RESEARCH ARTICLE

RESISTING NEO-COLONIALISM: A COMPARATIVE ANALYSIS OF CHINESE AND AMERICAN LARGE LANGUAGE MODELS * **

Haluk GERAY* , Şafak ETİKE******

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This study complies with research and publication ethics.

Abstract

This study argues that large language models are not merely technical tools but socio-technical apparatuses that perform ideological functions within the global knowledge order. It comparatively examines the responses of the U.S.-based *ChatGPT* and the China-based *DeepSeek* to questions concerning the developmental obstacles faced by Global South countries. The aim is to reveal how the legacies of colonialism, developmentalist discourses, and epistemic inequalities are represented in these models' outputs. A mixed methodological design combining thematic analysis and critical discourse analysis was employed to evaluate the models' responses in terms of content diversity, critical depth, and ideological orientation. The findings show that ownership structures, data ecologies, and political–economic positioning are concretised in the models' textual productions. While *ChatGPT*'s closed intellectual property regime and reliance on cloud monopolies reproduce hegemonic structures, *DeepSeek*'s open-access and low-cost computational strategy reflects an alternative, cost-reduction–driven approach to AI production. Overall, the study demonstrates that artificial intelligence represents not only a technological phenomenon but also a political issue-one that is deeply intertwined with questions of knowledge sovereignty, dependency, and global inequality in the context of the Global South.

Keywords: large language models, cloud-slavery colonialism, global south, knowledge sovereignty.

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*** Professor, Ankara University, Faculty of Communication, Ankara, Türkiye.
hgeray@ankara.edu.tr, ORCID: 0000-0003-1405-7115.

**** Associate Professor (PhD), Ankara University, Faculty of Communication, Ankara, Türkiye.
safaketike@ankara.edu.tr, ORCID: 0000-0002-3055-7876.

ARAŞTIRMA MAKALESİ

YENİ SÖMÜRGECİLİĞE DİRENMEK: ÇİN VE AMERİKAN BÜYÜK DİL MODELLERİNİN KARŞILAŞTIRMALI ANALİZİ* **

Haluk GERAY* , Şafak ETİKE******

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Bu çalışma araştırma ve yayın etiğine uygun olarak gerçekleştirilmiştir.

Öz

Bu çalışma, büyük dil modellerinin yalnızca teknik araçlar değil, küresel bilgi düzeninde ideolojik işlevler üstlenen sosyo-teknik aygıtlar olduğunu ileri sürmektedir. Araştırma, ABD merkezli *ChatGPT* ile Çin merkezli *DeepSeek* modellerinin Küresel Güney ülkelerinin kalkınma engellerine ilişkin sorulara verdikleri yanıtları karşılaştırmalı biçimde incelemektedir. Çalışmanın amacı, bu modellerin metinsel çıktılarında sömürgecilik mirası, kalkınma söylemleri ve epistemik eşitsizliklerin nasıl temsil edildiğini ortaya koymaktır. Yöntem olarak tematik analiz ve eleştirel söylem çözümlemesi birlikte kullanılmış, modellerin yanıtları içeriksel çeşitlilik, eleştirel derinlik ve ideolojik yönelim açısından değerlendirilmiştir. Bulgular, mülkiyet yapılarının, veri ekolojilerinin ve politik-ekonomik konumlanmaların modellerin metinsel çıktılarında somutlaştığını göstermektedir. *ChatGPT*'nin kapalı fikri mülkiyet rejimi ve bulut tekellerine dayalı yapısı hegemonik yapıları yeniden üretirken, *DeepSeek*'in açık erişim ve düşük maliyetli hesaplama stratejisi yapay zekâ üretimine alternatif, maliyet odaklı bir yaklaşımı yansıtmaktadır. Araştırma, yapay zekânın Küresel Güney açısından yalnızca bir teknoloji meselesi değil, bilgi egemenliği, bağımlılık ve eşitsizlik ilişkileri bağlamında politik bir mesele olduğunu ortaya koymaktadır.

Anahtar Kelimeler: büyük dil modelleri, bulut-köleci sömürgecilik, küresel güney, bilgi egemenliği.

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** Bu çalışmanın çevirisi araştırmacılar tarafından yapılmış, çeviride yapay zekâ destekli çeviri programı *DeepL* ve dil modeli *ChatGPT*'den faydalanılmıştır.

*** Profesör Doktor, Ankara Üniversitesi, İletişim Fakültesi, Ankara, Türkiye.
hgeray@ankara.edu.tr, ORCID: 0000-0003-1405-7115.

**** Doçent Doktor, Ankara Üniversitesi, İletişim Fakültesi, Yeni Medya ve İletişim Bölümü.
safaketike@ankara.edu.tr, ORCID: 0000-0002-3055-7876.

Introduction

Understanding global capitalism today requires recognising its enduring ties to colonialism. The postcolonial era replaced military domination with more subtle mechanisms of exploitation. At the same time, modernisation and development theories in the social sciences promoted the idea that newly independent nations could emulate the industrialised North. The neoliberal and globalisation agendas of the 1990s perpetuated this same logic.

This historical context situates digitalisation within a broader continuity of colonial power. Like the shift from colonialism to neo-colonialism, the early expansion of digital technologies was framed by promises of development and global integration but ultimately produced new dependencies. Since the 1980s, the growth of the computer and software industries, especially in information technologies, has deepened the asymmetry between technology-producing and technology-consuming nations. The desktop-based ecosystem that emerged institutionalised dependency on external data and software infrastructures, embedding digital systems within global power relations and laying the groundwork for a transition from desktop colonialism to cloud-slavery colonialism.

In this transformation, large language models (LLMs) have emerged as some of the most visible and consequential manifestations of cloud infrastructures. Trained on vast datasets, these models introduce radical innovations in natural language processing, content generation, and information access, while simultaneously posing significant risks of bias, ideological manipulation, and epistemic injustice. Recent studies have demonstrated that these models are not merely technical instruments, but epistemic actors imbued with cultural and political significance (Alvarado, 2023; Manvi et al., 2024). The academic debate on large language models (LLMs) as epistemic actors has increasingly focused on their ideological orientations. Scholars argue that the way AI "thinks" reflects not only its training data but also the worldviews of its developers. Ideological and political biases have been traced to design choices, dataset composition, and even prompt framing. Moreover, bias-mitigation filters can inadvertently introduce new forms of political partiality, raising concerns about intentional manipulation.

Our study situates these debates within the context of the Global South, examining whether large language models operate not only as technical tools but also as ideological actors in development relations. *ChatGPT* and *DeepSeek* were asked to identify the obstacles hindering Global South countries from catching up with the affluent North, and their responses were thematically analysed. This comparison illuminates how AI systems intersect with the legacies of colonialism and persistent global inequalities, revealing how they may reproduce the development paradigm along a continuum from desktop colonialism to cloud-slavery colonialism while constraining the Global South's capacity to articulate alternative trajectories.

Beyond the ideological orientations of their outputs, this study also compares *ChatGPT* and *DeepSeek* in terms of ownership, development processes, and political–economic positioning. It asks who developed these models, what data sources and infrastructures sustain them, how they are embedded within global power relations, and how these contexts shape their responses. By moving beyond technical performance, the analysis explores how large language models assume distinct roles within the global knowledge order and what policy or solution visions they advance for the Global South.

The article first traces the historical shift from desktop colonialism to cloud colonialism and situates large language models within this global information order. It then examines the ownership structures and political–economic positioning of *ChatGPT* and *DeepSeek*, discussing their ideological orientations and potential biases. The methodology section outlines the research design and data collection process, followed by two analytical subsections: the first compares the models' responses on the Global South, and the second presents the results of the critical discourse analysis.

The Reproduction of Neo-Colonialism

The paper by Daron Acemoğlu and Simon Johnson, which later earned them the Nobel Prize, was originally published in 2001, yet the award was granted only in 2024. This 23-year gap may be interpreted as the revival of a development paradigm once deemed obsolete in the 1970s. The paradigm in question is commonly known as the modernisation and communication, or stages-of-growth, paradigm. What, then, was this paradigm, and what were its defining features? It was the Modernisation and Communication approach, which posited that newly independent nation-states emerging after World War II could close the gap with developed countries by following similar paths of modernisation. The theories within this paradigm were grounded in the assumption that the developmental processes experienced by advanced economies would inevitably be replicated by developing nations (Ercan, 1996, pp. 104-130). From the 1950s onward, the Modernisation and Communication Approach became the dominant framework of this thinking. According to this view, mass communication media such as radio, cinema, and newspapers would serve as "magic multipliers" in the modernisation process (Geray, 1994, pp. 113-116). Although early formulations of the approach largely overlooked point-to-point communication technologies such as telephony and telecommunications, by the 1970s, these technologies had also been incorporated into the broader modernisation and communication framework.

An important development following World War II was the independence of former colonies, particularly in Africa and Asia, which led to the emergence of numerous new nation-states collectively referred to as the Global South. It was proposed that these countries should modernise along the lines of the industrialised North to close the developmental gap between them.

This perspective gave rise to modernisation and development theories within the social sciences. Modernisation theories were grounded in analyses of the processes advanced countries had undergone, drawing on the social dichotomies that characterised the transition of Western societies from traditional to modern forms. The implicit assumptions of this developmental model can be summarised as follows (Geray, 1994):

a. The modernisation process was assumed to follow similar stages.

b. Once various institutions were established, even as nuclei, they would trigger irreversible developments across other sectors and institutions and along with the overall trajectory of development.

c. Modernisation would proceed from the top down, from cities to rural areas.

d. The causes of underdevelopment were assumed to be internal to the country, with little consideration of external relations or colonial exploitation.

Modernisation theories became particularly influential in the field of communication. Daniel Lerner's seminal 1958 work, The Passing of Traditional Society, based on field research in several Middle Eastern countries, including Türkiye, remains one of the most foundational texts of this tradition. According to Lerner, certain processes experienced by Western countries are universal: increasing urbanisation leads to higher literacy rates; higher literacy increases exposure to mass communication media; and this exposure, in turn, fosters greater economic participation (measured by per capita income) and political participation (voting) (Lerner, 1964). A similar modernisation trajectory, Lerner argued, was unfolding in newly independent states. At the core of this process was a transformation in the modes of transmitting ideas and attitudes: a shift from oral communication to mass communication. Lerner sought to validate his theory through both in-depth interviews and large-scale survey research.

New colonialism in the context of the Global South and North

Contemporary neoliberal approaches to good governance and market development continue to maintain their hegemony by taking the capitalist North as a model and urging developing countries to follow its path. The institutional economics underpinning this view has evolved into new institutional economics, which integrates neoliberal notions of governance and market efficiency. Prevailing perspectives on governance reforms in the Global South implicitly define the state's role, while markets can allocate resources and stimulate entrepreneurship essential for development (Khan, 2012, pp. 1-4). Market failure is thus attributed to ineffective state intervention, and its remedy is framed as strengthening governance capacities to enhance market efficiency, often through the privatisation of public services and industries.

Neoliberal good governance models draw on the theoretical contributions of the new institutional economics approach that emerged after the 1980s. These studies typically aim to identify positive correlations that support the thesis that governance reforms designed to improve market efficiency will foster economic growth in developing countries and promote their convergence with advanced industrialised nations (Khan, 2012, pp. 11-14). In contrast, alternative approaches evaluate the processes of change and transformation in different countries, such as those of the Global South, within their historical contexts, seeking to develop coherent models of historical change. The strength of this perspective lies in its recognition that, while general similarities in social change may exist across countries, different combinations of factors and variables may contribute to solving similar problems in different contexts. Such an approach requires the integrated use of historical, political, social, and economic knowledge. Case studies and comparative analyses of country groups are therefore essential in this regard.

Critical approaches and neo-colonialism

Critical approaches challenge both the assumption that modernisation always follows the same developmental trajectory everywhere and the tendency to attribute underdevelopment to the internal characteristics of newly independent Southern nations. These perspectives emphasise that the earlier form of colonialism, based on territorial occupation, has been replaced by a new form of colonialism grounded in economic relations. Critical schools, particularly the dependency school, argue that the relative underdevelopment of some countries compared to the industrialised world stems from the structural characteristics of the international system and the internalisation of these structures within developing societies. Scholars who advance the critique of cultural imperialism have focused on how communication processes are used to establish and sustain neo-colonialism. For instance, Schiller (1970, pp. 33-44) observed that following the United States' ascent to the top of the international power hierarchy after World War II, American military institutions entered the field of communication and forged alliances with domestic communication industries. According to Schiller, this military–civilian communication–industrial bloc expanded further in the postwar period, increasing its influence over the formulation of U.S. communication policies. He further argued that one of the key reasons for this dynamic was the growing strategic significance of telecommunications, particularly during periods of global tension.

The concept of desktop colonialism was first associated with the restructuring of capitalism in 1995 (Geray, 1995). This restructuring, which coincided with the rise of neoliberalism and new right-wing policies, was said to aim to create a new field of accumulation in which capitalism greedily extended its reach into a type of product that had not previously been part of international

trade. This field was the service sector and its intangible goods. Intangible goods, unlike tangible ones, are products whose non-material components carry the primary value. Although the story in a book is on paper, a tangible commodity, the real value of the product derives from its intangible content. Likewise, software can be sold together with a memory device, but its actual value comes not from the hardware itself but from the code within it. Economists define all communicative actions as intangible products.

When the United States withdrew from UNESCO (United Nations Educational, Scientific, and Cultural Organisation) in 1980, it declared that issues related to communication regulations should be discussed on commercial rather than political platforms. At that time, UNESCO's efforts to address the imbalance in communication flows between developing and developed countries were coming to an end. This suggests that the United States, having identified the service sector -the domain of intangible goods- as the field in which it held the greatest competitive advantage, began implementing a long-term strategy to establish a new international order. From that year onward, the United States worked to ensure that service-sector products were incorporated into the General Agreement on Tariffs and Trade (GATT), and subsequent GATT sub-agreements included provisions related to intangible commodities. This development effectively meant the liberalisation of services-sector flows between nations. The World Trade Organisation (WTO), established in 1996 to oversee these agreements, institutionalised this transformation. Communication had thus become a matter of the global commercial system rather than of multilateral dialogue, thereby reinforcing neo-colonial exploitation. The service sector includes categories such as communication, information, and professional services, which constitute intangible commodities that underpin a new phase of capitalist accumulation. As Geray (1995, pp. 33-45) argues, the much-celebrated concept of globalisation should, in fact, be understood as a process directly linked to the global circulation of intangible goods. Communication products have ceased to be mere instruments supporting the global military apparatus of the previous era; they have become the very mechanism of exploitation that sustains the logic of the new colonialism.

As a concept, desktop colonialism highlights the growing centrality of digital networks in restructuring capitalism, indicating that priorities have fundamentally shifted. It underscores that digital communication can integrate all forms of communication-voice, image, text, radio, and television-within a single network, emphasising that "a single digital communication network" can deliver all services. Geray (1995, p. 44) offers a strong critique of this service diversification, noting that the transformative capacity of digital communication enables service providers to generate profit by offering a wide array of commodified services: "For example, remote diagnosis and treatment applications in the field of health, foreign language instruction and various vocational courses in education, and computerized product ordering campaigns (such as telemarketing)." Highlighting that computer networks have

been employed by the defence, banking, tourism, and travel industries since the 1950s, Geray stresses that the most significant change brought by digital networks, compared to earlier periods, is their ability to transform individuals and households into network customers.

Developing countries transfer about US$40 billion annually to the traditional services sector, even though only about 8 per cent of this sector is engaged in international trade. Three-quarters of global service production remains concentrated in a few advanced economies, chiefly the United States (Geray, 1995, pp. 44-45). It is evident that within these production relations, digital communication encompasses dependency and exploitation mechanisms in the Global South, no less significant than those of the previous era: "The relationship once defined as electronic colonialism can now be identified as desktop colonialism for the new era" (Geray, 1995, p. 44). The reason for using the term desktop lies in the exponential rise in the number of personal computers in developing countries after the 1980s.

A decade later, the renewed concept of desktop colonialism (Geray, 2005, pp. 189–215) drew upon Herbert Schiller's approach to cultural imperialism. Schiller (1970, p. 9) defines cultural imperialism as "... a process whereby a society is drawn into the modern world system, and its dominant segments are pressured, coerced, or even bribed to reshape their social institutions in conformity with, and even in promotion of, the values and structures prevailing at the center of the world system." In the 2005 revision, desktop colonialism is defined as follows (Geray, 2005, p. 199): "... the totality of actions and policies undertaken by core countries to market, through digital networks, not only the new products of the new accumulation regime in peripheral countries but also all kinds of information and communication technology products (hardware, software, content, services, applications), beginning with high-income segments. In this process, peripheral countries will sell their finite natural resources and, in exchange, will acquire largely inexhaustible commodities such as software, information, and content) (Babe, p. 207)." In Geray's 2005 study, the concept of desktop colonialism is exemplified through an analysis of various Internet applications and communication policies, such as the privatisation of *Türk Telekom*. Furthermore, the feasibility of mitigating desktop colonialism is discussed, and several strategies are proposed to counter this new form of colonialism (Geray, 2005, p. 213):

> These practices can be realised through policies and strategies aimed at strengthening local capabilities and actors. In general, industrial policies aligned with science and technology policies targeting innovative sectors with high added value and based on qualified labour, should constitute the core of this alternative strategy. In addition, communicative strategies ensuring equality, universality, income balance, and the protection of the disadvantaged must not be overlooked.

Qualified labour, as defined, includes the mental workforce in research and research laboratories.

Moreover, both Schiller and Geray propose distinct paths of resistance in their analysis. Schiller advocates a rupture from neo-colonial domination. Such a stance, in his view, would have required withdrawing from Western alliances and pursuing non-alignment or alignment with the Warsaw Pact countries-an option that no longer exists today. Perhaps membership in the BRICS bloc (comprising Brazil, Russia, India, China, and South Africa), whose global influence has recently grown considerably, can be regarded as a contemporary manifestation of Herbert Schiller's politics of resistance[1]. Although BRICS is not configured as a military alliance, it could nevertheless become a locus of resistance if an alternative currency replaces the U.S. dollar and if new investment mechanisms are established outside the World Bank and the IMF. Geray's model of resistance from that earlier period remains equally relevant today: enhancing the local capacity to produce high-value-added goods based on qualified labour through strategic science and technology policies, while simultaneously fostering egalitarian and participatory communication structures.

If we aim to renew our conceptual framework in light of recent developments, this must, as in our earlier approach, be done without abandoning a holistic perspective. Among the emerging concepts are: the notion of an 'Internet Empire' (Mirlees, 2020), describing the United States' use of the Internet for both military and economic exploitation; "platform capitalism" and "platform imperialism" (Dal Yong, 2020; Papadimitropoulos, 2021), which emphasize the growing dominance of digital platforms; and 'data colonialism' (Couldry and Mejias, 2019), which focuses on the extraction and processing of personal data. Providing a comprehensive definition of data colonialism is not an easy task. A close examination of Couldry and Mejias's formulation reveals significant limitations. First, their analysis remains fragmented rather than holistic. By establishing an opposition between historical colonialism (based on raw materials and land) and new colonialism (based on data), it conceals the enduring mechanisms of neo-colonialism that have persisted since the 1950s. Second, by grounding the concept in the processing of data derived from atomised individuals, data colonialism effectively obliterates the structural divide between rich and poor nations-the 'rich North' and the 'poor South'-treating all countries as if they were equal participants within the same system.

The colonialism of the new era: Cloud-slavery colonialism

This section explains why we conceptualise the new form of colonialism, constituting the next stage of desktop colonialism and informed by recent developments, as cloud-slavery colonialism. A holistic perspective within a critical political economy framework is essential for understanding these transfor-

1 The group, which started with four countries, later increased to 10 with the participation of 6 members. The countries that joined later are: South Africa, Egypt, Ethiopia, Indonesia, Iran, and the United Arab Emirates. Türkiye has also applied.

mations. For this purpose, we draw on Yanis Varoufakis's political-economic analysis, particularly because it exposes the growing centrality of financial markets and platform economies. Varoufakis, who served as Greece's Minister of Finance during the period when the 'Green' movement came to power, highlights the extraordinary expansion of global financialization that had already become visible by 2007. The planet's total income was 50 trillion dollars in 2002, while the financial sector's income reached 70 trillion dollars. Yet, within five years -by 2007- the world's income rose to 70 trillion dollars, whereas the financial sector's income skyrocketed to 750 trillion dollars, a tenfold increase (Varoufakis, 2023, pp. 40-43). When the 2008 crisis erupted, the central banks of advanced economies mobilised all available resources to rescue and recapitalise commercial banks, thereby further inflating financial markets.

According to Varoufakis, the primary actors exploiting this vast financial market are cloud capitalists such as *Apple*, *Amazon*, *Google*, *Facebook*, and *Tesla* (2023, pp. 103–108). Only a negligible portion of the money flowing into Wall Street was reinvested in factories, technologies, or agriculture, effectively breaking the capitalist cycle as it had previously functioned. Cloud capital has transformed the very foundation of capitalism's profit-making and market-dependent dynamics. This structure -which Varoufakis characterises as techno-feudalism- has undermined capitalism's mechanism of generating profits and channelling them into productive investment. The fundamental source of capital income is no longer profit reinvested in production but rent. Rent refers to the extraction of abnormally high income derived from ownership or monopolistic control, resulting in the servitude of entrepreneurs who supply products to monopolised platforms.

There is no European capital capable of competing with U.S.-based cloud capital; Europeans, however, attempt to sustain themselves by relying on portions of the wealth accumulated through their past colonial enterprises. In contrast, the countries of the Global South not only lack any form of cloud capital but are also burdened by external debt, remaining trapped in the stranglehold of the International Monetary Fund and the World Bank. The nations of the South have been left with no alternative but to sell their lands, territories, minerals, rare earths, cities, homes, ports, and entire infrastructure networks –including electricity, communications, telecommunications, and railways- as well as state assets, small and medium-sized industries, rivers, and clean water resources.

Geray (2024, 2025) identifies the core features of what he conceptualises as the new stage of desktop colonialism -namely, cloud-slavery colonialism- as follows:

- The World Bank, which keeps peripheral countries under constant squeeze, continues to impose a governance regime designed down to the minuscule detail.

- Colonial institutions are not limited to their boards of directors; they also oppose the development of independent strategies and policies by Southern countries. Numerous examples can be found across the Global South.
- The Cloudalists likewise resist any form of cooperation among developing nations.
- The most powerful aspect of cloud-slavery colonialism lies in its operation through the voluntary participation of individuals, asking questions to AI systems, posting on social media, or taking selfies with smartphones. Because of this voluntarism, one can raise tariffs on tangible goods -as President Trump did in the United States- but such actions invite retaliatory sanctions. By contrast, in cloud-slavery colonialism, the risk of retaliation effectively disappears, since the only countermeasure available is to restrict access to products. As access itself depends on the voluntary participation of billions, no state can easily risk cutting it off.

How Does Artificial Intelligence, as an Instrument of Cloud-Slavery Colonialism, Produce Bias?

Cloud slavery colonialism has expanded its reach through artificial intelligence. Large language models (LLMs) such as *ChatGPT* and *DeepSeek, the most critical instruments of these mechanisms, have* assumed an unprecedented hegemonic role in the production, dissemination, and regulation of knowledge. While offering users the promise of personalised and instantaneous access, these systems simultaneously function as a new form of epistemic domination. Their rise to the position of the "single authoritative source" within education, media, and public knowledge ecosystems has triggered not only a technical but also an epistemological and ethical crisis-one that reproduces cultural codes, value hierarchies, and the legitimacy of knowledge on a global scale. As Alvarado (2023) notes, the emergence of artificial intelligence as a dominant actor in knowledge production reshapes how knowledge is generated and presented, since these tools not only organise information but also reproduce and transform it. Alvarado argues that artificial intelligence is a unique epistemic technology, distinct from other forms of technology, including earlier epistemic technologies, primarily in its design and development. Through language models such as *ChatGPT*, AI has begun to play a direct role in the reproduction and circulation of knowledge and, consequently, in the circulation of meaning itself. This marks the emergence of new epistemic asymmetries and authorities. A major concern is that these technologies, largely designed and produced in Western centres, are developed in accordance with Western ideological orientations and interests. Disinformation represents another critical issue within this field. Yet, as Coeckelbergh (2022) observes, the

formation of epistemic 'bubbles' that confine individuals within closed informational loops poses a risk to democracy, not only because it enables false ideas to dominate public discourse, but also because it undermines individuals' epistemic agency and autonomy. Coeckelbergh further notes that when statistical information is presented directly-or in the form of classifications and algorithmic recommendations-our inclination to seek causal relationships diminishes: "Finding scientific knowledge usually requires effort, whereas today statistical knowledge is provided to us in abundance: as a search result, a suggestion, a news item supported by an AI algorithm, or information disseminated via social media".

Large language models (LLMs) are particularly significant for the role they play in consolidating the new, cloud-based forms of desktop colonialism. The market dominance established through personal computers and software since the 1980s is now being reproduced through cloud computing infrastructures and artificial intelligence systems. In the processes of data collection, processing, and interpretation, LLMs confine users to specific epistemic frameworks, marginalise local modes of knowledge production, and create one-directional dependencies in global information flows. As a result, the capacity of Global South countries to develop contextually grounded information systems and to produce alternative solutions is progressively undermined, turning these models into increasingly ideological instruments. This is not merely a technical problem, but a critical issue of knowledge sovereignty, cultural autonomy, and democratic participation. It is therefore essential to critically examine the ideological orientations, biases, and epistemic positions of these models within the broader processes of knowledge production.

These models are statistical systems designed to generate text by imitating human speech or writing. They process vast amounts of linguistic data collected from the internet, position words within a high-dimensional semantic space, and complete sequences through probabilistic selection (e.g., via the temperature parameter) (Hicks et al., 2024; Licon, 2025). Rather than aiming for factual accuracy, they prioritise producing persuasive, human-like content; as a result, their truthfulness is incidental, often reflecting the random repetition of patterns in their training data (Gunkel & Coghlan, 2025; Buchanan, 2023; Li, 2023). The tendency of these models to generate content indifferent to truth has been discussed in terms of Frankfurt's notion of 'bullshit', which denotes rhetorically persuasive yet factually unconcerned discourse (Licon, 2025). *ChatGPT*'s production of such 'nonsense' or 'hallucinations' stems from its design, which prioritises plausibility over accuracy, and from its training on human language data that is inherently speculative. However, labelling every output as "bullshit" risks underestimating the model's occasional capacity for accuracy and originality (Gunkel & Coghlan, 2025).

Artificial intelligence algorithms are subject not only to technical limitations but also to structural biases that reinforce social inequalities. Risk as-

sessment systems (Zajko, 2021), facial recognition technologies (Buolamwini & Gebru, 2018), and welfare algorithms often disadvantage vulnerable groups, while corporations' use of such systems as tools of labour control (Etike, 2023a; Etike, 2023b) reveals the historical power asymmetries underlying social bias (Gallegos et al., 2023). Biased datasets not only reproduce existing social and political divisions (Manvi et al., 2024; Feng et al., 2023) but also, in some cases, shape users' political judgments (Frackiewicz, 2023; Fisher et al., 2023). Moreover, the political choices embedded in training data and 'bias-correction' filters can lead models to adopt liberal or pro-independence orientations (Walker & Timoneda, 2024), illustrating how the tension between accuracy optimisation and neutrality may itself generate new forms of bias (Fulay et al., 2024).

Studies examining user perceptions also reveal the ideological orientations of large language models. A U.S.-based survey involving more than 10,000 participants found that *OpenAI*'s models were generally perceived as left-leaning, while *Google*'s models were viewed as the least biased (Westwood et al., 2025). Another study comparing *ChatGPT*'s responses with those of 350,000 individuals across 33 countries identified a pronounced left-leaning tendency on issues such as environmental sustainability, civil rights, and income inequality (Becchetti & Solferino, 2025).[2] Paschalides et al. (2025) further demonstrated that these models can be steered not only along a left–right axis but also toward more nuanced ideological positions-progressive left, centre, right, or conservative right-and that fine-tuning with ideologically skewed datasets strengthens such alignments. Similarly, the study "Large Language Models Reflect the Ideologies of Their Creators" shows that Western-trained models emphasise human rights and diversity. In contrast, non-Western models prioritise state control and nationalism (Buyl et al., 2024). Researchers at Stanford University likewise found that large language models' heavy reliance on Global North data introduces geographic biases that weaken the representation of the Global South in knowledge production (Manvi et al., 2024). These asymmetries constrain epistemic diversity, rendering local knowledge systems invisible and turning language models into instruments of epistemic violence on a global scale.

2 Several studies investigating the political biases of large language models have characterized *ChatGPT-4* as 'progressive' and 'liberal' (Choudhary, 2024), while others have found that it tends to generate 'left-liberal' content (Hartmann et al., 2023; Rozado, 2023; Rutinowski et al., 2023). According to Feng et al. (2023), BERT-variant language models tend to exhibit more socially conservative and authoritarian orientations compared to GPT-based variants, whereas Becchetti and Solferino, as noted above, contend that *ChatGPT* displays a marked leftward bias. However, it is important to recognize that the notion of the 'left' employed in such analyses is predominantly defined within the context of Western liberal democracies and the Anglo-American ideological spectrum. Consequently, it reflects political and cultural norms shaped by Western-centric frameworks rather than representing a universal conception of leftist ideology.

The monopolistic order of the West consolidates the dominance of data sets that reflect Western-centric interests, while the labour of low-paid 'ghost workers' contributes to the reproduction of bias and the erosion of human oversight (Grey & Suri, 2019). Intellectual property regimes conceal vast training datasets under the guise of trade secrecy, preventing independent scrutiny and leaving bias detection to the discretion of the technology oligarchy. The constant monitoring of user interactions and the delivery of personalised content, as part of what Zuboff (2019) terms 'surveillance capitalism', reshape social perceptions of reality, reinforcing an ideological framework that presents neoliberal and consumer-oriented values as objective truth. Consequently, large language models operate not merely as text generators but as socio-technical apparatuses that disseminate ideology on a global scale; data monopolies (Srnicek, 2017) encode Western-centric commercial and political interests as universal reality, while closed ownership regimes obstruct transparency and neutralise critique. Hence, the problem of bias and ideology is not a technical malfunction but a structural issue-one that demands profound political-economic transformations in data ownership, the valuation of labour, access to knowledge, and algorithmic governance.

'DeepSeek' and 'ChatGPT': Two Distinct Paradigms

The theoretical framework outlined above shows that large language models function not merely as technical systems but as instruments that reproduce global power relations. Building on this premise, this study compares the responses of the U.S.-based *ChatGPT* and the China-based *DeepSeek*, introduced as models that challenge closed intellectual property regimes and epistemic hierarchies*, to* questions about the structural barriers to development in the Global South. The analysis followed a dual-method design. First, the models' responses were systematically evaluated across thematic and discursive dimensions, examining their concreteness, diversity, and critical depth. Complementing this quantitative assessment, critical discourse analysis explored the ideological positioning of each model, the conceptual frameworks underlying their responses, and their representations of power. Through this integrated approach, the study illustrates how ownership structures, data ecologies, and political-economic alignments materialise in the outputs of both models, exposing how global epistemic asymmetries are encoded within AI systems. Within this framework, the emergence of large language models can be interpreted as a direct outcome of data capitalism and intensifying competition among technological monopolies. Corporations such as *Google*, *OpenAI* (*Microsoft*), and *Meta* have leveraged massive datasets and inexpensive distributed computing power derived from user data (search queries, social media content) and cloud infrastructures (*AWS*, *Azure*) to transform AI development into a strategic field of capital investment. Meanwhile, the escalating AI rivalry between the United States and China has spurred state subsidies and private

capital flows, positioning large language models as the next major platform of global technological power. Corporations increasingly adopt generative systems as new monetisation channels, such as automated customer service and personalised advertising, aimed at replacing the search engine advertising market, valued at USD 286 billion in 2023. The origins of *ChatGPT* trace back to *OpenAI*'s introduction of the Generative Pre-trained Transformer (GPT) architecture in 2018, which pioneered self-supervised learning on massive text corpora. The release of *GPT-3* in 2020, with 175 billion parameters, marked a breakthrough for its human-like text generation, rapidly attracting millions of users. This leap was enabled by *Microsoft*'s USD 1 billion investment and *Azure* cloud infrastructure. *ChatGPT*'s public release in 2022 initiated large-scale user data collection, followed by monetisation through paid subscriptions and API access in 2023. This trajectory illustrates how U.S.-based tech monopolies reproduce the logic of platform capitalism (Srnicek, 2017) within AI, establishing dominance through free access, then generating profit via data monopolisation and cloud dependency. *OpenAI*'s alliance with *Microsoft* has turned AI production and cloud infrastructure into geopolitical instruments, where proprietary, North-centric models limit the Global South's capacity for autonomous AI development and deepen dependencies of data, infrastructure, and algorithms-an expression of cloud colonialism.

The emergence of *DeepSeek* represents a notable rupture in the long-standing dominance of US-based technology corporations within the global artificial intelligence ecosystem. This China-based model distinguishes itself not only through its technical capacity but also through its ownership structure, data resources, and the political-economic strategies underpinning its development. By relying on national cloud infrastructures and domestically sourced datasets, *DeepSeek* articulates an explicit ambition to reduce dependence on North-centric, proprietary systems. Such an approach introduces a new terrain of debate concerning data sovereignty, technological self-reliance, and the reconfiguration of global power relations in AI production. Beyond its technical significance, *DeepSeek* stands as a salient case for reconsidering whether alternative models to cloud colonialism can emerge from the Global South-models grounded in autonomous infrastructures, local data ecosystems, and regionally defined epistemic priorities.

The *DeepSeek* R-1 model was released as an open-source system[3] on Jan-

3 Free and open-source software (FOSS) and creative works rest on the principles of open and free access in the interest of the collective (copyleft). It stands outside the logic of profit based commercial copyright paradigm. In software, open-source licenses make source code and the use of it publicly accessible, whereas proprietary programs keep their code closed so that monopoly rights are established for profit making. Closed-source systems increase the likelihood of hidden backdoors and unauthorized access, while open access allows anyone to modify, improve, and redistribute the code. Because open-source projects involve large, distributed communities of contributors, potential vulnerabilities are typically identified and resolved

uary 20, 2025, marking a major intervention in the closed and proprietary architecture of global AI development. According to Char (2025), three aspects of the model are particularly noteworthy: (1) its performance surpasses *OpenAI*'s o1 model in several respects; (2) it is free to use, and its application programming interface (API) is priced at one-thirtieth of *OpenAI*'s o1 model; and (3) while Western firms reportedly spend between USD 100 million and 1 billion on training costs, *DeepSeek*'s entire model was trained for only USD 5.6 million. This sharp cost asymmetry highlights *DeepSeek*'s challenge to the political economy of AI monopolies: by merging open access with significantly lower computational costs, the model contests the profit-oriented logic of Western AI systems and reshapes global participation in AI research. Experts note that *DeepSeek* has adopted four distinctive strategies to achieve comparable performance at lower cost (Char, 2025): optimising resource use, training only critical components, employing low-memory configurations for faster, cheaper results, and prioritising reinforcement and supportive learning. For instance, while other companies used around 16,000 high-end chips, the *DeepSeek* R1-V3 model operated with only 2,000 (Liu, 2025). This model demonstrates enhanced reasoning abilities and processes prompts step by step through a strategic approach.

According to Bloom (2025), *DeepSeek*'s rapid ascent contains the latent potential for a transition to a new global artificial intelligence paradigm. It demonstrates that China's state-supported development through open-source models has proven more effective than Silicon Valley's commercial company–based approach. While China's strategy enables the rapid diffusion of AI innovations, Silicon Valley's approach remains constrained by commercial structures. Consequently, the emergence of *DeepSeek* and hundreds of other AI firms in China indicates that the centre of AI power is shifting from the West, particularly the United States, toward China. China has chosen an open-source systems strategy to overcome Western gatekeepers, accelerate the spread of innovation, and establish itself as the hub of global AI collaboration. The country's state-supported initiatives have treated open-source AI applications as national resources rather than as corporate assets. Since 2020,

more rapidly enhancing the overall security and resilience of the software. *The Creative Commons* licensing model, based on the libertarian ethos of open collaboration, requires that any derivative work also remain open under the same licensing principle. In other words, if one modifies an open-source system and develops a new product, the resulting code must likewise be shared openly. By contrast, the MIT license used by *DeepSeek* introduces a crucial distinction: it permits derivative works to close their source code. This means that *DeepSeek* could, if it chooses, release a future version as a proprietary commercial product. Similarly, third-party developers building upon *DeepSeek*'s open code may legally privatize their modified versions and commercialize the outcomes. While this flexible approach accelerates innovation and adoption, it also risks reproducing the very enclosure logic-the privatization of the commons-that open-source movements originally sought to resist.

China's open-source strategy has expanded developers' access to AI tools. In recent years, this strategy has been further strengthened through the creation of state-backed open-source operating systems and platforms. This resolution reflects China's ambition to consolidate its leadership in AI and build an independent, self-sufficient digital ecosystem.

Due to the embargo on China's imports of advanced US-origin artificial intelligence integrated systems, the country had no alternative but to pursue a different innovation strategy (Bloom, 2025). China's adoption of open-source practices can be seen as a paradox, given the strict information control present in China when compared with Western and traditional conceptions of human rights. China's artificial intelligence strategy rests on technological development and alignment with core socialist values and state-sanctioned narratives in accordance with the ideological framework of the Chinese Communist Party. Yet AI research in China has advanced not despite this situation but, in many respects, because of it. Economic incentives, bureaucratic efficiency, and the use of information and technology to sustain regime stability all play a role. China's AI roadmap seeks to integrate state-led initiatives with private-sector innovation (Bloom, 2025). Introduced in 2017, the plan set goals to achieve global competitiveness by 2020, a major AI breakthrough by 2025, and global leadership by 2030.

Matt Assay (2025), a leading figure in free and open-source software (FOSS), argues that DeepSeek is no longer Chinese, despite its origins in China. This is because a group of developers, including the Beijing Academy of Artificial Intelligence, has begun replicating *DeepSeek*'s success as a FOSS project. For instance, the Beijing Academy has started reproducing *DeepSeek*'s open-weight models under the name *OpenSeek*. This approach was launched to build global open-source communities that not only aim to surpass *DeepSeek*'s performance but also to collaboratively generate innovations in algorithms, data, and systems. The United States has opposed this initiative and placed it on its export blacklist. However, states cannot prevent joint software projects produced by free communities. Hundreds of thousands of developers-from full-time researchers to hobbyists-have begun contributing to the development, fine-tuning, and dissemination of these open-source models. According to Assay, *DeepSeek* and its global counterparts represent a radical transformation in technological development. In his view, no one can claim ownership of this wave, no one can stop it, and no one can contain it.

Research and Findings

Building on the theoretical and comparative discussion of *DeepSeek* and *ChatGPT* presented in the previous section, this part of the study operationalises those conceptual distinctions into an empirical inquiry that examines how the two models respond to similar prompts and whether their outputs

reflect divergent ideological or geopolitical orientations. The main research question of this study is whether artificial intelligence systems shaped by two distinct paradigms-one originating from China and the other from the United States-produce differing responses, and what the nature of these differences is. The secondary question examines whether *DeepSeek*, given China's leadership within the BRICS countries and its relations and investments in the Global South, generates responses more aligned with the interests or perspectives of the Global South.

DeepSeek (free), free version of *ChatGPT* Model: *GPT-3.5*- and paid/plus version of *ChatGPT* Model: *GPT-4* were asked the following question for this research: What are the obstacles preventing Southern countries from developing like Northern countries? The research with *DeepSee*k and the free version of *ChatGPT* was conducted on February 14, 2025, while the research with the paid version of *ChatGPT* was conducted on February 16, 2025. The prompt was asked of each model once, and the responses were analysed as observable outputs generated at a specific moment in time. The aim of the study is not to measure response variability across repeated trials but to examine the discursive and thematic structures embedded in the generated texts. The interaction was conducted through the platforms' publicly accessible interfaces. The models' responses to the question were first subjected to thematic analysis, then evaluated comparatively using scoring, and finally analysed through critical discourse analysis. This holistic approach revealed not only the content diversity of the language models but also their ideological positioning and their relations with social practices. The aim of the study is not to measure response variability across repeated trials but to examine the discursive and thematic structures embedded in the generated texts.

This section provides a comparative description of the responses given by the three models included in the study to the same question, in terms of content structure and thematic focus. Within the scope of the analysis, the models were systematically compared in terms of the figures they affirmed or criticised, the themes they emphasised, how they structured information, and the framing they used to present events. Discourse analysis was not employed; only the content diversity and structural formation of the responses were qualitatively described. This approach aims to present initial observations on how the models make sense of and explain different topics. *DeepSeek* generated a 516-word answer to our question, compared to 353 words from the free and 470 words from the paid versions of *ChatGPT*. *DeepSeek*'s response contained 12 sub-sections and a concluding paragraph, whereas the free and paid versions of *ChatGPT* produced 7 and 8 sub-sections, respectively. These quantitative gaps, mirrored in the structure and coherence of their outputs, also indicate qualitative differences between the free and paid versions of *ChatGPT*.

Structural and thematic comparative analysis of language model responses

The paid and free versions of *ChatGPT* employ greater generalisation and abstraction. They do not provide concrete examples. For instance, instead of naming important organisations such as the World Trade Organisation, the World Bank, and the International Monetary Fund, it refers to them as "various institutional structures." Although the question was posed within the North–South context, it is noteworthy that the answers in both paid and free *ChatGPT* outputs are not aligned with the North–South axis. The term 'rich countries' refers to countries in the North. *DeepSeek*, by contrast, explicitly names these organisations and repeatedly reiterates the North–South distinction throughout.

'Colonialism' in language model outputs

The most significant difference between *DeepSeek* and the free version of ChatGPT, which is widely used by the public, is evident. For example, in the section on 'historical legacy', while *DeepSeek*'s response includes the expressions 'imposed economic structures and arbitrarily drawn borders', the free *ChatGPT* obscures the roots of exploitation by referring instead to 'long-term effects and structural disadvantages', thereby rendering both the perpetrators and historical responsibility invisible. Under the heading 'Politics and Governance', *DeepSeek* establishes a connection between institutional weakness and corruption, stating that instability also weakens long-term planning. Moreover, it explicitly lists neo-colonial practices as one of the causes of this weakness. The free *ChatGPT*, however, does not mention this. The paid version of *ChatGPT*, on the other hand, notes that economic and political structures have collapsed due to historical colonialism and, under the heading of neo-colonialism, refers to how multinational corporations and Western policies constrain internal growth. Thus, while the greatest divergence appears between the free *ChatGPT* and *DeepSeek*, the responses of the paid *ChatGPT* are relatively aligned with those of DeepSeek.

'ChatGPT' attributes instability to internal weaknesses

'DeepSeek' emphasises neo-colonialism

Under the subheading 'Politics and Governance Issues', *DeepSeek* provides more concrete outputs. It establishes a connection between institutional weakness and corruption. In addition, it refers to the negative impact of instability on long-term planning and discusses neo-colonial practices. *ChatGPT*, on the other hand, attributes instability and governance problems to internal weaknesses, and the exclusion of external factors from the equation is a defining characteristic of neoliberal policies. As expected, the free version of

ChatGPT does not mention neo-colonialism at all, focusing instead on internal factors. The paid version of *ChatGPT* likewise directs attention to "internal" dynamics in this subheading, using the phrase "elite interests" rather than prioritising global power relations, corporations, and external interests. In this subheading, there is a marked discursive difference between *DeepSeek* and both versions of *ChatGPT*.

'DeepSeek': "It is the north that weakens the economies of southern countries"

DeepSeek provides detailed responses under the heading 'Economic Problems'. This subheading lists the external debt burden, export-dependent economies, customs duties imposed by Northern countries, and the fragile and unequal trade conditions resulting from state subsidies implemented by the North. It emphasises the lack of high-value-added goods and the predominance of low-value-added production. The free version of *ChatGPT* summarises the issue only by noting excessive dependence on raw material exports. The paid version of *ChatGPT*, like *DeepSeek*, highlights the external debt burden. However, in the paid version, the negative effects of the South's external debt burden, customs practices, and Northern subsidies that *DeepSeek* mentions are replaced with the phrase "unequal trade relations." This indicates that the paid version also prefers to summarise the issue rather than illustrate it. Furthermore, while *DeepSeek* highlights a critical issue, such as the failure to transition from low-value-added production to high-value-added production, the paid *ChatGPT* omits this point. It was also found that the deterrent policies implemented by Northern countries that prevent the transition to high-value-added production are absent from the responses of both versions of *ChatGPT*.

'ChatGPT' is more sensitive to environmental vulnerabilities.

Among the responses produced and analysed within the scope of this study, one of the few areas in which the paid version of ChatGPT proved more comprehensive than *DeepSeek* was the subheading 'Environmental Vulnerabilities'. While the paid version of *ChatGPT* demonstrates that climate issues disproportionately and adversely affect countries in the Global South and will continue to do so, *DeepSee*k remains silent on this issue. However, the paid *ChatGPT* attributes the environmental problems of the Global South to 'extractive industries', thereby foregrounding an internal dynamic rather than the effects of the global ecological crisis.

One domain absent from the outputs of both the paid and free versions of *ChatGPT* is the 'cultural and psychological factors' emphasised in *DeepSeek*'s responses. *DeepSeek* highlights not only the internalisation of the colonial

mindset in the establishment of colonial rule but also the departure from self-sufficiency through foreign development models and aid. In this regard, *DeepSeek* elaborates on cultural identity struggles and the tension between modernity and tradition in the Global South. The *ChatGPT* models, however, do not touch upon this issue at all.

Global power imbalances: 'DeepSeek' focuses on asymmetric institutions 'ChatGPT' on the South's internal problems

In *DeepSeek*'s responses, global power imbalances are addressed extensively. The World Bank, the World Trade Organisation, and the International Monetary Fund (IMF) are defined as 'asymmetric institutions' in which the North holds dominance. It is stated that these institutions prioritise the interests of Northern countries, imposing unfavourable debt conditions and austerity policies on the South, amounting to geopolitical exploitation. As a solution, *DeepSeek* proposes that the South strengthen its position in technology transfer negotiations by establishing equal economic partnerships. The free version of *ChatGPT*, however, does not mention the "imbalance" between the North and the South and attributes the failure to achieve equality to the South's weakness in negotiating technology transfers. In this subheading, the paid version of *ChatGPT* goes further than the free version by employing the concept of geopolitical exploitation, also used in *DeepSeek*. It also links this exploitation to extractivism and to political interventions by powerful states and their corporations. However, the paid *ChatGPT* does not explicitly mention the World Bank or the International Monetary Fund. Rather than referring to concrete relationships or institutions, it prefers to say, 'Western countries' instead of 'Northern countries' and to use the term 'global power'. While the paid *ChatGPT* notes that, due to patent and intellectual property restrictions, Southern countries have limited access to technology and medicines, it attributes this limitation to the South's limited influence within the United Nations and the World Trade Organisation. In doing so, it presents the South's weakness in these organisations as stemming from internal causes, without revealing to the user that the North shapes these institutional structures in line with its own interests.

Language models generally produce a conclusion section summarising each of their extended responses, and they also generated conclusion sections while answering our questions. When these conclusion sections are compared, it is observed that DeepSeek explicitly refers to the postponement of external debts and to 'international governance reforms' aimed at empowering the Global South, mentioning the enhancement of developing countries' influence in institutions such as the United Nations, the World Trade Organisation, the World Bank, and the International Monetary Fund. In addition, *DeepSeek* emphasises the need to develop strategies specific to each country's

context and the importance of global cooperation.

DeepSeek speaks of achieving South–North equality through proposals that could be considered anti-North, such as postponing external debt and implementing South-oriented international governance reforms. In contrast, *ChatGPT* again emphasises the South's own problems. In *DeepSeek*'s generated conclusion, "debt postponement" is explicitly mentioned, whereas *ChatGPT* refers instead to regional cooperation. *DeepSeek* clearly includes reforms of international organisations to strengthen the Global South, whereas *ChatGPT* does not. The conclusion section is where the paid and free versions of *ChatGPT* converge most strongly. The results listed by the paid version of *ChatGPT* are summarised in a single sentence as regional cooperation, investment in education and technology, economic diversification, good governance, and climate-sensitive development policies. None of the recommendations found in *DeepSeek* appears in either the paid or free *ChatGPT* responses. *ChatGPT*'s answers articulate what the Southern countries should do, but do not address the weakening factors produced by the Northern countries. The relative attempt at convergence identified in the paid *ChatGPT* responses compared with *DeepSeek* does not appear at all in the conclusion section. This finding overlaps with Geray and Başaran's (2011) observation that the dominant discourse on information and communication technologies in Türkiye absorbs the dissenting discourse. According to this, the incorporation of dissenting discourses into the dominant discourse occurs merely by integrating them into the discursive content. At the same time, the outcomes of the policies do not reflect this incorporation, thus remaining a merely nominal form of support. Both the paid and free versions of *ChatGPT* exhibit discourses similar to *DeepSeek*'s in the conclusion section, but only as a token inclusion.

Structural similarities in artificial intelligence responses

All three chatbots position themselves as objective or neutral in their responses. Our research confirms Lopatto's (2025) finding that they display confidence in their ability to maintain such neutrality in their discourse. While adopting this objective/neutral position, they indicate that they are engaged in a thought process intended to assist the questioner. It is observed that the responses tend to be descriptive and do not indicate which of the described aspects is most important. In other words, no prioritisation is made within the responses. From the perspective of experts who have worked extensively in the subject area posed to the chatbots or language models, it is possible to assess which issues should take precedence. However, when the questioner is not an expert on the topic, the suggestions or answers provided, without prioritisation, remain largely as lists. At this point, although the discourse suggests that language models are tasked with assisting the questioner (or user), the primary responsibility and cognitive burden ultimately fall on the questioner. In short, non-experts cannot easily distinguish among the answers and may reach incorrect conclusions.

Another similarity identified in the responses provided by the language models is that both *DeepSeek* and *ChatGPT*, after giving their answers, direct users to conduct further inquiries and to use the application programming interface (API). From this perspective, even the free and open-source *DeepSeek* becomes, in a certain sense, paid. This is because, although it costs only one-thirtieth of paid *ChatGPT, DeepSeek* charges for API usage based on tokens (units of information processing volume).

Another similarity observed across all models is that they generally fail to establish cause-and-effect relationships by connecting their responses to theoretical frameworks. From this perspective, *DeepSeek* constructs cause-and-effect relationships more extensively; the *ChatGPT* versions, on the other hand, process data primarily for presentation. Even when reasoning options are selected, *ChatGPT*, in particular, does not engage in genuine reasoning but rather decides what to display. At this point, it is useful to recall the necessity of theory. Chul Han (2024) emphasises that the primary purpose of theory is to construct narratives about how something better can be created. According to him, theory as a narrative enables us to imagine why things are the way they are and how they could be improved. Unfortunately, language models' responses are quite weak at constructing such narratives, as they lack both prioritisation based on cause-and-effect relationships and an imagination of a better world.

Comparative analysis of language model responses based on scoring

Up to this point, the models' responses in the study have been analysed in terms of content structure and thematic focus. In this section, these responses were scored according to how they addressed the dynamics defined within the framework of the critical development paradigm –namely, historical legacy, politics and governance, economic problems, social barriers, environmental sustainability, technology, global power imbalances, and outcomes. The scores assigned to the responses under these categories were then summed and averaged to obtain an overall language model score. The criterion in the scoring process was whether the responses merely mentioned these dynamics superficially or whether they examined historical and structural elements, such as the legacy of colonialism, external debt relations, inequalities in the global trade system, or the determining effects of multinational corporations, within an economic-political context. The close similarity between the two researchers' independent evaluations is attributable not to subjective judgments but to the use of a shared theoretical framework. However, the fact that only two researchers conducted the scoring is also a limitation of the study. For instance, a scoring process conducted by subject-matter experts in a focus group setting could yield different results.

Within this framework, both researchers evaluated *DeepSeek*'s responses

as more successful, giving them a score of 7.8 (*Table 1*). The weakest responses were identified as those produced by the free version of *ChatGPT*, which received only 4.3 points from the researchers. The paid version of *ChatGPT* achieved a higher score than the free version, with a result of 6.6.

Table 1. Comparative scoring of language model responses by researchers

	Researcher A	**Researcher B**	**Average**
DeepSeek	7,5	8,1	7,8
ChatGPT (paid)	6,3	6,8	6,6
ChatGPT (free)	4,8	3,7	4,3

Deepening the findings through critical discourse analysis

The outputs produced by language models should be examined not only at the content level but also in terms of the ideological, discursive, and social contexts that shape them. Therefore, in this section, the language models' responses to the question "What are the development barriers of the Global South?" are analysed using critical discourse analysis and discussed with attention to their ideological dimensions.

Critical discourse analysis is an interdisciplinary approach to language study that focuses on how discourse (spoken, written, or visual texts) enacts, maintains, or challenges power, domination, and inequality within society. It views language as a social practice and examines the relationship between language, power, and ideology (Waugh et al., 2015). This method is significant because it reveals how texts and discourses can reflect, reinforce, or question social inequalities and injustices (Dechnaski & Kohi, 2015). Conducted from a critical realist perspective, critical discourse analysis argues that language and texts can be understood only within the broader framework of social practice (Başaran & Geray, 2011). Its key distinction from other forms of discourse analysis lies in its aim to uncover the nature of the social practice that surrounds discourse. According to Norman Fairclough, discourse is not merely a linguistic expression, but a multidimensional practice intertwined with social relations. Therefore, discourse should be examined through a three-dimensional model across three levels. The first of these is the text, which is the direct output of the production process. The second level is discursive practice, referring to how texts are produced and interpreted through interaction between individuals and communities. The third and final level is social practice, which encompasses the sociocultural context within which production and interpretation occur. These three dimensions are dialectically interconnected, allowing for a comprehensive understanding of both the linguistic and social dimensions of discourse. In the analysis process, description reveals textual features; interpretation analyses the processes of production and interpretation; and explanation examines the institutional, situational, and social levels in which

discourse is embedded, revealing how discourse relates to hegemony and ideology (Fairclough, 1992). Within this framework, the content of the *ChatGPT* and DeepSeek models was examined across the levels of textual analysis, discursive practice, and social practice.

At the textual level, clear ideological differences have been identified in the models' linguistic and rhetorical choices. *DeepSeek* frames the issue as a structural consequence of the global capitalist system, using militant metaphors such as colonial exploitation and digital exploitation camps, as well as directly counter-hegemonic expressions like exploitation, inequality, open source, and BRICS. Its discourse is dominated by a tone of necessity (Debt must be cancelled, institutions must be reformed) and maintains an accusatory stance toward the system, even when obscuring the agent through passive constructions (e.g., "resources were exploited"). In contrast, the free version of *ChatGPT* centres on soft, technical, and superficial metaphors such as structural disadvantages and fragile states, along with conciliatory and neoliberal jargon like cooperation, sustainable development, and human capital. Its language, characterised by modal possibility (investment could be made, cooperation should be ensured) and passive constructions, constructs a discourse that redirects responsibility toward the internal dynamics of the South and legitimises the status quo. The paid version of *ChatGPT*, on the other hand, presents a more elevated register, employing politicised and radical terms such as "neo-colonialism," "climate justice," and "decolonisation." By alternating grammatically between necessity and permissibility (e.g., "reforms should be implemented" and "local solutions should be encouraged"), it adopts a more balanced and reformist stance. However, despite this radical terminology, its avoidance of explicitly naming concrete actors such as the World Bank and the IMF, and its tendency to present solutions in abstract terms, reveal the limits of its discourse.

At the level of discursive practice, the context in which the models are produced and their intended audiences emerge as key factors shaping their discourse. As a China-based actor, *DeepSeek* draws on a critical political economy perspective consistent with the Chinese state's strategy of "offering a global alternative." Its discourse targets an audience that takes a critical stance toward the existing global order, such as academics and Global South activists. It derives its legitimacy from the claim of providing a "fairer technological model," emphasising "open source" and "low cost." The free version of *ChatGPT*, by contrast, produces a techno-optimistic discourse that asserts neutrality, reflecting OpenAI's (and Microsoft's) position as a global technology corporation. Its target audience comprises general users and policymakers, and it constructs its legitimacy through universally accepted yet hollow notions such as "collaboration" and "sustainability." The paid version of *ChatGPT*, promising more sophisticated and in-depth outputs, shifts toward a balanced and reformist discourse aimed at academic and political audiences. Although this version questions hegemony more than the free one, it ultimately represents

a discursive practice constrained by the same company's commercial interests and its US-centric data ecosystem.

At the final and most critical level of analysis – social practice - the discourses of the models clearly reveal their ideological positioning within global power relations. *DeepSeek* explicitly adopts a counter-hegemonic stance, criticising the West's technological and financial domination. Its naturalisation of the idea that technology is a tool of capitalist domination aims to foster critical consciousness. It positions the Global South, BRICS, and open-source communities as agents, proposing a power dynamic that advocates for the South's epistemic and technological autonomy within the North–South conflict axis. In contrast, the free version of *ChatGPT* embodies a technocratic and neoliberal ideological orientation. Its discourse that "development is possible through cooperation" legitimises the status quo and the North's financial and technological hegemony by naturalising them. Assigning agent roles to the IMF, the World Bank, and Western corporations helps sustain this hegemony. The paid version of *ChatGPT*, however, occupies a hybrid position. While it does not fully reject the neoliberal framework, it tends to question hegemonic structures through expressions such as "decolonisation is necessary." It foregrounds Global South states and civil society as agents and proposes a power relation that implies the South should renegotiate hegemony through its collective bargaining power. Nevertheless, this reformist discourse ultimately falls short of fundamentally undermining the existing hegemony, as it advocates reforms from within the system rather than pursuing deep structural transformations.

In conclusion, the critical discourse analysis demonstrates that, contrary to their claims of "objectivity," large language models are instruments shaped by deeply ideological and political-economic contexts. *DeepSeek* generates a radical and counter-hegemonic discourse aligned with China's ambition for global leadership. In contrast, the free version of *ChatGPT* employs a technocratic language that reproduces the Western-centric neoliberal status quo. Although the paid version of *ChatGPT* employs a more sophisticated and partially critical register, it remains situated in a grey zone between "being reformist and being critical" due to its abstractness, avoidance of concrete actors, and ambiguity in its proposed solutions. It thus presents a discourse aimed at improving the system rather than promising fundamental transformation. These findings once again confirm that AI outputs reflect the geographical, political, and economic contexts in which they are developed, and that technology is not a neutral tool.

Conclusion

This study demonstrates that large language models are not merely technical instruments but epistemic actors within the global political-economic order and its new manifestation, cloud-slavery colonialism. The study comparatively analyses the responses from the *ChatGPT* and *DeepSeek* models regarding

the development barriers in the Global South using a three-stage holistic approach. This analysis clearly reveals how the ownership structures, data ecosystems, and political-economic positioning underlying large language models are reflected in their outputs. The findings of this research directly align with the fundamental characteristics of cloud-slavery colonialism as defined by Geray (2024).

One of the most prominent features of cloud-slavery colonialism is a structure that monitors every step taken by Southern countries through institutions such as the World Bank and the IMF, imposing a specific governance model. The outputs of *ChatGPT, particularly those of its free version, avoid* explicitly naming these institutions, addressing the issues within an abstract framework that shifts responsibility to the Global South through phrases such as "institutional structures" or "internal weaknesses." This approach renders the existence of colonial institutional domination invisible, thereby reinforcing its legitimacy and unquestionability. In contrast, *DeepSeek* explicitly names these same institutions, defining them as "asymmetric institutions" and labelling their structures, which operate in favour of the North, as "geopolitical exploitation." This demonstrates that a China-centred model has adopted a critical perspective toward the hegemony of existing global financial institutions.

Cloud-slavery colonialism aims to prevent Southern countries from forming alternative power centres through cooperation among themselves. While *ChatGPT*'s proposed solutions mention "regional cooperation," they do not present it as a concrete political project centred on BRICS-like structures or the collective bargaining power of the South. Its proposals are primarily technical and governance-oriented. *DeepSeek*, on the other hand, explicitly mentions "international governance reforms" that would strengthen the South and refers to the "collective power of the Global South," implicitly alluding to structures such as BRICS, in its conclusion. This difference reflects the models' distinct ideological orientations toward South–South solidarity.

The most fundamental characteristic of cloud-slavery colonialism is that it operates through individuals' voluntary participation in platforms and tools. One of the most striking findings of the research is that the free version of *ChatGPT* distances users from the structural inequalities at the root of the problem, reducing the solution to good governance, education, and infrastructure investments at the individual and national levels. This discourse reproduces colonial relations through voluntary participation, inviting users to adapt to the system rather than question it. *DeepSeek*, on the other hand, carries the potential to foster critical awareness among users through a discourse that makes the perpetrators visible by naming them as "the North," "multinational corporations," and "asymmetric institutions."

In conclusion, this study has demonstrated that large language models are both a reflection of and an active agent of cloud-slavery colonialism. *ChatGPT*, particularly in its free and closed-source version, reproduces Western-centric

neoliberal hegemony and its colonial practices behind a veil of technical neutrality. In contrast, *DeepSeek*, emerging from an alternative political-economic pole, has developed a discourse that questions this hegemony and centres the Global South's perspective more prominently. These findings once again underscore the importance of epistemic diversity and open-source code in the field of language models.

While the analysis presented in this study identifies discursive patterns in the responses generated by the examined models, the findings should be interpreted within the methodological scope of the research. The analysis is based on responses to a single prompt at a specific moment in time, obtained through publicly accessible interfaces. Therefore, the study does not aim to measure response variability across repeated prompts or different users; rather, it focuses on examining the discursive and thematic structures embedded in particular AI-generated outputs. At the same time, the approach of critical discourse analysis seeks to investigate how macro-level ideological and structural relations become visible within micro-level textual practices. In this sense, the study aims to discuss these broader structural relations through the discursive patterns observable in specific AI-generated responses. Future research may extend this approach by incorporating repeated prompts, multiple users, and cross-regional comparisons to examine potential variations in model responses.

In this context, a resistance strategy for the Global South should not be confined to critical literacy of these models' outputs. It must also encompass the development of open-source and transparent local language models, the creation of critical datasets, and deeper engagement with the political economy of technology production. Technology is, inevitably, a carrier of the social relations within which it is produced. Therefore, the pursuit of epistemic justice is inseparably linked with the struggle for technological independence and autonomy. Future studies should investigate the concrete practices through which this struggle materialises.

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