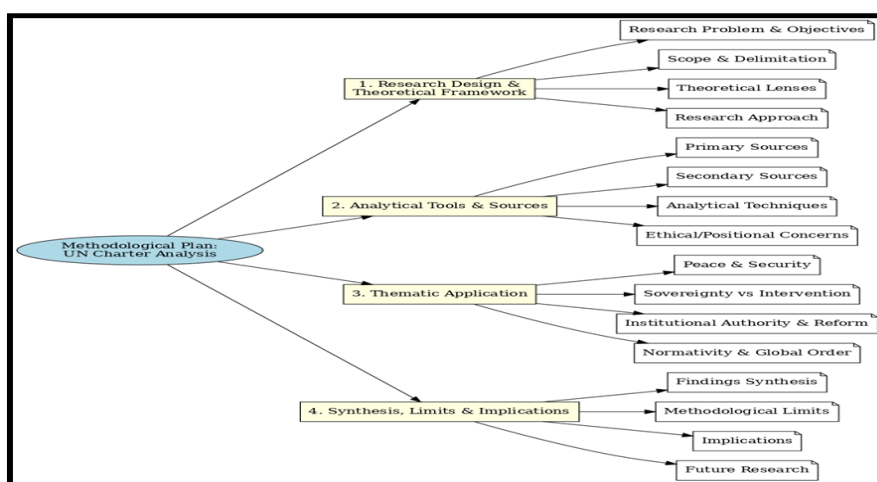
I. Geopolitical Shifts

1. **The Reconfiguration of Global Power: The Rise of "Middle Powers" in a Multiplex World Order**
Case studies could include Türkiye, Indonesia, Brazil, or South Africa navigating between major powers.
2. **Post-American Global Order? Comparative Regional Responses to U.S. Strategic Retrenchment**
Focus on how regions like the Middle East, East Asia, and Latin America adapt to perceived U.S. decline.
3. **Eurasian Geopolitics and the New Silk Roads: China's BRI in the Face of Global Pushback**
Analysis of competing connectivity strategies, infrastructure diplomacy, and regional resistance.
4. **The Indo-Pacific as a Geostrategic Construct: Between Strategic Imagination and Regional Reality**
Critically assess whether the Indo-Pacific is a cohesive strategic space or a fragmented narrative.
5. **Geopolitics of the Arctic: New Frontiers of Competition and Cooperation**
Explore overlapping claims, military buildup, and resource politics in a warming Arctic.

Source: OpenAI, ChatGPT, Large language model.

Additionally, ChatGPT proves valuable in the analysis of political and international documents. Upon request to develop a conceptual mind map outlining a methodological framework for examining the Charter of the United Nations, the model produced a coherent and detailed research plan. Such outputs offer a foundational framework that can assist researchers in gaining an initial, structured understanding of inter/national documents.

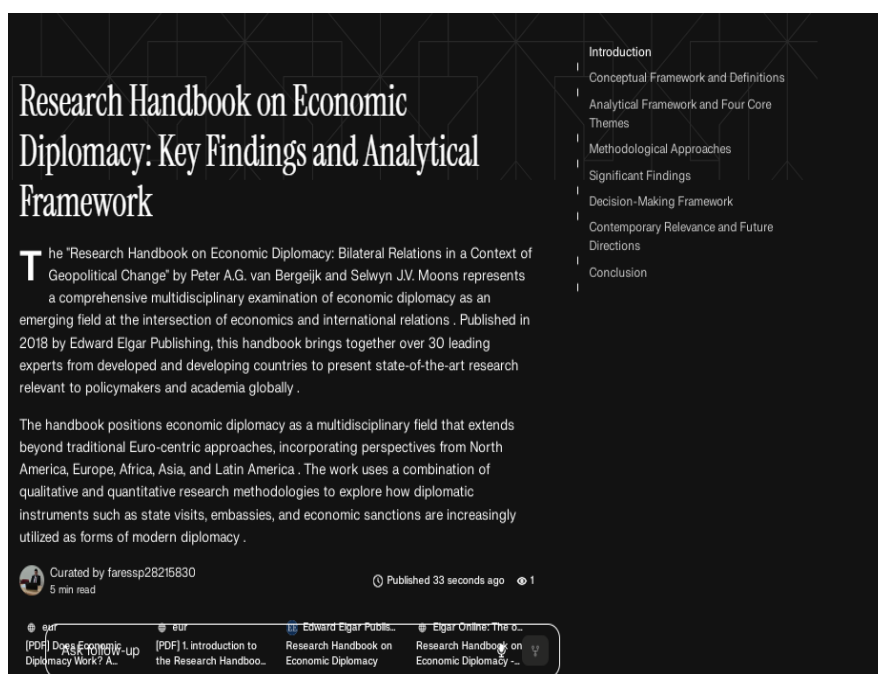
Figure 4: A conceptual mind map for analyzing the United Nations Charter



Source: OpenAI, ChatGPT, Large language model.

-**Perplexity**: this platform leverages artificial intelligence to function as an advanced academic search tool. While writing this manuscript, I requested to do a quick research about "the Research Handbook on Economic Diplomacy" by van Bergeijk and Moons. I opened Perplexity and typed the following prompt: **"You are an expert in international relations and economic diplomacy. Please summarize the key findings and methodology from "Research Handbook on Economic Diplomacy" by van Bergeijk and Moons, focusing on its analytical framework and significant conclusions."**

Figure 5: Summary of the Research Handbook on Economic Diplomacy



Source: PerplexityAI, *Perplexity*, Large language model.

The Perplexity AI tool generated a brief summary on the given topic (figure 5), for each factual claim presented, the tool provided a hyperlinked inline citation pointing to the original source. Furthermore, it compiled a comprehensive list of all sources that were referenced in the composition of the summary. Therefore, Perplexity AI is not just a chatbot, it is an Answer Engine.

- **Gemini**: launched on December 6, 2023, by Google DeepMind, is a state-of-the-art multimodal AI chatbot that integrates advanced large language models (LLMs) and sophisticated natural language processing (NLP) techniques to rival leading models such as OpenAI's ChatGPT and GPT-4. Unlike previous methods which merged individually pre-trained modality-specific components, Gemini is

natively multimodal, pre-trained to natively understand and reason across text, images, audio, and video, enabling superior conceptual and complex reasoning capabilities. (Muhammad & Norah, 2024, p. 2)

In academic contexts, particularly within International Relations (IR), Gemini offers comprehensive support throughout the writing process. It provides exceptional capabilities for processing extensive information landscapes and discerning emergent trends, particularly in the context of inconstant and rapidly evolving geopolitical events. For instance, in assessing the escalation risks following Israeli strikes on Iran in June 2025, Gemini produced a detailed analysis * highlighting a shift from covert conflict to overt state confrontation, emphasizing the security dilemma as the core causal driving this dynamic, and expressed a clear shift from a 'shadow war' paradigm to direct state-on-state conflict.

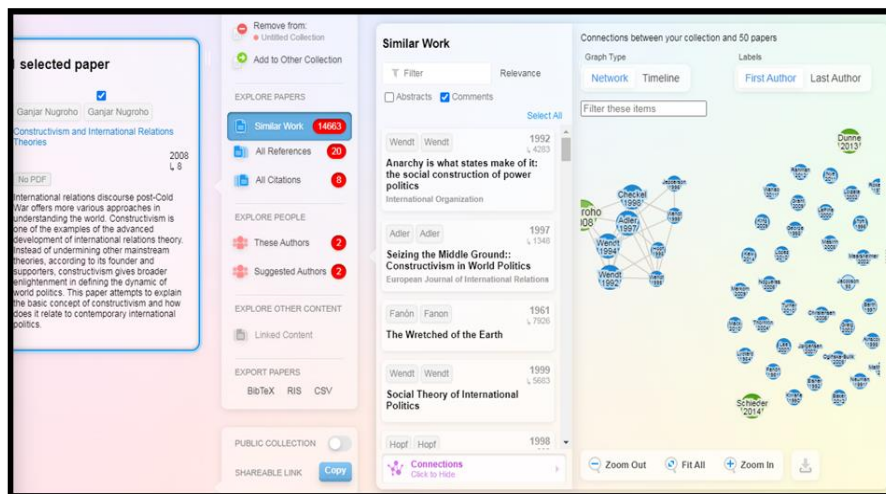
The reasoning given by Israel for its military attacks—namely, the desire to 'degrade, destroy, and eliminate the threat' posed by Iran's nuclear weapons program while preserving its own existence—constitutes a good example of the underlying dynamics of the security dilemma., wherein actions taken by one state to enhance its security are perceived as threatening by another, leading to a reciprocal cycle of military buildup and heightened tension. Gemini's report also noted the 'limited or ineffective' nature of Iran's retaliatory missile response, attributed to advanced Israeli defensive capabilities, a factor that could paradoxically influence future escalatory calculations by either party.

In summary, Gemini's advanced capabilities facilitate the rapid extrapolation of emergent geopolitical events. Its efficacy stems from its capacity to concurrently process big data from diverse internet-based sources. This comprehensive processing enables the projection of plausible future scenarios. For researchers in the field of International Relations, this capability is instrumental for comprehending the complex dynamics of swiftly unfolding events.

- **Research Rabbit:** is an advanced research platform, launched in August 2021, which aims to simplify literature discovery and academic networking. Often described as "Spotify for papers," its main feature is the visualization of related literature and researchers and making personalized suggestions for academic papers based on the user-added selections, thereby mirroring the algorithmic approach of music streaming services. (Ritu, et al, 2022, pp. 215-216)

In International Relations research, the platform transforms traditional literature review methodologies by enabling visual and interactive exploration of scholarly networks. A search for Ganjar Nugroho's research on "Constructivist Theory in International Relations," for instance, resulted in a network of more than 14,600 connected papers, demonstrating the tool's ability to chart large research terrains efficiently.

Figure 6: A network map of the literature related to Ganjar Nugroho's article on Constructivism in International Relations.



Source: Research Rabbit, Beta 2025, Literature Review Tool with AI.

This platform allows for a rapid yet thorough evaluation of a source's scholarly context and influence. As researchers contend with an ever-expanding volume of publications, ResearchRabbit provides the essential edge by transforming the literature review from a time-consuming manual search into a dynamic and highly efficient process of discovery

Paperpal: a sophisticated AI-powered academic writing assistant designed to assist researchers and students throughout the entire scholarly writing process. Leveraging advanced generative AI algorithms, Paperpal provides a wide range of functionalities such as title and abstract generation, professional paraphrasing, multilingual translation, literature search, scientific question answering, and plagiarism checking, thus positioning itself as a comprehensive tool for academic excellence.

One of the significant challenges that researchers in international relations face is coming up with innovative and original research topics. Paperpal addresses this challenge with a brainstorming feature that facilitates the creation of new topics for dissertations and research articles. For instance, when prompted, Paperpal suggested different topics related to emerging challenges in international relations over the last decade.

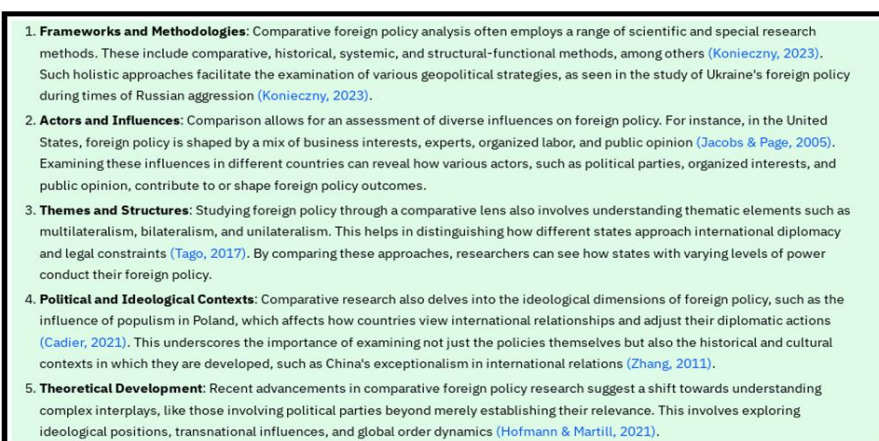
Figure 7: Emerging Challenges in International Relations as Identified by the Paperpal AI Tool (Brainstorming Technique).



Source: Paperpal, 2025, AI writing and citation tool

The "Research & Cite" feature further enables researchers to ask precise questions and receive scientifically validated answers from various references. For example, while researching the use of the comparative approach in foreign policy analysis, Paperpal provided a description of this method that involves comparing the foreign policies of different states or actors in order to reveal similarities, differences, and underlying patterns. This approach allows researchers to trace general trends and understand forces that shape foreign policy choices in different contexts.

Figure 8: how to use of the comparative method in studying foreign policies



Source: Paperpal, 2025, AI writing and citation tool

Additionally, Paperpal offers a PDF chat feature, which allows researchers to engage with a large volume of research papers within a limited time. Through this option, users can pose key questions and get results straight from research papers, greatly improving the quality of research by allowing an in-depth review of related literature. Paperpal also assists in reviewing articles and research papers prior to submission to academic journals, to ensure that they meet the set standards in the scientific community. The figure below illustrates an example with a hypothetical research paper uploaded to the tool, demonstrating the resulting output.

Figure 9: Manuscript and research papers review service with the Paperpal tool.



Source: Paperpal, 2025, AI writing and citation tool

Paperpal effectively identifies potential rejection risks in submitted manuscripts by accurately critical deficiencies across various dimensions, including metadata accuracy, language quality, structural coherence, referencing standards, and the presentation of figures and tables. Addressing these issues is essential for enhancing the manuscript’s overall quality and increasing its likelihood of acceptance and successful publication.

The overview of these AI-driven tools highlights the transformative impact of artificial intelligence on scientific research and academic writing. AI technologies are reshaping traditional methodologies by enabling the processing of big datasets, facilitating experimental design, generating innovative ideas, and producing scholarly content with high efficiency. This paradigm shift promises to revolutionize research preparation, accelerating knowledge production and dissemination.

Nonetheless, wholesale dependence on AI tools for academic work is a matter of serious ethical concern within the academic community. The generation of research of research outputs exclusively through AI assistance, without due

acknowledgement or critical review, constitutes academic misconduct and plagiarism, regardless of the factual correctness of the generated content. Therefore, while AI offers powerful support to researchers, maintaining scholarly integrity demands that these tools be employed as research assistants rather than substitutes for original intellectual contribution.

3. The Limits of Ai Tools in International Relations: Between Ethical Considerations and Technical Challenges

a. Ethical Considerations and Challenges of AI in Academic writing

The use of artificial intelligence (AI) in the generation of scientific papers presents significant ethical challenges related to authorship and originality. Independently generated texts may be viewed as reflections of technological competence rather than genuine academic contributions, thereby threatening their classification as cases of academic misconduct.

Furthermore, an overreliance on AI tools threatens the fundamental educational goals of developing researchers' core skills in critical synthesis, comprehensive reading, and scholarly writing. Therefore, AI should serve as an augmentative resource that complements, not substitutes for intense scholarly training. Overreliance on such technologies might weaken researchers' abilities to detect substantial errors, thereby inhibiting scientific knowledge and innovation advancement.

The academic community remains divided on the issue of AI-assisted authoring. While some stakeholders express significant concerns, especially over AI playing a role in the primary writing and editing tasks, others recognize its utility in supplementary roles such as data transcription. A balanced approach has been proposed, that promotes a synergistic model where AI produces first drafts, while researchers are still responsible for writing up the substantive and interpretative parts of manuscripts, thereby preserving intellectual accountability. (Karim Hamda & Mostafa Ahmed, 2024, pp. 153-154)

Current discourse highlights the ethical necessity of transparency in AI usage within scientific writing. A key recommendation is the mandatory disclosure of AI tool use by providing clear statements within published articles. However, the effectiveness of such policies relies on authors' good-faith compliance, which cannot be unequivocally guaranteed. Early adoption phases may create a stigma associated with AI disclosure, as reviewers and readers might perceive AI-assisted works— even if AI was only used for linguistic refinement—as being less stringent or reliable. Although empirical data on the impact of disclosure on peer review outcomes are not yet available, implicit biases could plausibly negatively affect acceptance rates. (Steven R. Cooperman & Roberto A. Brandão, 2024, p. 2)

Moreover, the use of AI for superficial rephrasing aimed at disguising plagiarism detection constitutes a serious breach of academic integrity. Plagiarism,

defined as the appropriation of another's intellectual efforts without significant original contribution, is not mitigated by mere lexical substitution. "Algorithmic paraphrasing" fails to contribute new analysis or insight and thus remains a form of plagiarism irrespective of technological mediation. It is thus advisable that journal editors make use of advanced AI-powered detection tools that have the capacity to detect both direct copying and text altered by algorithmic revision, thereby upholding ethical standards. (Michele, Fabio, & Alberto, 2023, pp. 3-4)

A significant issue of relying on artificial intelligence is the exclusion of expert human judgment, which is foundational to the scientific process. AI analyses, unguided by domain-specific oversight, may perpetuate and amplify biases and errors in training datasets, thus undermining the validity of findings and potentially resulting in incorrect or unfair conclusions. The active involvement of subject-matter experts throughout the research lifecycle—from experimental design to manuscript finalization—is required to ensure the quality, reliability, and integrity of scientific outputs. (Michele, Fabio, & Alberto, 2023, p. 4)

b. Technical Challenges and AI tools in Academic writing

Artificial intelligence (AI) models, especially those based on deep learning architectures, are often described as "black boxes" due to their complex internal operations, which make understanding difficult—particularly for the non-expert. One of the most significant issues in academic discourse relates to the accuracy and reliability of AI-generated textual content. Language models such as ChatGPT have been shown to produce outputs containing factual inaccuracies and unintentional plagiarism, thereby risking the integrity of scholarly work, especially when erroneous citations or fabricated references are involved. (Ahmed S, 2023, p. 1154)

The misuse of AI-generated research can be driven by diverse motivations, including financial gain, professional recognition, career advancement, and CV enhancement—concerns particularly relevant for early-career researchers facing intense competition. Although AI can streamline research workflows, it simultaneously threatens the integrity of scientific inquiry and the credibility of authentic human scholarship. (Bahammam, Trabelsi, Pandi-Perumal, & Jahrami, 2023, p. 153)

Empirical studies have demonstrated that AI language models can produce scientific abstracts with a high degree of realism, sometimes indistinguishable from genuine texts and capable of deceiving expert reviewers. However, the performance of these models heavily depends on the quality and representativeness of their training data. In specialized fields, limited access to comprehensive and high-quality datasets results leads to biased models, contextual misunderstandings, knowledge gaps, and deficient data extraction. (Anil, Praveen, Mohammad Zubair, & Krishnakant, 2025, p. 535)

Alkaissi and McFarlane (2023), in their article "Artificial Hallucinations in ChatGPT: Implications in Scientific Writing," highlight that despite the linguistic sophistication of large language models like ChatGPT, their accuracy and reliability in scientific contexts remain uncertain. They introduce the concept of "artificial hallucinations," wherein AI generates plausible but fictitious content that is not based on reality. (Hussam & Samy I, 2023, pp. 1-3)

Furthermore, Walters and Wilder (2023) examined bibliographic errors produced by ChatGPT-3.5 and ChatGPT-4. Their analysis of 636 citations across 42 multidisciplinary literature reviews found that 55% of GPT-3.5 citations were fabricated, compared to 18% for GPT-4. Moreover, among authentic citations, substantive errors were present in 43% (GPT-3.5) and 24% (GPT-4). These findings underscore improvements in GPT-4 but also highlight persistent reliability challenges. (William H & Esther, 2023, p. 2)

Consequently, while AI can augment research productivity, its outputs must be critically evaluated and supplemented by expert judgment to maintain scientific integrity.

Conclusion:

This research paper examined the integration of artificial intelligence (AI) tools as cognitive and methodological aids in the preparation of academic research and articles within the field of International Relations. By focusing on a selection of prominent AI tools, including ChatGPT, Gemini, Research Rabbit, Perplexity AI, and Paperpal, the study explained their scientific applicability across various stages of the research lifecycle. Specifically, it demonstrated their utility in generating innovative ideas and topics, facilitating comprehensive literature reviews, extending the limitations of traditional reference collection methods, assisting in the development of research plans, refining manuscript language, correcting spelling and grammatical errors, and adapting articles to increase publication chances.

As a result, the study concluded with a set of findings that can be summarized in the following points:

- Artificial intelligence tools can revolutionize traditional methods in academic writing and research, considering the capabilities and promises these tools now offer in enhancing research productivity and saving time and effort.
- The impact of artificial intelligence tools is not limited to natural, experimental, and medical sciences but also extends to the humanities and social sciences, including the field of international relations, given their ability to handle big data, analyze events, predict trends, and make decisions.
- Artificial intelligence tools provide researchers in international relations with intelligent capacities that assist them in preparing their research and articles,

by developing new research techniques and methods that facilitate the research or publication process.

- Researchers in international relations discipline can scientifically apply artificial intelligence tools when preparing research and manuscripts at different stages of the research process. ChatGPT can be effectively employed for brainstorming, generating ideas, and analyzing political documents. Perplexity AI offers complex answers and citations from scientific literature. Research Rabbit enables visualizing and swiftly reviewing related literature networks. Paperpal aids in various writing tasks and reviewing articles and research.
- Complete reliance on AI tool outputs introduces significant technical challenges, as they may produce errors or "artificial hallucinations" leading to unreliable content. Furthermore, a critical concern is their propensity to produce fabricated or incorrect citations in AI-generated texts, necessitating verification by the researcher.
- Misuse of these tools could also raise ethical concerns about the permissibility of their use in scientific research, considering their ability to produce scientific content, which may lead to academic plagiarism and the lack of disclosure about whether the research is human-made. Moreover, an over-dependence on these technologies risks undermining the researcher's critical scientific spirit, and limiting their research and writing skills.

Recommendations:

- Using AI tools in academic research necessitates robust guidelines to ensure they are used properly.
- These tools should help researchers, not replace their knowledge and judgment. Therefore, complete reliance on their output is strongly discouraged.
- Universities, research centers, and journal editors should create clear rules for using AI ethically.
- Researchers must disclose the use of AI in their work prior to publication.
- All AI-generated content, including data and ideas, must be meticulously checked by researchers to avoid mistakes that could harm the research's quality and trustworthiness

Footnotes:

*see: <https://shorturl.at/MATty>

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