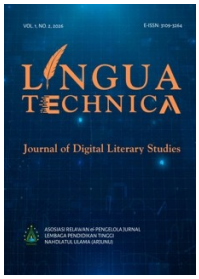
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Digital literary cartography and colonial space: re-mapping spatial imaginations in *Robinson Crusoe* and *Max Havelaar*

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A B S T R A C T

Background: The spatial turn in literary studies and digital humanities highlights the need to reassess how colonial space is constructed through the interaction between narrative and cartographic knowledge. **Objective:** This study examines how colonial spatial imagination is produced, contested, and differentiated in *Robinson Crusoe* (1719) and *Max Havelaar* (1860) through digital literary cartography. **Method:** Using a qualitative digital humanities design, the research integrates close textual analysis with historical cartographic materials and spatial metadata, focusing on Atlantic navigation maps, West Indies and New England coastal maps, and administrative maps of Java and Bantam. **Results:** The findings show that *Robinson Crusoe* aligns with a cartographic logic of enclosure and maritime circulation, reinforced by island, Atlantic, and West Indies maps that normalize spatial mastery. In contrast, *Max Havelaar* articulates a fragmented administrative geography, revealed through maps of Java and the Dutch East Indies that expose bureaucratic segmentation and ethical tension. Comparative re-mapping demonstrates divergent cartographic epistemologies shaped by exploration versus governance. **Implication:** Digital literary cartography reveals colonial space as an ideological construct rather than a neutral backdrop. **Novelty:** The study offers a comparative Global South–oriented cartographic reading that repositions maps as critical epistemic texts in colonial literature.

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INTRODUCTION

In recent decades, spatial analysis has become an increasingly significant lens in the humanities, particularly as digital technologies reshape how texts, archives, and cultural memory are interpreted. According to the Alliance of Digital Humanities Organizations, more than 65% of humanities research projects since 2015 have incorporated some form of spatial or geovisual method (Berendsen et al., 2018), signaling a decisive "spatial turn" in literary and cultural studies. This shift is especially crucial for colonial literature, where space was not merely described but actively produced as an instrument of power, surveillance, and economic extraction. Colonial maps functioned as technologies of domination, translating unfamiliar territories into legible and governable spaces. Literary texts emerging from colonial contexts both absorbed and contested these cartographic logics. Yet, while digital mapping tools now allow scholars to visualize narrative space with unprecedented precision, the epistemic implications of mapping colonial literature remain underexplored. Understanding how colonial spatial imaginaries were constructed—and how they can be critically re-mapped today—is therefore not only a methodological concern but also a broader intervention into how historical injustice, imperial knowledge, and narrative authority continue to shape global cultural memory.

Existing scholarship has extensively examined the relationship between literature and space, particularly through literary geography, spatial theory, and postcolonial criticism (Chitanya et al., 2025; Krishnan & Cartwright, 2024). Influential studies have demonstrated that maps operate as texts and that narratives, in turn, perform cartographic functions by organizing movement, distance, and territorial meaning. Research on canonical European works has revealed how spatial representation naturalizes imperial expansion (Crowley, 2025; Moslund, 2015), while postcolonial studies have highlighted narrative resistance to colonial epistemologies (Bandia, 2010; Efendi et al., 2026). Meanwhile, digital humanities scholarship has introduced literary cartography as a method for visualizing narrative space using historical maps and GIS-based tools (Cooper et al., 2016; Durić, 2015; Edelson & Ferster, 2013; Losada Palenzuela, 2019; Thomas, 2013). However, these strands of research have largely developed in parallel. Digital literary cartography has often prioritized European literary canons, whereas Global South narratives are frequently discussed without sustained engagement with cartographic methodologies. Comparative studies that place European colonial narratives and Global South counter-narratives within a shared digital cartographic framework remain rare. Consequently, the question of how colonial space is differently imagined, structured, and contested across these traditions has not been systematically addressed through digital spatial analysis.

This article seeks to address this gap by examining how colonial space is constructed and contested through digital literary cartography in two public-domain novels: *Robinson Crusoe* and *Max Havelaar*. The study is guided by three interrelated questions. First, how do these novels encode spatial imagination through narrative movement, location, and territorial description? Second, how can digital literary cartography—using historical maps, spatial metadata, and narrative mapping—reveal similarities and differences in colonial spatial logic between a European canonical text and a Global South narrative? Third, what forms of ideological alignment or resistance emerge when these literary spaces are re-mapped in relation to colonial cartographic archives? By addressing these questions, the article aims to move beyond close reading alone and to demonstrate how spatial visualization can function as a critical interpretive method. The analysis treats maps not as neutral illustrations but as epistemic frameworks that interact dynamically with literary narration.

This article argues that digital literary cartography exposes fundamentally divergent spatial imaginaries within colonial literature. While *Robinson Crusoe* reproduces a cartographic logic of mastery that renders space as empty, exploitable, and measurable, *Max Havelaar* articulates a counter-mapping that reveals colonial space as fragmented, contested, and ethically charged. By re-mapping these narratives through historical cartographic materials and spatial metadata, the study demonstrates that literary space functions as a site where imperial knowledge is both stabilized and destabilized. The provisional claim tested in this research is that digital literary cartography not only visualizes narrative space but also makes visible the power relations embedded within spatial representation itself. This approach has broader implications for digital humanities and postcolonial studies, suggesting that spatial visualization can serve as a critical methodology for reinterpreting colonial archives, amplifying Global South perspectives, and rethinking the epistemological foundations of literary geography.

LITERATURE REVIEW

Literary cartography

Literary cartography refers to an interdisciplinary approach that examines how literary texts construct, represent, and negotiate space through cartographic logic. At its core, literary cartography treats maps not merely as illustrative tools but as epistemic texts that interact with narrative structures. Scholars such as Moretti conceptualize literary cartography as a method of "distant reading," using spatial visualization to identify large-scale patterns across texts (Dekel & Marienberg-Milikowsky, 2021; Jänicke et al., 2017), while others emphasize close interpretive engagement with spatial metaphors and narrative movement (Bandry-Scubbi, 2022; Ben Zid & Al Amri, 2022). Divergences in definition emerge between metaphorical and material approaches: some scholars view literary cartography as a figurative framework for spatial interpretation, whereas others insist on the integration of actual maps, coordinates, and historical cartographic materials. This conceptual tension reflects broader debates about whether literary cartography should prioritize interpretive symbolism or empirical spatial data (Taylor, Mills). Nevertheless, most scholars agree that spatial representation in literature is never neutral but deeply entangled with cultural, political, and historical forces.

The operationalization of literary cartography commonly involves several analytical dimensions. First, narrative mobility—such as journeys, routes, and trajectories—serves as a primary indicator of how space is organized within texts. Second, place representation examines how locations are described, named, or silenced, revealing ideological hierarchies embedded in spatial language. Third, relational spatiality focuses on proximity, distance, and networks among characters, events, and places. Recent studies also emphasize the integration of historical maps and archival materials to contextualize fictional spaces within real-world cartographic regimes. In digital contexts, metadata and georeferencing function as additional indicators, enabling scholars to link textual locations with spatial coordinates. Collectively, these aspects demonstrate that literary cartography operates at the intersection of narrative form, historical geography, and interpretive methodology. As such, it offers a flexible yet rigorous framework for analyzing how literary texts produce spatial meaning across different cultural contexts.

Colonial space

Colonial space refers to the spatial order produced through imperial expansion, governance, and knowledge production, while spatial imagination denotes the cognitive and narrative processes through which such space is conceptualized. Postcolonial theorists argue that colonial space is not a passive backdrop but an active construct shaped by power, ideology, and economic interests. Some scholars emphasize material dimensions—territorial boundaries, trade routes, and administrative divisions (Jorge, 2023; Mills, 2013)—whereas others focus on discursive dimensions, such as narrative framing and symbolic geography (Johnson, 2019; Radović, 2014). These differing emphases reveal that colonial space operates simultaneously as a physical and imaginative domain. Literary studies have shown that colonial texts often naturalize domination by depicting colonized territories as empty, exotic, or chaotic, thereby legitimizing imperial intervention. Conversely, counter-narratives expose fractures within this spatial logic by foregrounding indigenous presence, ethical conflict, and spatial instability. Thus, colonial spatial imagination emerges as a contested field rather than a coherent system.

Analytically, colonial space can be examined through several interrelated aspects. Territorial representation is central, encompassing how land is claimed, mapped, and renamed. Mobility and circulation —such as exploration, trade, and labor movement—serve as indicators of how colonial power organizes spatial flows. Another key aspect is spatial hierarchy, evident in the division between centers and peripheries, metropoles and colonies. Scholars also highlight temporal layering, where colonial spaces are represented as existing outside modern time to justify intervention. In literary texts, these aspects manifest through descriptive density, narrative focalization, and spatial metaphors. When mapped digitally, colonial spaces reveal patterns of enclosure, extraction, and resistance that may remain obscured in linear reading. These indicators enable scholars to trace how literature both reflects and reshapes colonial spatial regimes across different cultural and historical contexts.

Digital humanities

Digital humanities (DH) encompasses the use of computational tools and digital methodologies to study humanistic questions, including literature, history, and culture. Within literary studies, digital mapping has emerged as a key DH practice, enabling scholars to visualize narrative space and temporal movement. Definitions of digital humanities vary: some scholars frame DH as tool-based innovation (Given & Willson, 2018; Koolen et al., 2019), while others emphasize its critical orientation toward epistemology and knowledge production (Rieger, 2010; van Es, 2023). This divergence extends to digital mapping, where some projects focus on technical visualization, whereas others foreground interpretive and theoretical intervention. Recent scholarship stresses that digital maps are not neutral interfaces but argumentative forms that shape interpretation. Consequently, digital mapping in literary studies must be understood as both a methodological and a critical practice. It offers new ways of interrogating texts while simultaneously raising questions about data selection, representation, and power.

Key aspects of digital literary mapping include data modeling, visualization, and interactivity. Data modeling involves translating narrative elements—such as places, movements, and events—into structured datasets. Visualization then renders these datasets into maps, timelines, or layered interfaces that invite interpretive engagement. Interactivity allows users to explore multiple spatial narratives rather than a single authoritative reading. Scholars also identify metadata as a crucial indicator, as it determines how literary spaces are categorized, retrieved, and connected to archival sources. Importantly, critical DH emphasizes reflexivity, urging scholars to interrogate whose perspectives are represented and whose are marginalized. In the context of colonial literature, digital mapping becomes a powerful tool for exposing spatial asymmetries and amplifying Global South perspectives. Thus, digital literary mapping functions not merely as a technique but as a critical methodology for rethinking spatial imagination in colonial narratives.

METHOD

The unit of analysis in this study consists of literary texts, historical cartographic materials, and digital spatial metadata related to *Robinson Crusoe* (1719) by Daniel Defoe and *Max Havelaar* (1860) by Multatuli. These novels were selected because they are in the public domain and contain rich spatial narratives embedded in colonial contexts. The literary corpus includes complete digitized versions of both novels obtained from open-access repositories, ensuring textual integrity and reproducibility. In addition, the study incorporates a cartographic corpus composed of colonial-era maps contemporaneous with the narratives, as well as supplementary archival documents that contextualize spatial references. The combination of literary and cartographic corpora allows for a multilayered analysis of spatial imagination. This integrated corpus reflects the methodological premise that literary space emerges from the interaction between narrative discourse and cartographic knowledge rather than from textual description alone.

This research employs a qualitative interpretive design informed by digital humanities methodologies and comparative literary analysis. The design is comparative in nature, juxtaposing a European canonical colonial narrative with a Global South colonial critique to identify divergent spatial imaginaries. Digital literary cartography is used as the primary analytical framework, enabling the integration of textual interpretation with spatial visualization. Rather than treating mapping as a purely technical process, the design emphasizes critical cartography, acknowledging that maps function as ideological instruments. This approach aligns with recent scholarship that positions digital methods as epistemic interventions rather than neutral tools. By combining close reading, archival contextualization, and digital mapping, the study bridges traditional literary analysis and spatial humanities. The design ensures that interpretations remain grounded in textual evidence while being extended through spatial abstraction and visualization.

The study draws on multiple categories of information sources to ensure analytical depth and validity. Primary sources consist of the original literary texts and historical maps contemporaneous with their narrative settings. Secondary sources include peer-reviewed journal articles and monographs on literary cartography, postcolonial spatial theory, and digital humanities methods. Tertiary sources comprise digital repositories and library catalogs that provide metadata, provenance, and contextual descriptions of cartographic materials. The use of authoritative archives—such as national libraries and academic digital collections—ensures the reliability of spatial data. This triangulation of sources reflects best practices in interdisciplinary research,

where literary interpretation is strengthened by historical and cartographic evidence. Collectively, these sources enable a comprehensive examination of how colonial space is imagined, represented, and contested across texts and maps.

Table 1. Research corpus of cartography and colonial space

Corpus Category	Title / Material	Year	Source Repository	Data Type	Analytical Function
Literary Text	*Robinson Crusoe* – Daniel Defoe	1719	Project Gutenberg / Internet Archive	Full text (HTML/PDF)	Narrative spatial imagination; island enclosure
Literary Text	*Max Havelaar* – Multatuli	1860	Project Gutenberg / Delpher	Full text (HTML/PDF)	Colonial counter-narrative; administrative space
Cartographic Archive	Crusoe's Island map published with *Serious Reflections…*	1720	British Library / Internet Archive	Raster map	Micro-scale colonial enclosure
Cartographic Archive	Herman Moll's map of the West Indies	c. 1732	British Library / David Rumsey Map Collection	Raster map	Imperial maritime circulation
Cartographic Archive	Atlantic Ocean map by Pierre de Vaulx	1613	Bibliothèque nationale de France / British Library	Raster map	Transatlantic spatial framework
Cartographic Archive	Maps of Java in *Max Havelaar* (Edmonston & Douglas edition)	19th c.	National Library of Scotland / Delpher	Raster map	Literary–administrative spatial anchoring
Cartographic Archive	East India Islands and Dutch East Indies map (*Encyclopædia Britannica*, 10th ed.)	1902	Internet Archive	Raster map	Macro-scale colonial administration
Cartographic Archive	Map of Bantam (*De Stadt Bantam*, Blaeu–Van der Hem Atlas)	1624 / 1665–68	National Archives of the Netherlands	Raster map	Early colonial urban–trade node
Cartographic Archive	North Atlantic colonial trade pattern	18th c.	British Library / David Rumsey Map Collection	Raster map	Oceanic circulation and trade networks
Cartographic Archive	*A Correct Map of the Coast of New England* – Cyprian Southack	1737	Library of Congress	Raster map	Coastal navigation and colonial precision
Metadata Dataset	Place names, routes, and administrative units	1719–1860	Derived from texts and maps	Tabular (CSV)	Georeferencing and spatial alignment
Supplementary Archive	Colonial reports and travel accounts	17th–19th c.	Internet Archive	Textual documents	Historical and cartographic contextualization

Data collection was conducted in several systematic stages. First, all spatial references in the literary texts—such as place names, routes, and regions—were manually identified through close reading. These

references were then extracted and compiled into a structured dataset. Second, historical maps corresponding to the identified locations and periods were selected from digital archives. Third, spatial references from the texts were georeferenced by aligning narrative locations with approximate historical coordinates. This process accounted for historical changes in place names and boundaries. Finally, descriptive metadata were added to each data point, including narrative context, chapter location, and thematic relevance. This layered data collection process ensures transparency and reproducibility, allowing other scholars to trace how literary space is translated into spatial data.

Data analysis followed a multi-stage interpretive procedure. First, qualitative textual analysis was conducted to examine how space is narratively constructed through description, movement, and metaphor. Second, spatial data derived from the texts were visualized using digital mapping techniques to reveal patterns of mobility, enclosure, and hierarchy. Third, comparative analysis was applied to identify convergences and divergences between the spatial imaginaries of *Robinson Crusoe* and *Max Havelaar*. Throughout the analysis, critical cartographic principles guided interpretation, emphasizing power relations embedded in spatial representation. Rather than treating maps as final outputs, the study interprets them as analytical texts that generate new insights. This combination of qualitative interpretation and spatial visualization allows for a robust analysis of colonial space as both a narrative and cartographic construct.

RESULTS

Cartographic structuring of colonial space in Robinson Crusoe

The first set of results is grounded in three cartographic artifacts that frame the spatial imagination of *Robinson Crusoe*: the island map published with *Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe (1720)* (Figure 1), *Herman Moll's c. 1732 map of the West Indies* (Figure 2), and *Pierre de Vaulx's 1613 map of the Atlantic Ocean and surrounding continents* (Figure 3). Together, these maps constitute a multi-scalar cartographic corpus, ranging from the micro-space of Crusoe's island to the macro-space of transatlantic navigation. Figure 1 visualizes the island as a bounded and internally organized territory, while Figures 2 and 3 situate that island within broader imperial maritime routes connecting Europe, Africa, and the Americas. The coexistence of these cartographic scales provides concrete visual evidence that Crusoe's narrative space is embedded within early modern imperial mapping regimes rather than imagined in isolation.

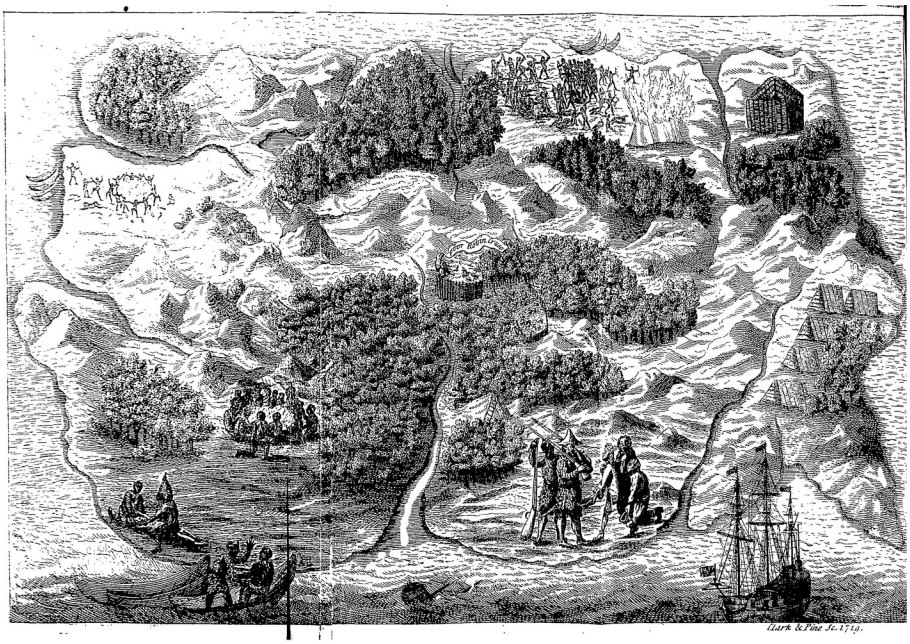


Figure 1. Crusoe's Island as depicted on the map published with the *Serious Reflections During the Life and Surprising Adventures of Robinson Crusoe: With his Vision of the Angelick World. Written by himself* (London: W. Taylor, 1720).



Figure 2. Herman Molls small but significant c. 1732 map of the West Indies. Moll's map covers all of the West Indies, eastern Mexico, all of Central America, the Gulf of Mexico, North America as far as the Chesapeake Bay, and the northern portion of South America, commonly called the Spanish Main.



Figure 3. Map of the Atlantic Ocean, 1613, and of parts of Europe, Africa, and North and South America was made in the French port city of Havre de Grace by Pierre de Vaulx, a cartographer and pilot in the French royal navy.

Descriptively, the three figures reveal a consistent spatial logic of enclosure and integration. Figure 1 presents Crusoe's island as a legible micro-territory, structured through coastlines, interior zones, and identifiable points of habitation and control. The island appears detached from social relations yet meticulously organized, emphasizing internal order over external interaction. In contrast, Figure 2 expands the spatial frame by positioning the island within the West Indies and the Spanish Main, highlighting imperial sea lanes and colonial nodes. Figure 3 further enlarges this perspective, depicting the Atlantic as a connective imperial space linking continents through navigation routes. Read together, these maps produce a dual spatial pattern: the island functions as a controlled colonial micro-space, while the ocean operates as a macro-space of circulation, trade, and imperial mobility. The absence of indigenous toponyms across scales reinforces the visual perception of colonial emptiness and availability.

Analytically, the spatial patterns across Figures 1–3 reveal a colonial cartographic imagination structured by mastery, abstraction, and exclusion. Figure 1 mirrors the epistemic function of colonial mapping by transforming lived space into a governable territory, aligning narrative authority with spatial control. Figures 2 and 3 contextualize this micro-mapping within a broader imperial system, where islands function as nodes in transatlantic networks of extraction and movement. The narrative's alignment with these cartographic regimes normalizes Crusoe's authority by embedding it within dominant geographical knowledge systems of the early modern period. The absence of competing spatial perspectives—whether indigenous or alternative—reinforces a singular worldview in which space exists primarily as an object of organization and exploitation. Digital re-mapping thus confirms that Crusoe's spatial dominance is not incidental but structurally produced through the convergence of narrative form and imperial cartography.

Counter-cartography and fragmented colonial space in *Max Havelaar*

The second set of results is based on three cartographic artifacts that frame the spatial imagination of Max Havelaar: the maps of Java published with *Max Havelaar or the Coffee Auctions of the Dutch Trading Company* (Figure 4), *the historical map of the East India Islands from the tenth edition of the Encyclopædia Britannica (1902)* (Figure 5), and *the map of Bantam (De Stadt Bantam) from the Blaeu–Van der Hem Atlas* (Figure 6). Together, these maps construct a layered cartographic corpus that spans literary space, colonial geography, and early modern urban mapping. Figure 4 directly anchors the novel's narrative to the administrative geography of Java, while Figure 5 situates Java within the broader spatial system of the Dutch East Indies. Figure 6 provides a localized historical visualization of Bantam, a region central to colonial trade and governance. This multi-scalar cartographic evidence demonstrates that *Max Havelaar* is embedded within an administratively dense and historically stratified colonial space.

Descriptively, Figures 4–6 reveal a spatial pattern characterized by fragmentation rather than enclosure. Figure 4 emphasizes Java as a segmented administrative territory, structured through residencies, districts, and governance zones rather than natural boundaries. Figure 5 expands this logic by visually integrating Java into a wider colonial archipelago, marked by dispersed islands and maritime connections rather than a single spatial center. Figure 6 further complicates this configuration by depicting Bantam as an early colonial urban node shaped by trade, ports, and fortifications. When read alongside narrative spatial references in *Max Havelaar*, these maps reveal a discontinuous colonial space experienced through bureaucratic movement between offices, plantations, villages, and administrative centers. Authority appears spatially dispersed, producing a layered geography in which official order coexists with zones of neglect and exploitation. This visual configuration contrasts sharply with the centralized island space observed in *Robinson Crusoe*.

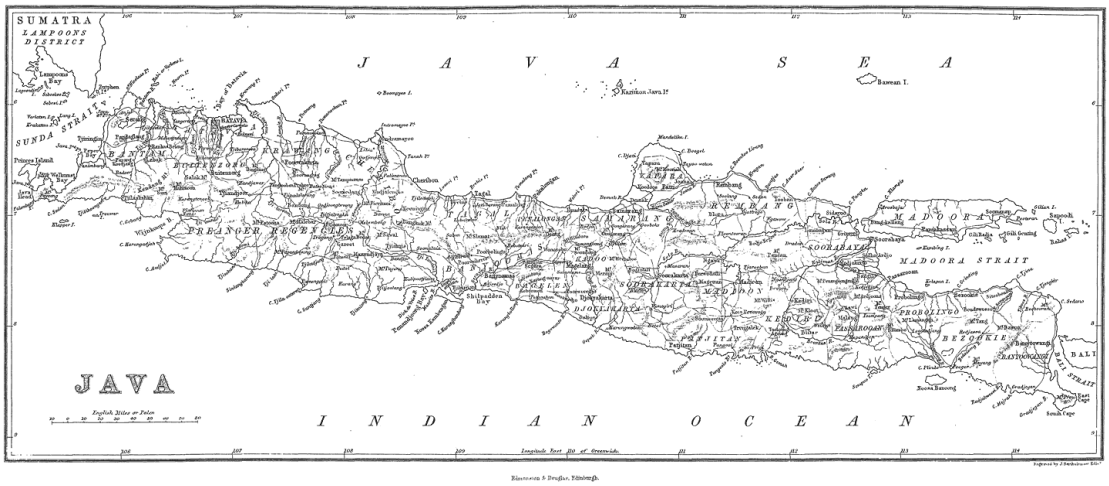


Figure 4. Maps of Java in *Max Havelaaror the coffee auctions of the Dutch trading company* by Edmonston & Douglas. Edinburgh.



Figure 5. Historical map of the East India Islands, Malaysia and Melanesia, and Dutch East India, inset showing Papua New Guinea, from the 10th edition of the Encyclopædia Britannica, 1902.



Figure 6. Map of Bantam. De Stadt Bantam. The illustration is taken from the Blaeu-Van der Hem Atlas. The original illustration dates from 1624 and was copied between 1665-1668, probably in Johannes Vingboons' studio.

Interpretively, the fragmented spatial patterns evident in Figures 4–6 function as a form of counter-cartography that exposes the ideological limits of colonial mapping. Rather than presenting space as empty or fully controllable, the cartographic materials associated with *Max Havelaar* reveal an overdetermined administrative landscape that conceals systemic injustice beneath its apparent order. The novel's narrative movement through these mapped spaces highlights the ethical disjunction between bureaucratic rationality and lived colonial reality. Digital re-mapping makes visible how colonial cartography prioritizes administrative legibility while marginalizing social relations and local suffering. In this sense, *Max Havelaar* does not negate cartographic knowledge but destabilizes its authority by revealing its partiality. The novel thus reconfigures colonial space as a contested field, demonstrating how Global South narratives can appropriate cartography as a critical instrument of exposure and resistance.

Comparative digital re-mapping of colonial spatial imaginations

The comparative digital re-mapping of *Robinson Crusoe* and *Max Havelaar* reveals contrasting colonial spatial imaginaries when both narratives are visualized against contemporaneous cartographic archives. This comparison is based on two cartographic artifacts that represent distinct but complementary colonial spatial regimes: *the eighteenth-century North Atlantic colonial trade pattern* (Figure 7) and *Cyprian Southack's 1737 map of the coast of New England* (Figure 8). Figure 7 visualizes the Atlantic as a transoceanic system of circulation, structured by trade routes, ports, and imperial exchange networks linking Europe, Africa, and the Americas. Figure 8 provides a more localized coastal cartography, emphasizing shorelines, harbors, and navigational precision along New England. When spatial references from Robinson Crusoe and *Max Havelaar* are comparatively situated within this cartographic framework, two contrasting spatial orientations become evident. *Robinson Crusoe* aligns with the Atlantic logic of maritime circulation and colonial expansion, whereas *Max Havelaar* remains structurally misaligned with this oceanic regime, reflecting a fundamentally different colonial spatial experience rooted in inland administration and governance.

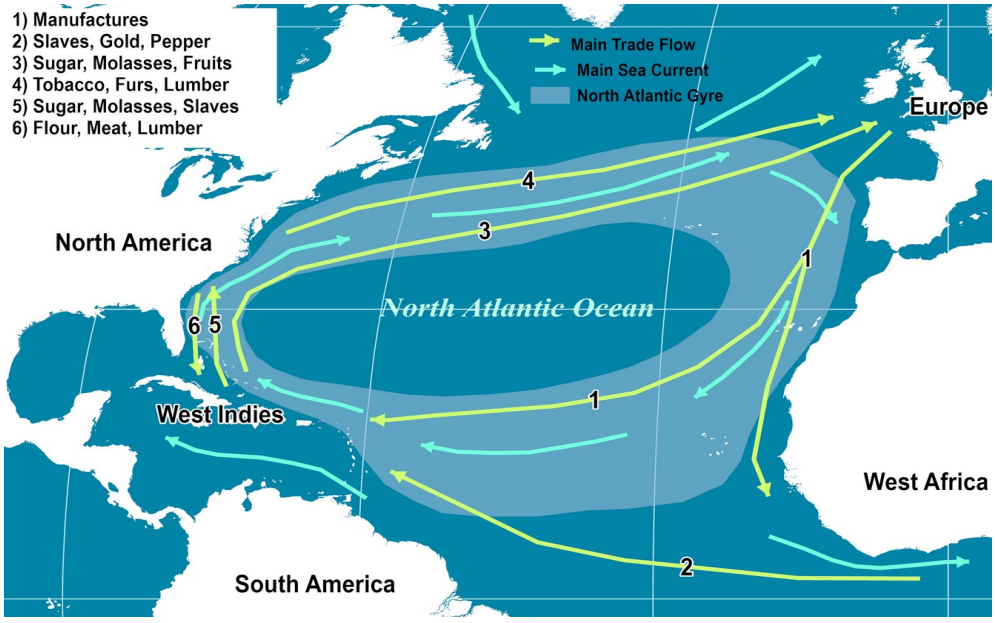


Figure 7. Colonial trade pattern North Atlantic 18th century

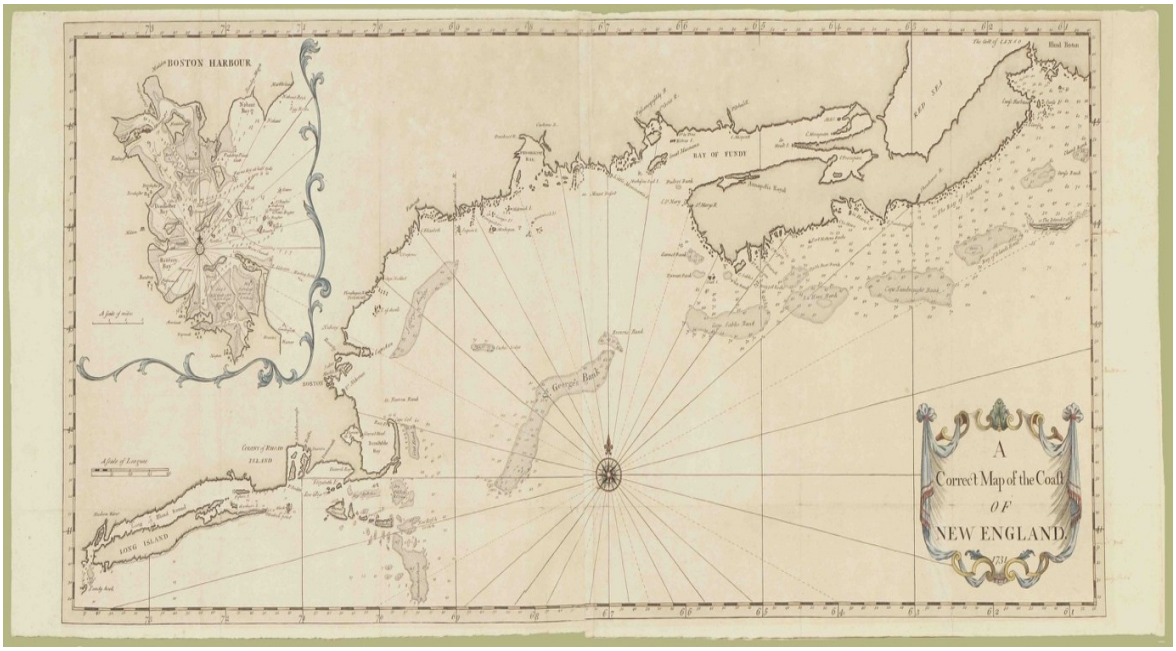


Figure 8. A correct map of the coast of New England
By Southack, Cyprian, 1662-1745 [1737]

Descriptively, Figures 7 and 8 foreground a spatial logic centered on mobility, connectivity, and navigational mastery. Figure 7 depicts colonial space as a networked system in which movement across the Atlantic is normalized and routinized, reinforcing imperial integration. Figure 8 complements this view by rendering coastal space as legible and measurable, designed to facilitate safe passage and commercial exchange. When read against these cartographic patterns, *Robinson Crusoe* exhibits a strong spatial congruence: narrative movement radiates outward from isolated nodes into wider maritime networks, producing a coherent and hierarchical spatial order. By contrast, *Max Havelaar* does not map neatly onto this Atlantic-coastal paradigm. Its narrative spatiality lacks sustained maritime orientation and instead foregrounds administrative interiors, producing a spatial disjunction when juxtaposed with Figures 7 and 8. This contrast highlights a divergence between oceanic colonial expansion and land-based colonial administration.

Interpretively, the comparative digital re-mapping reveals that colonial spatial imagination operates through distinct cartographic epistemologies tied to different colonial functions. *Robinson Crusoe* embodies an epistemology of circulation and mastery, in which space is rendered knowable through navigation, trade routes, and coastal mapping, as exemplified by Figures 7 and 8. *Max Havelaar*, however, exposes the limitations of this epistemology by remaining structurally incompatible with oceanic cartographic logics. Its spatial imagination reflects the ethical and bureaucratic contradictions of inland colonial governance rather than the coherence of maritime expansion. Digital literary cartography thus functions as a critical comparative tool, not by forcing equivalence between narratives, but by revealing their differential alignment with dominant cartographic systems. This finding underscores that colonial space is produced through multiple, uneven spatial regimes, and that Global South narratives can disrupt imperial cartographic coherence by foregrounding alternative spatial logics.

DISCUSSION

The findings from *Robinson Crusoe* demonstrate that literary cartography functions as a narrative technology of colonial normalization. These cartographic enclosure and spatial centralization reveal how narrative space operates to legitimize possession, labor discipline, and resource extraction (Johnstone, 2022; Zamyatin, 2023). This spatial logic functions effectively within the colonial epistemology by rendering space empty, orderly, and controllable, thereby naturalizing imperial authority. However, this function simultaneously produces a dysfunction: the systematic erasure of prior spatial meanings and social relations. From a critical perspective, the implication is that canonical European literature does not merely reflect colonial geography but actively participates in its reproduction. Digital literary cartography exposes this process by making visible how narrative movement aligns with imperial cartographic practices. Consequently, the so-what question extends beyond literary interpretation to methodological significance, showing that spatial visualization can uncover ideological work embedded in narrative form that remains obscured in purely textual analysis.

The cartographic logic in *Robinson Crusoe* emerges from deeper structural conditions rooted in early modern imperial capitalism and Enlightenment epistemology. Colonial expansion relied on mapping as a means of transforming unknown territories into measurable assets (Porter, 2007; Sampeck, 2014), a logic mirrored in Crusoe's spatial practices. The correlation between narrative enclosure and cartographic rationality reflects an underlying structure in which knowledge production and territorial control are mutually reinforcing. The novel's spatial coherence is thus not accidental but grounded in a worldview that equates mastery of space with moral and economic legitimacy. Scholars of critical cartography have shown that maps operate as instruments of power precisely because they obscure their ideological foundations. By narrativizing cartographic order, *Robinson Crusoe* internalizes these assumptions within literary form. The why, therefore, lies in the convergence of narrative, cartographic science, and colonial political economy, which collectively shape the novel's spatial imagination.

In contrast, the results of analysis on *Max Havelaar* reveal that literary space can function as a site of counter-cartographic intervention. These fragmented and discontinuous spatial patterns undermine the apparent rationality of colonial administrative maps (Kotikot et al., 2025; Sarkowsky, 2010). This narrative strategy functions to expose the moral dissonance embedded in colonial governance, revealing how bureaucratic spatial order masks systemic exploitation. The dysfunction of colonial cartography becomes visible as administrative coherence fails to account for human suffering and ethical responsibility. The implication of this finding is significant for postcolonial studies: Global South narratives can reconfigure spatial representation not by rejecting maps outright but by destabilizing their authority through narrative contradiction. Digital re-mapping amplifies this effect by juxtaposing official cartographic order with narrative disruption. Thus, the so-what lies in demonstrating how literary cartography can operate as a form of critique, transforming spatial representation into an ethical and political intervention.

The counter-cartographic patterns in *Max Havelaar* are rooted in the structural contradictions of colonial bureaucracy. Unlike frontier colonialism, which emphasizes exploration and possession, administrative colonialism depends on territorial segmentation and hierarchical governance (Fawaid et al., 2022, 2024). This structure generates spatial fragmentation, as authority is distributed across offices, districts, and reporting mechanisms. The narrative reflects this underlying structure by presenting space as morally and administratively unstable. The correlation between fragmented spatial representation and ethical critique suggests that the novel's form is shaped by the lived contradictions of colonial governance. Postcolonial theorists have argued that bureaucratic rationality often conceals violence behind procedural order (Thompson, 2017; Tulbure, 2022). *Max Havelaar* disrupts this concealment by narratively reassembling fragmented spaces into a coherent moral indictment. The why, therefore, resides in the tension between administrative cartography and human experience, a tension that the novel transforms into a spatial critique of colonial power.

The comparative digital re-mapping of *Robinson Crusoe* and *Max Havelaar* demonstrates that colonial spatial imagination is neither uniform nor static. Instead, it operates through multiple cartographic regimes shaped by distinct historical and ideological conditions (Benson et al., 2023; Lay et al., 2010; Sarkowsky, 2010; Unigarro Caguasango, 2024). The functional implication of this comparison is methodological as well as

theoretical: digital literary cartography enables scholars to move beyond isolated case studies and toward relational analysis across colonial contexts. At the same time, the comparison reveals a dysfunction in traditional literary geography, which often privileges European canonical texts while marginalizing Global South perspectives. By placing both narratives within a shared cartographic framework, this study exposes asymmetries in spatial representation and narrative authority. It extends to disciplinary practice, suggesting that comparative digital mapping can serve as a corrective to Eurocentric knowledge production in literary studies.

The divergent spatial imaginaries revealed through comparative re-mapping are shaped by underlying structural differences in colonial experience and narrative position. *Robinson Crusoe* emerges from a metropolitan perspective aligned with imperial expansion, while *Max Havelaar* is rooted in the contradictions of colonial administration and ethical witnessing. These positions correspond to distinct cartographic epistemologies: one oriented toward mastery and abstraction, the other toward fragmentation and moral exposure. Digital mapping makes these epistemological differences legible by situating narrative space within historical cartographic systems (Sen-Podstawska, 2024; Whittingham & McGarry, 2024; Wilmott, 2016). The correlation between narrative position and spatial logic underscores that literary space is structured by power relations embedded in colonial modernity. Recognizing this intersection allows digital literary cartography to function not merely as an analytical tool but as a critical methodology for rethinking colonial space in global literary studies.

CONCLUSION

This study demonstrates that digital literary cartography provides a powerful methodological lens for reinterpreting colonial space in literary narratives. By comparatively re-mapping *Robinson Crusoe* and *Max Havelaar*, the research reveals how colonial spatial imagination operates through distinct cartographic regimes: one privileging enclosure, mastery, and abstraction, and the other exposing fragmentation, ethical tension, and administrative contradiction. The primary strength of this study lies in its integrative approach, combining close textual analysis with historical cartographic archives and digital spatial methods. This approach advances literary studies by reframing maps as epistemic texts and narratives as spatial practices, thereby contributing to digital humanities, postcolonial criticism, and literary geography through a comparative Global South–oriented perspective.

Despite these contributions, this study has several limitations that suggest avenues for further research. The analysis focuses on two canonical public-domain texts, which limits the generalizability of the findings across broader colonial and postcolonial literary corpora. Additionally, the digital mapping employed here relies on interpretive georeferencing rather than computational automation, leaving room for methodological refinement. Future research could expand the corpus to include non-European and indigenous narratives, integrate quantitative spatial analysis, or employ interactive GIS platforms to enhance analytical depth. Such extensions would further strengthen digital literary cartography as a critical methodology for examining colonial space and narrative power in global literary studies.

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Fitriya Dessi Wulandari: conceptualization (lead); spatial analysis (lead); writing – original draft (lead). **René Faruk Garzozi Pincay**: comparative literary analysis (supporting); colonial theory perspective (supporting). **Dian Muhammad Rifai**: digital mapping interpretation (supporting); writing – review and editing (equal).

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

AI USE DECLARATION

The authors used artificial intelligence tools to assist with the formatting and layout of this manuscript. AI was not used to generate the substantive content, conceptualization, data, analysis, or conclusions of the research, all of which remain the sole responsibility of the authors.

INFORMED CONSENT

We have obtained informed consent from all individuals included in this study.

ETHICAL APPROVAL

The research related to human use has been complied with all the relevant national regulations and institutional policies in accordance with the tenets of the Helsinki Declaration and has been approved by the authors' institutional review board or equivalent committee.

DATA AVAILABILITY

Data availability is not applicable to this article as no new data were created or analyzed in this study.

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