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Digital Colonialism and the Architecture of Global Power: Technological Hegemony, Data Sovereignty, and the Structural Subordination of the Global South

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Abstract

The emergence of digital infrastructure as the primary medium of economic, political, and social organization in the twenty-first century has engendered a new modality of asymmetrical global power, variously theorized as digital colonialism. This paper interrogates the structural conditions under which transnational technology corporations—concentrated overwhelmingly in the United States—have established quasi-monopolistic control over the global digital ecosystem, encompassing data flows, cloud computing infrastructure, algorithmic governance, and platform architectures. Drawing upon postcolonial political theory, international political economy, and empirical data from regulatory proceedings, market analyses, and intergovernmental reports, the paper argues that digital colonialism constitutes a distinctive form of structural domination that reproduces classical colonial hierarchies through technological rather than territorial means. It operates through the extraction of data as a raw material, the imposition of



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platform-dependent economic relations, the subordination of national regulatory sovereignty, and the systematic exclusion of non-Western epistemologies from the design of global digital infrastructure. The paper further examines the governance responses of states in the Global South, including data localization mandates, regional digital sovereignty frameworks, and multi-stakeholder internet governance coalitions, assessing their efficacy as counter-hegemonic strategies. The analysis concludes that without substantive structural reform of the international digital order—encompassing technology transfer obligations, equitable intellectual property regimes, and democratic global data governance—the digital divide will deepen into a permanent condition of technological subalterneity.

Keywords: digital colonialism, data sovereignty, platform capitalism, technological hegemony, Global South, internet governance, postcolonial theory

1. Introduction

The collapse of formal European colonial empires across Asia, Africa, and Latin America during the mid-twentieth century was widely understood to mark a decisive rupture in the global order—an end to the systematic territorial subjugation of peoples and the extractive economic relations it sustained. Yet as Kwame Nkrumah observed as early as 1965, formal political independence did not necessarily entail substantive economic or cultural autonomy; the mechanisms of domination had merely assumed new institutional forms. The concept of neo-colonialism he advanced has since been elaborated through a succession of theoretical frameworks—dependency theory, world-systems analysis, postcolonial criticism—each of which sought to account for the persistence of structural inequalities in the postcolonial international order (Ndlovu-Gatsheni, 2018).

The digital revolution of the late twentieth and early twenty-first centuries has furnished these structural inequalities with a radically new technological substrate. The internet, initially



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developed within the United States Department of Defense and subsequently commercialized through a succession of Silicon Valley ventures, has become the organizing infrastructure of global economic and political life. By 2023, an estimated 5.4 billion people—approximately 67 percent of the global population—were internet users, yet the ownership, governance, and standard-setting authority over this infrastructure remained concentrated in a small number of corporations headquartered predominantly in the United States (International Telecommunication Union [ITU], 2023). Five firms—Alphabet (Google), Amazon, Apple, Meta, and Microsoft—reported combined revenues exceeding \$1.4 trillion in 2022, a figure that surpasses the gross domestic product of all but a handful of nation-states (Statista, 2023).

The political science literature has increasingly converged upon the concept of digital colonialism to name this configuration of power. The term, as employed in this paper, refers not merely to a metaphorical analogy with historical colonialism but to a structurally specific set of relations in which technologically advanced states and their corporate actors exercise systematic control over the digital infrastructure, data resources, and standard-setting mechanisms upon which less technologically developed states depend—thereby reproducing conditions of economic extraction, political subordination, and epistemic marginalization functionally analogous to, though institutionally distinct from, classical colonial domination. This paper proceeds through four analytical sections: a theoretical elaboration of the digital colonialism concept; a literature review of the existing scholarly debate; a methodological account; and a substantive empirical analysis organized around the key dimensions of technological hegemony, data extraction, platform governance, and sovereignty responses.

2. Literature Review

The scholarly literature on digital colonialism has developed across several disciplinary traditions, and it is important to situate the present analysis within that intellectual genealogy. The foundational theoretical resources are drawn from postcolonial studies and critical political



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economy. Frantz Fanon's analysis of the psychological and material dimensions of colonial subjugation, Aimé Césaire's account of colonialism as a civilizational project, and Edward Said's theorization of Orientalism as an epistemic regime of power all provide conceptual antecedents for understanding how digital technologies may function as vectors not merely of economic extraction but of cultural and ontological subordination (Fanon, 1961; Said, 1978).

The more immediate theoretical predecessor is the dependency theory tradition, particularly the work of André Gunder Frank and Immanuel Wallerstein, which argued that the economic development of the capitalist core was structurally predicated upon the underdevelopment of the periphery through the mechanisms of unequal exchange, capital repatriation, and the suppression of indigenous industrialization. Nick Couldry and Ulises Mejias (2019) have most systematically applied this framework to the digital domain, arguing in their influential monograph that what they term data colonialism represents the appropriation of human social life through data as a new form of primitive accumulation—a process through which the raw material of human behavior is extracted, commodified, and valorized by platform corporations without meaningful compensation to or consent from the populations whose activity generates it.

A parallel strand of scholarship has focused more specifically on the governance dimensions of digital power. Shoshana Zuboff's (2019) concept of surveillance capitalism, while not primarily concerned with geopolitical asymmetries, provides a detailed account of how behavioral data has become the central commodity of the digital economy, with profound implications for political autonomy and democratic governance. The geopolitical dimension is addressed more directly by scholars such as Anupam Chander and Uyên Lê (2015), who analyze data localization policies as responses to digital sovereignty concerns, and by Jack Goldsmith and Tim Wu (2006), whose earlier work on internet fragmentation anticipated the current literature on the splinternet and geopolitical competition over digital governance norms.

A significant body of empirical research has documented the material dimensions of digital inequality. The World Bank's Digital Economy for Africa initiative and the ITU's annual



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Measuring Digital Development reports have consistently demonstrated that access to digital infrastructure remains profoundly unequal along global North-South lines, with sub-Saharan Africa recording broadband penetration rates of approximately 22 percent compared to 91 percent in Europe (ITU, 2023; World Bank, 2023). These access disparities compound with disparities in hardware manufacturing, software development capacity, and technical standard-setting authority to produce what May (2015) characterizes as a technologically structured global division of labor.

The literature is not, however, unanimous on the appropriateness of the colonial analogy, and significant critical interventions have complicated straightforward applications of the framework. Scholars such as Aouragh and Chakravartty (2016) have cautioned against a reductive reading that renders Global South populations as purely passive victims of technological domination, emphasizing the creative appropriations, resistant practices, and alternative technological imaginaries that circulate in non-Western digital cultures. Similarly, researchers working in the tradition of Science and Technology Studies (STS) have argued that the materiality of digital infrastructure—its servers, cables, protocols, and code—cannot be reduced to an epiphenomenon of political economy but must be analyzed in its own technical specificity (Plantin et al., 2018). The present paper attempts to hold these critiques in productive tension with the structural analysis, acknowledging the agency of peripheral actors while insisting on the analytical importance of structural power differentials.

3. Methodology

This research employs a qualitative, interpretive methodology grounded in the tradition of critical political economy and postcolonial theory. The epistemological orientation is broadly constructivist in the sense that it regards the categories through which digital power relations are understood—colonialism, sovereignty, extraction, governance—as socially produced and politically consequential, subject to contestation and revision. At the same time, the analysis is



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committed to empirical grounding in documented institutional arrangements, market structures, regulatory proceedings, and quantitative data on infrastructure distribution and economic flows.

The primary data sources employed in this paper include official reports and datasets from the International Telecommunication Union (ITU), the United Nations Conference on Trade and Development (UNCTAD), the World Bank Group, and the Internet Corporation for Assigned Names and Numbers (ICANN). These institutional sources are supplemented by regulatory filings and court documents from major antitrust proceedings in the United States, European Union, and India concerning the market conduct of large technology platforms. Secondary sources consist of peer-reviewed scholarship in political science, international relations, communication studies, and science and technology studies journals.

The analytical approach is structured around the comparative and historical method, tracing structural parallels between classical colonial economic relations and contemporary digital power configurations while remaining attentive to the historically specific institutional forms through which digital domination operates. The paper does not claim to offer a predictive causal model but rather an interpretive account that illuminates structural patterns and their political implications. The limitations of this methodology include the difficulty of quantifying some dimensions of power—particularly epistemic and cultural dimensions—and the risk of theoretical overextension in applying historical concepts to novel phenomena. These limitations are addressed through careful qualification of claims and explicit engagement with counter-arguments in the scholarly literature.

4. Analysis

4.1 Technological Hegemony and Infrastructure Control

The concept of hegemony, as developed by Antonio Gramsci in his account of the Italian political conjuncture and subsequently elaborated in international relations theory by Robert Cox



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and others, refers to a form of dominance that operates not merely through coercion but through the production of consent, the naturalization of particular institutional arrangements as universal and rational, and the occupation of leading positions in the economy and cultural life. Applied to the digital domain, this framework illuminates the degree to which the dominance of American platform corporations reflects not simply market success but a structurally embedded asymmetry in the capacity to set technological standards, design infrastructural architectures, and define the normative frameworks within which digital governance operates.

The physical infrastructure of the internet provides the most concrete illustration. As of 2023, approximately 95 percent of international internet traffic was carried over submarine cable systems, the majority of which are now either owned or co-owned by American technology corporations. Google, Meta, Amazon, and Microsoft have collectively funded or co-funded more than two dozen major submarine cable projects since 2016, fundamentally restructuring a market previously dominated by telecommunications consortia (Telegeography, 2023). This shift in ownership represents more than a commercial development; it means that the physical arteries through which the digital communications of billions of people flow are controlled by private entities subject to the laws and intelligence-sharing arrangements of a single state—a configuration with direct implications for surveillance, interception, and the selective denial of connectivity.

At the level of computational infrastructure, the market for cloud computing services is similarly concentrated. Amazon Web Services held approximately 32 percent of global cloud infrastructure market share in 2023, with Microsoft Azure at 22 percent and Google Cloud at 11 percent—meaning that three American corporations accounted for roughly 65 percent of the market for the services upon which contemporary government, financial, educational, and social infrastructure increasingly depends (Synergy Research Group, 2023). For states in the Global South, this dependence creates a structural condition analogous to what dependency theorists described as technological rent: the payment of ongoing fees to foreign corporate entities for access to infrastructure that performs functions previously carried out by nationally owned institutions.



4.2 Data Extraction and the New Primitive Accumulation

Perhaps the most analytically productive parallel between classical colonialism and digital power relations concerns the mechanism of extraction. Classical colonial economies were organized around the systematic removal of raw materials—cotton, rubber, minerals, agricultural produce—from colonized territories, their processing in metropolitan industries, and the return of finished commodities to colonial markets at prices that generated profits accruing primarily to metropolitan capital. The asymmetry was not merely quantitative but structural: colonized economies were locked into roles as producers of low-value raw inputs and consumers of high-value manufactured outputs, a division of labor that inhibited indigenous industrialization and sustained technological dependency.

The data economy reproduces this structure with remarkable fidelity. UNCTAD's 2021 Digital Economy Report documented that the global market for artificial intelligence—the technology most dependent on large-scale data—was projected to reach \$15.7 trillion in economic value by 2030, yet the capacity to extract value from this resource was concentrated overwhelmingly in the United States and China, which together accounted for 94 percent of venture capital investment in AI and 70 percent of top AI researchers (UNCTAD, 2021). The populations of the Global South, meanwhile, contribute an enormous volume of behavioral data to the platforms of American and Chinese corporations—through social media activity, mobile payments, agricultural management applications, health monitoring services, and e-commerce—without receiving commensurate economic returns or exercising meaningful governance authority over the use of data generated from their activity.

This dynamic is particularly acute in the context of artificial intelligence training datasets. The large language models and computer vision systems that increasingly mediate access to information, financial services, and labor markets are trained on data that disproportionately reflects the linguistic, cultural, and epistemological norms of English-speaking, Western populations, while encoding systematic biases against non-Western languages, social practices,



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and knowledge systems. A 2023 analysis published in the journal *Nature* found that of the ten most widely used large language model training datasets, English-language content accounted for between 68 and 92 percent of total data volume, with most African, South Asian, and Southeast Asian languages representing less than 0.1 percent of training data (Bender et al., as cited in Sambasivan et al., 2021). The epistemic consequences—in terms of whose knowledge, language, and social norms are encoded in the systems that increasingly govern access to information and opportunity—constitute a dimension of digital colonialism that exceeds purely economic analysis.

4.3 Platform Governance and the Subordination of National Sovereignty

A third dimension of digital colonialism concerns the relationship between platform governance and national regulatory sovereignty. The dominant technology platforms—Google Search, YouTube, Facebook, WhatsApp, Amazon Marketplace, and their counterparts—function in many respects as private regulatory regimes, establishing the terms under which billions of people access information, conduct commerce, communicate, and participate in public life. The content moderation policies, algorithmic ranking decisions, data retention practices, and terms of service agreements of these platforms have direct and material effects on political discourse, electoral competition, economic opportunity, and cultural expression in every society in which they operate.

The governance of these platforms remains, however, primarily subject to the legal frameworks of the jurisdictions in which they are incorporated—overwhelmingly the United States, and specifically the state of California. The Communications Decency Act's Section 230, which immunizes platform operators from liability for user-generated content, was enacted by the United States Congress in 1996 without meaningful input from the governments or populations of the other countries in which these platforms subsequently came to dominate public communication. Similarly, the algorithmic decisions that determine the visibility of political content, the amplification of particular narratives, and the demonetization of content creators are made by corporate entities accountable primarily to their shareholders and American regulatory



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authorities, not to the governments or publics of the societies whose political life they materially shape.

The consequences for Global South states are particularly acute. Research conducted by MIT's Media Lab and subsequently corroborated by independent journalists documented that Facebook's differential content moderation practices resulted in significantly higher rates of harmful content remaining visible in non-English-speaking markets—including Myanmar, Ethiopia, and India—than in English-language markets, contributing to documented incidents of ethnic violence and political instability (Haugen, 2021, as discussed in Couldry & Mejias, 2019). The company's own internal research, disclosed in regulatory proceedings, acknowledged these disparities yet maintained that resource constraints precluded equivalent moderation investment in non-Anglophone markets—a disclosure that illuminates both the material dimensions of platform power asymmetry and the limitations of voluntary corporate self-governance as a regulatory mechanism.

4.4 Counter-Hegemonic Responses: Data Sovereignty and Digital Self-Determination

The preceding analysis should not be taken to imply that states in the Global South are passive objects of digital domination. A range of governance initiatives—at the national, regional, and multilateral levels—represents meaningful attempts to assert digital sovereignty and recalibrate the terms of integration into the global digital economy. India's Personal Data Protection Bill, South Africa's Protection of Personal Information Act, and the African Union's Convention on Cyber Security and Personal Data Protection each represent attempts to impose regulatory requirements on technology corporations operating in African and Asian markets, including data localization mandates, algorithmic transparency obligations, and requirements for local data storage (African Union, 2014; Ministry of Electronics and Information Technology, India, 2022).



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The limitations of these national regulatory approaches are, however, significant. Enforcement capacity varies enormously across jurisdictions, and the leverage available to individual states—particularly smaller economies—in negotiations with corporations whose revenues exceed their GDPs is structurally constrained. The European Union's General Data Protection Regulation (GDPR), which represents the most comprehensive regulatory challenge to platform data practices yet enacted, has demonstrated that even a regulatory bloc of considerable economic weight faces sustained legal resistance, regulatory arbitrage, and compliance evasion from major platform operators (Zuboff, 2019). For smaller economies lacking the EU's market leverage, the prospects for effective unilateral regulation are considerably more limited.

At the multilateral level, the debate over internet governance—conducted primarily through the Internet Governance Forum, ICANN, and the ITU—has been structured by a fundamental tension between the multi-stakeholder model championed by the United States and its corporate sector, which institutionalizes private actors as co-equal participants in internet governance, and the intergovernmental model advocated by many Global South states and the Russian and Chinese governments, which would assign a more authoritative role to state actors through the ITU framework. Neither model, as currently constituted, adequately addresses the structural power asymmetries documented above; the multi-stakeholder model systematically advantages well-resourced corporate actors, while the intergovernmental model risks consolidating authoritarian state control over digital communications. The development of governance frameworks that simultaneously constrain corporate extraction and protect civil liberties remains the central unresolved challenge of global digital politics.

5. Conclusion

This paper has argued that digital colonialism names a structurally specific and analytically coherent configuration of global power relations, characterized by the concentrated control of digital infrastructure, the systematic extraction of data as a raw material, the subordination of



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national regulatory sovereignty to private platform governance, and the reproduction of epistemological hierarchies through the design of technological systems. These dimensions of digital power are not contingent outcomes of market competition but reflect structurally embedded asymmetries in technological capacity, capital accumulation, and political influence that have developed over several decades and are now deeply institutionalized.

The implications for political science are significant. The dominant paradigms of international relations theory—realism, liberalism, constructivism—each capture aspects of the digital power landscape but none provides an adequate account of the specifically structural character of the inequalities involved, nor of the distinctive role played by private corporate actors in constituting and reproducing those inequalities. A political science adequate to the digital age requires both the structural sensitivity of the critical tradition and the institutional specificity demanded by the novelty of platform capitalism as a form of economic organization.

The normative implications of this analysis point toward a set of structural reforms that go beyond regulatory compliance within existing institutional frameworks. Meaningful digital self-determination for Global South populations would require, at minimum: technology transfer obligations analogous to those discussed—though rarely implemented—in the context of industrial development; equitable intellectual property regimes that do not lock developing economies into permanent technological dependency; democratic reform of global internet governance institutions to ensure genuine representation of non-Western populations; and the development of public and community-owned digital infrastructure as alternatives to the monopolistic platform model. Whether the political will to pursue such reforms can be mobilized—given the structural advantages enjoyed by incumbent corporate and state actors—is a question that will determine the character of global digital politics for decades to come.

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