



Islamic History as a Global Network: A Network Analysis Approach in Contemporary Islamic Historiography

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Article	Submitted	Revised	Accepted	Available Online
History	2026-03-11	2026-07-06	2026-07-17	2026-07-29

Abstract

Islamic historiography is generally structured through territorial, dynastic, and chronological frameworks, resulting in a fragmented understanding of the cross-regional relations that shaped the development of the Islamic world. This tendency leaves gaps in our understanding of the relationships among intellectual centers, economic networks, and social mobility on a transregional scale. This article aims to analyze patterns of global connectivity in Islamic history using a network analysis approach to reconstruct relationships among scholars, scientific institutions, trade routes, and Muslim communities across regions. This research uses a qualitative-historical method based on library studies, analyzing Islamic historiographic literature, historical sources, biographies of scholars, travelogues, and trade studies in Eurasia and the Indian Ocean. A network analysis framework is used to map the nodes, relationships, and connectivity flows that shape the historical structure of the Islamic world. The results of the study reveal a layered network pattern connecting centers of knowledge in the Middle East, South Asia, Southeast Asia, and Africa through scholarly travel, scholarly transmission chains, and intellectual correspondence. The scholarly network serves as a mechanism for knowledge transmission, fostering epistemic integration across regions. At the same time, trade networks formed corridors of economic, cultural, and religious interaction that accelerated the circulation of ideas, commodities, and Muslim identities. The mobility of migrants, diasporas, and students strengthened the position of various cities as strategic nodes in the global Islamic

network. These findings affirm Islamic history as a relational system shaped by transregional connectivity and enrich contemporary Islamic historiography with a more integrative, global-network perspective.

Keywords: Islamic Historiography; Network Analysis; *‘Ulamā’* Network; Indian Ocean; Islamic History

Abstrak

Historiografi Islam umumnya disusun melalui kerangka teritorial, dinastik, dan kronologis, sehingga relasi lintas kawasan yang membentuk perkembangan dunia Islam sering kali dipahami secara terfragmentasi. Kecenderungan ini menyisakan kesenjangan dalam menjelaskan hubungan antarpusat intelektual, jaringan ekonomi, dan mobilitas sosial yang berlangsung pada skala transregional. Artikel ini bertujuan untuk menganalisis pola keterhubungan global dalam sejarah Islam melalui pendekatan *network analysis* guna merekonstruksi hubungan antara ulama, institusi keilmuan, jalur perdagangan, dan komunitas Muslim lintas wilayah. Penelitian ini menggunakan metode kualitatif-historis berbasis studi kepustakaan, dengan analisis terhadap literatur historiografi Islam, sumber sejarah, karya biografi ulama, catatan perjalanan, serta kajian perdagangan di Eurasia dan Samudra Hindia. Kerangka *network analysis* diterapkan untuk memetakan simpul, hubungan, dan arus konektivitas yang membentuk struktur historis dunia Islam. Hasil kajian menunjukkan pola jaringan berlapis yang menghubungkan pusat-pusat keilmuan di Timur Tengah, Asia Selatan, Asia Tenggara, dan Afrika melalui rihlah ilmiah, sanad keilmuan, serta korespondensi intelektual. Jaringan ulama berfungsi sebagai mekanisme transmisi pengetahuan yang menciptakan integrasi epistemik lintas kawasan. Pada saat yang sama, jaringan perdagangan membentuk koridor interaksi ekonomi, budaya, dan keagamaan yang mempercepat sirkulasi gagasan, komoditas, serta identitas Muslim. Mobilitas migran, diaspora, dan pelajar memperkuat posisi berbagai kota sebagai simpul strategis dalam jaringan global Islam. Temuan ini menegaskan sejarah Islam sebagai sistem relasional yang terbentuk melalui konektivitas transregional serta memperkaya historiografi Islam kontemporer dengan perspektif jaringan yang lebih integratif dan global.

Kata Kunci: Historiografi Islam; *Network Analysis*; Jaringan Ulama; Samudra Hindia; Sejarah Islam

Introduction

Over the past few decades, Islamic history has undergone a paradigm shift from a political-territorial approach to a global connectivity perspective that treats relations among Muslim communities as a central element of the historical process (Ahmed et al., 2025). Classical and modern Islamic historiography has largely been constructed within the framework of dynasties, states, regions, or chronological periods, thereby producing fragmented narratives of the development of the Islamic world (Al-Shuqairat, Al-Maani, & Aldajah, 2025). Such a framework makes it difficult to explain the circulation of scholars, the transmission of scientific chains of narration, the mobility of *hajj* pilgrims, the exchange of manuscripts, and the trade networks that connected Africa, the Middle East, South Asia, Southeast Asia, and the Indian Ocean region for centuries. Studies of global history, connected history, and entangled history demonstrate that interregional connectivity is a crucial factor in shaping social, intellectual, economic, and religious transformations (Six, 2022). The

historical context of Islam demonstrates similar patterns through the Haramayn scholar network, the Red Sea trade network, the Indian Ocean intellectual network, and the cross-regional teacher-student relationships that shaped the religious authority of the Islamic world. The complexity of such relationships requires an analytical framework capable of systematically explaining the structure of relations, actors' positions, the intensity of connections, and the patterns of knowledge dissemination.

Developments in global historical methodology demonstrate a significant increase in the use of network analysis as an instrument for studying human mobility, the circulation of ideas, and the formation of transregional communities. The World Humanities Report (2024) notes the expansion of digital humanities research utilizing network mapping to analyze historical relationships across space and time. The International Institute of Social History (2025) identifies network analysis as a key approach to the study of diasporas, global trade, intellectual history, and the history of mobility. A similar trend is evident in the study by Anugerah, Muttaqin, and Trinarningsih (2022), which reports an increase in publications on historical network analysis in international databases over the past decade. In contrast, Islamic historiography remains dominated by narrative-descriptive approaches that focus on specific figures, institutions, dynasties, or regions. Several studies have conceptually explained transregional relations among Muslims (Akhter, 2023; Cieciora, 2018; Henig, 2016; Marsden & Henig, 2019), but mapping the structure of these relations, the positions of key nodes, the degree of connectivity, and the multidimensional patterns of interaction remains rare. This methodological gap limits Islamic historiography's ability to comprehensively explain the formation of religious authority, the spread of ideas, economic integration, and the reproduction of knowledge across regions.

Hagemann and Heidemann (2020) found that trade networks and social mobility played a crucial role in the formation of transregional relations between the Islamic world and Asia. Their research focuses more on historical descriptions, resulting in a systematic analysis of the structure of inter-actor relationships. Prestholdt (2023) shows that merchant and cleric communities established connectivity in the Indian Ocean through family ties, trade, and religious authority. This study explains the dynamics of social interactions without mapping the positions of key actors or the degree of their centrality in the network. Pervez (2023) explains that the diversity of Islamic thought emerged through historical connections between various Muslim intellectual centers. The analysis of these relationships remains conceptual and does not utilize network analysis tools. Zinhom (2024) revealed the role of manuscript mobility and translation activities in shaping cultural connections among Muslim communities across regions. This research has not yet quantitatively identified connectivity patterns or knowledge transmission pathways.

Umar et al. (2025) found that scholars' travel, educational activities, and teacher-student relationships generated scientific networks across regions of the Islamic world. The research focused on describing the process of knowledge transmission without analyzing the network structure connecting key nodes. Overall, these studies demonstrate academic consensus on the importance of transregional connectivity in Islamic history. A major limitation is the absence of an integrated network analysis as a methodological framework for identifying relationship patterns, levels of actor centrality, connection density, intercommunity relations, and the simultaneous interactions among intellectual, economic, social, and religious networks. A research gap lies in the need to develop a relationship-based Islamic historiography capable of reconstructing Islamic history as a global network system in more measurable and analytical terms.

This research begins with questions regarding the limitations of territorial historiography in explaining the connectivity of the Islamic world, the character of network structures that shape the development of Islamic history across regions, patterns of interaction between intellectual, economic, social, and religious networks, and the relevance of network analysis for the reconstruction of contemporary Islamic historiography. The research objectives include analyzing Islamic history as a global network system and evaluating the potential of network analysis as a methodological framework for Islamic historiography. The main argument frames the development of Islamic history as the result of multidimensional interactions among actors, institutions, communities, and centers of knowledge, connected through relations spanning geographical, political, and cultural boundaries. The network perspective allows for the identification of key nodes, transmission pathways, knowledge diffusion mechanisms, and connectivity patterns that are difficult to discern through a chronological-territorial approach. The theoretical contributions of this research include the development of a framework for Islamic historiography based on relational analysis and the integration of social network theory into the study of Islamic history. Practical contributions include providing a methodological foundation for research in Islamic history, intellectual history, educational history, trade history, and Muslim mobility, with a focus on systematically mapping relationships, connectivity, and network structures.

Method

This research uses a historical qualitative method and a historical network analysis approach to reconstruct Islamic history as a global relational system shaped by interactions among actors, institutions, and transregional spaces from the 7th to the early 20th centuries. Network analysis is used as a methodological tool, not merely an interpretive metaphor, by establishing Islamic scholars, merchants, rulers, educational institutions, trade centers, and cities as nodes, while intellectual, economic, political, and religious relations, pilgrimage mobility, knowledge

transmission, and commodity exchange are positioned as relations (ties). The research data are drawn from classical Islamic historiography, biographies of scholars, travelogues, trade archives, institutional documents, and contemporary academic literature, selected for thematic relevance, academic authority, geographical representation, and source traceability. Data collection was carried out through a systematic literature search, source selection using clear inclusion and exclusion criteria, relational data extraction, coding of nodes and relations in a network matrix, and triangulation between sources to verify the validity of historical relationships. Data analysis was conducted by mapping network structures and identifying levels of centrality, density, brokerage roles, clustering patterns, the direction and intensity of interactions, and changes in network configuration between periods. The results were then interpreted historiographically by integrating spatial, temporal, and relational dimensions to explain the formation, transformation, and sustainability of global Islamic networks that conventional chronological approaches do not reveal.

Results and Discussion

The Transformation of the Paradigm of Islamic Historiography from Territorial Narrative to a Global Network Perspective

Islamic historiography has, for decades, been heavily influenced by the territorial history paradigm, which treats states, dynasties, political regions, and government chronologies as the primary units of analysis (Ahmed et al., 2025). This framework developed through the modern historiographic tradition, which adopted the assumption that political space constitutes the natural boundaries of historical development (Puente-Lozano & García-Álvarez, 2022). As a result, the historical experience of Muslim societies is often represented through categories of center and periphery, territorial expansion, regime change, and power consolidation. Such readings produce narrative structures that tend to identify historical change in terms of political transformation, while social, intellectual, economic, and religious relations across geographical boundaries receive less attention. Critiques of the territorial paradigm emerged alongside the development of global history, which questioned the tendency in conventional historiography to divide historical spaces into discrete geographical units (Drayton & Motadel, 2018).

The development of connected history deepens this critique by rejecting the assumption of a closed historical space. Sanjay Subrahmanyam (1997) points out the importance of exploring interregional relationships to understand historical processes that unfold through the circulation of people, ideas, objects, and social practices. This approach is highly relevant to Islamic historiography, as the formation of the Islamic world in its earliest period was shaped by cross-regional mobility that connected the Hijaz, East Africa, Central Asia, Persia, India, Southeast Asia, and the Mediterranean region (Hagemann & Heidemann, 2020). Such a structure of relationships is difficult to reduce to isolated regional histories.

Critiques of territorial history are not directed at the entire tradition of Islamic history, as several classical genres, such as the *riḥlah* (journey), *ṭabaqāt* (generation-level), *sanad* (chains of narration) networks, and biographies of scholars, demonstrate a strong awareness of interspatial relationships. The problem is that modern historiography tends to prioritize political units as the dominant interpretive framework, often leaving patterns of transregional connection unsuited for analysis.

The conceptual foundation of the historiographical shift toward a relational perspective rests on the assumption that relationships determine historical configurations more than geographical boundaries do. Relational history focuses on interactions between actors, institutions, and communities that generate social processes across space (S. Liu, 2024). This framework differs significantly from both global history and connected history. Global history focuses on large-scale processes connecting different regions of the world (Scarfi & Andrade, 2023); connected history examines concrete relationships across historical spaces; while relational history utilizes relationships as the primary unit of analysis (Van Oyen, 2016). Network analysis provides a methodological tool that translates these three approaches into a more systematic analytical model. Through the concepts of nodes, ties, hubs, brokerage, density, and centrality, historical relationships can be reconstructed as patterned structures.

The relevance of the network approach is evident in Islamic intellectual history, which developed through relationships between teachers, students, educational institutions, scholarly families, *sanad* networks, and the mobility of knowledge seekers. Marshall Hodgson (2002) and Nile Green (2020) demonstrate that the spread of Islamic scholarly tradition occurred through the circulation of actors and texts that connected various centers of learning. This pattern demonstrates that the distribution of intellectual authority was not concentrated in a single region but rather emerged from layered interactions among network nodes. Balachandran's (2023) study of the relationship between the Hijaz, Yemen, Gujarat, Aceh, and the Indonesian archipelago demonstrates how '*ulamā*' functioned as brokers connecting distant scholarly communities. Conventional narrative readings often depict intellectual development as the local history of each region. Network analysis enables the identification of the centrality of figures, the positions of educational institutions, the pathways of knowledge transmission, and patterns of authority formation that were previously difficult to discern through a region-based chronological approach.

The economic dimension demonstrates a similar urgency. Janet Abu-Lughod (1989), K. N. Chaudhuri (1985), Michael Pearson (2003), and Engseng Ho (2006) show that the Islamic world developed through trade networks connecting the Indian Ocean, the Red Sea, the Persian Gulf, South Asia, Southeast Asia, East Africa, and the Mediterranean region. Economic integration depended on the continuity of

relationships between actors that facilitated the movement of commodities, capital, technology, and information. A network perspective enables the identification of ports that served as hubs, diaspora communities that acted as brokers, and trade routes that connected regions. Such mechanisms explain why economic changes in one region often impacted other geographically distant regions. State-based historiography struggles to capture these patterns of relationships because the focus of analysis is directed at political units, rather than the relational structures that underpinned the economic integration of the Islamic world.

Social and religious mobility demonstrates an even broader networked character. The pilgrimage, the migration of scholars, the movement of traders, the spread of Islamic orders, and the circulation of manuscripts created spaces of interaction that brought together diverse Muslim communities. Prasad's (2012) study of Hadrami networks in the Indian Ocean demonstrates how identity, authority, and social solidarity were formed through transregional relationships spanning centuries. This phenomenon reveals the Islamic world as a relational configuration that continually changes with the intensity of connectivity among network nodes. A network perspective allows for a more detailed explanation of the processes of community formation, the reproduction of religious authority, and the dissemination of cultural practices that occur through ongoing interactions between actors and institutions.

The use of network analysis goes beyond simply employing network metaphors in historical writing. This approach offers conceptual and methodological tools for measuring the patterns of relationships that shape historical processes. Centrality analysis allows for the identification of nodes with strong influence in the circulation of knowledge or trade. The concept of brokerage explains the role of intermediary actors connecting different groups. Density measurements help understand the level of integration within a community, while clustering reveals the formation of groups with high levels of connection. The use of these instruments makes it possible to reconstruct Islamic historiography more precisely than traditional descriptive readings can.

Structure and Dynamics of 'Ulamā' (Islamic scholars) Networks in the Circulation of Islamic Knowledge

Network-analysis-based Islamic historiography views Islamic intellectual development as the result of interactions among nodes that form relational systems across space and generations. This perspective shifts the focus of historical studies from territorial units to the configuration of relationships connecting scholars, educational institutions, scholarly communities, trade routes, and centers of learning. The structure of scholarly networks is multi-centered, exhibiting varying levels of connectivity among actors and locations (Umar et al., 2025). The concepts of degree centrality, betweenness centrality, and eigenvector centrality help explain the distribution of influence that emerges through actors' relational positions within

knowledge networks. This approach demonstrates how nodes with extensive connections gain greater capacity to connect disparate intellectual communities, accelerate the flow of ideas, and shape scholarly orientations across regions (Bucur, 2020; Chiranjeevi et al., 2024; Dablander & Hinne, 2019).

Intellectual mobility is a key mechanism connecting various scholarly clusters in the Islamic world. Scholarly travel generates a network function far more complex than that of ordinary academic travel because each move creates new relationships that connect different centers of knowledge (Jasafat et al., 2025). A network analysis perspective shows that scholars moving between the Haram, Egypt, Syria, South Asia, East Africa, and the Indonesian archipelago functioned as knowledge brokers, bridging intellectual groups that previously had no direct connections. The brokerage position is crucial because it enabled the transfer of information, interpretative methods, and scientific traditions between regions. This phenomenon explains why transregional Islamic networks were able to maintain intellectual integration despite their vast geographic reach. Mobility also increased network density by creating new connections, thereby expanding the reach of scholarly communication (Petersen, 2018). This pattern creates the character of a small-world network, enabling rapid knowledge exchange through relatively short relational paths despite spanning vast geographic spaces.

The teacher-student relationship forms the primary infrastructure for the reproduction of Islamic knowledge and provides historical data that allows for detailed mapping of intellectual networks. The *sanad* of knowledge can be understood as a genealogical network that demonstrates the flow of knowledge between generations through documented pedagogical relationships. Each learning relationship creates an epistemic bond that connects individuals to the broader scholarly community (Kusuma et al., 2025). The network perspective suggests that a scholar's position is not determined solely by the number of teachers or students they have, but rather by their ability to connect different lines of transmission. Actors located at the intersection of multiple *sanads* possess a higher degree of centrality because they act as connectors between intellectual traditions (Kamali, 2005). This mechanism explains the formation of scholarly authority as a result of structural position within the knowledge network. Legitimacy emerges through collective recognition, formed when a scholar occupies a strategic location that connects various epistemic communities while maintaining the continuity of knowledge transmission.

Islamic scholarly centers functioned as network hubs, concentrating scholarly interactions, manuscript exchange, the reproduction of intellectual traditions, and the formation of academic authority. Mecca, Medina, Baghdad, Cairo, Damascus, Fez, Delhi, and other regional centers achieved central positions due to their high level of connectivity to the broader network. This centrality is not permanent, as changes in political, economic, and human mobility can alter the distribution of connections

among centers (Indah et al., 2025). Network analysis reveals a more appropriate multipolar pattern than a simple hub-and-spoke model. Some scientific centers may serve as dominant nodes for a period, then decline as new centers emerge with greater capacity for connections.

The circulation of Islamic knowledge occurs through relational networks that allow ideas to move, adapt, and transform as they pass through various intellectual nodes. The network approach demonstrates that knowledge transmission is a reconstructive process shaped by actors' positions within the network. Each node has a different capacity to receive, interpret, modify, and then redistribute knowledge to other communities (Phelps, Heidl, & Wadhwa, 2012). This phenomenon explains the emergence of variations in thought that remain connected through a shared epistemological framework. The concept of knowledge brokerage helps understand the role of scholars who connect different intellectual traditions and produce new syntheses that then gain legitimacy through the transmission network. The path of knowledge dissemination follows the patterns of relationships established through *sanad*, scholarly correspondence, teaching activities, and the exchange of manuscripts. The cumulative nature of the network allows knowledge to develop by integrating new ideas without losing ties to preceding scholarly traditions.

The formation of scholarly authority can be explained through the relationship between an actor's structural position and their level of influence within the network. The theory of religious authority suggests that scholarly legitimacy arises through a combination of epistemic capital, collective recognition, academic reputation, and the capacity to bridge different intellectual communities (Noy & O'Brien, 2026). A network analysis perspective shows that scholars with high betweenness centrality have a greater ability to influence the direction of discourse because they control communication channels between groups that are not directly connected (Ahmad, 2023). This influence is not always dependent on political standing. However, patronage from rulers and waqf institutions, as well as support from educational institutions, often strengthens the position of certain actors within the network. The relationship between intellectual capital and political capital produces a complex configuration of authority. This structure demonstrates how scholarly legitimacy is formed through layered interactions among social, institutional, and epistemological relationships.

The transregional character of the '*ulamā*' network explains the Islamic world's ability to maintain intellectual continuity despite shifts in centers of power, political fragmentation, and economic change. Network resilience arises because connectivity relies on interpersonal relationships and epistemic communities spread across diverse regions. Imawan's (2024) study of the Haramayn-Nusantara, Indian Ocean, Hadramawt, East Africa, and South Asia networks demonstrates the existence of a shared intellectual space connecting Muslim communities through the

circulation of '*ulamā*', manuscripts, and educational practices. The relationships between clusters create a global network structure that enables the exchange of ideas to transcend geographical boundaries. The perspectives of connected histories and global intellectual history show that the development of Islamic thought is better understood as the result of interactions among nodes that influence one another rather than as the product of local traditions that developed in isolation.

Trade Networks and Social Mobility in the Historical Expansion of Islam

Trade activities were one of the main foundations of the integration of the Islamic world, creating relational networks that connected Eurasia, Africa, and the Indian Ocean into an interdependent system of cross-regional exchange (Seland, 2019). A network analysis perspective positions trade as a process of relationship formation that produces layered connectivity between ports, regional markets, merchant communities, religious institutions, and local authorities. The Indian Ocean, Red Sea, Persian Gulf, overland Silk Road, and Trans-Saharan routes formed network configurations with varying levels of connection density, resulting in heterogeneous patterns of regional integration (Zreik, 2025). This structure explains why some regions developed into meeting points for various flows of people and information. The connected history framework demonstrates that interregional linkages emerged through repeated relationships that created spaces for ongoing interaction, thereby enabling the development of Islamic history through the accumulation of transregional connections that continually expanded and reconfigured.

The position of traders within Islamic trade networks can be understood through the concept of brokerage, which explains how certain actors connect social groups previously separated by geographic distance, political boundaries, or cultural differences (Koster & van Leynseele, 2018). The brokerage function is more significant than the distribution of goods because it enables the transfer of information, technology, legal practices, language, and religious ideas along trade corridors. The literature on merchant networks indicates that the success of long-distance trade relies heavily on trust networks built through partnership contracts, family relationships, collective reputation, and religious affiliation. Trust mechanisms reduce transaction costs and uncertainty, enabling economic relationships to endure across generations (Kurt, Sinkovics, Sinkovics, & Yamin, 2020; Marsden & Anderson, 2020; Query & Thompson, 2024). Brokers' capacity to build bridges between communities creates diffusion pathways that accelerate the spread of social norms and religious practices (Yogev, 2022). This strategic position makes trade networks a medium for social transformation, connecting local spaces into a geographically expansive system of Islamic interaction.

Trade networks do not operate solely through individual relationships but are strengthened by diaspora communities that serve as hubs for the reproduction of cross-regional connectivity. Miran's (2012) study of the Hadrami, Gujarati, and

coastal Arab diasporas of East Africa demonstrates how merchant migrations created permanent nodes that maintained economic ties while expanding cultural and religious influence. The network perspective describes diaspora communities as hubs that can concentrate flows of information, capital, human resources, and social legitimacy. Kinship ties, marriage, economic patronage, and religious institutions created mechanisms that maintained long-term continuity of networks. Such structures enabled local actors to gain access to broader markets through integration into transregional networks. The integration process led to changes in the social position of certain groups, as involvement in trade relations opened access to previously unavailable economic resources, education, and symbolic authority.

Global trade connectivity depended on the presence of cities that occupied central positions within network structures. Aden, Hormuz, Basra, Calicut, Malacca, and Zanzibar developed as nodes with high centrality due to their roles as meeting points for various maritime and land routes (Shekhar, 2025). The significance of these cities was not determined solely by their size or political power, but rather by their ability to connect diverse regional networks into broader exchange systems. A network analysis perspective shows that changes in the position of one port could influence the distribution of trade flows across regions because each node operated as part of an interconnected relational configuration (Q. Liu, Yang, Ke, & Ng, 2022). The concentration of traders, scholars, sailors, artisans, and migrants created a cosmopolitan environment that accelerated the exchange of knowledge and institutional innovation. Mosques, educational centers, commercial organizations, and philanthropic networks developed alongside intensified intercommunity connections, enabling trading cities to serve as arenas for the production of social, economic, and intellectual connectivity in the Islamic world.

Human mobility developed as a logical consequence of the formation of trade corridors connecting various regions. The framework of mobility studies shows that human movement not only resulted in changes in geographic location but also expanded individuals' access to networks of relationships with economic and social value (Mani & Riley, 2021). Traders, sailors, dockworkers, religious scholars, translators, and migrant groups moved along trade routes, bringing with them knowledge, skills, identities, and cultural practices. Repeated interactions between immigrant communities and local communities led to the formation of new social networks that expanded economic opportunities for various groups. Integration into trade networks enabled some individuals to gain access to capital, markets, patronage, and education, thereby increasing their social standing. Geographic mobility then transformed into social mobility through relational mechanisms that connected individuals to strategic resources.

The influence of trade networks on the development of Islam operated through relational diffusion mechanisms mediated by interpersonal relationships, rather than through a linear process of dissemination. Network diffusion theory posits that

religious ideas spread along interaction paths formed among highly connected actors (Becker et al., 2020). The spread of Islam along the Indian Ocean coast demonstrates how trade, marriage, education, and patronage created channels of communication that accelerated the adoption of religious practices (Prange, 2018). Variations in connectivity resulted in distinct patterns of Islamization across regions, so the development of Muslim communities did not follow a single model. Some regions experienced rapid integration due to their strategic position within trade networks, while others developed through a more gradual process. This perspective demonstrates that the acceptance of Islam was influenced by the structure of social relations that connected local actors to transregional networks. Religious diffusion emerged from repeated interactions that created spaces for cultural negotiation and the formation of new identities.

Analysis of the relationships among trade, mobility, and cultural diffusion demonstrates that the interaction of multiple interconnected networks shaped the expansion of Islam. Economic activity created corridors of connectivity, human mobility expanded the reach of social relations, and cultural exchange transformed identities and institutions. The interrelationships between these elements form a historical mechanism that explains how Muslim communities expanded beyond the boundaries of specific political regions. A global economic history framework helps explain economic integration across regions, while connected history demonstrates the interconnectedness of historical experiences among societies often separated by modern geographic boundaries. The combination of the two perspectives produces a more comprehensive understanding of the formation of the Islamic world as a social system structured through a multi-center relational network.

Reconstruction of Islamic Historiography through a Network Analysis Approach

The reconstruction of Islamic historiography through network analysis stems from a shift in the unit of historical analysis, namely a shift in focus from region, dynasty, and chronology to the relationships connecting actors, institutions, knowledge artifacts, and geographical spaces across regions. This shift aligns with the development of relational history and connected history, which view historical processes as the result of interconnected social nodes that shape long-term configurations of change (Buckles, 2023; Go & Lawson, 2025). This perspective allows Islamic history to be read as a system of transregional interactions that continuously shift through the circulation of people, texts, authority, and resources. The network framework not only maps the relationships among historical actors but also transforms how researchers define historical cause and effect. Social change is understood through relational positions that enable certain actors to facilitate the transfer of ideas, the formation of legitimacy, and the reproduction of knowledge across communities. Consequently, Islamic historiography has acquired analytical

tools capable of explaining relationships across historical spaces without being bound by the geographical limitations that have dominated territorial narratives.

This development has epistemological implications for how historical sources are read and interpreted. Historical network analysis transforms sources from mere information storage media into traces of social relationships that can be systematically reconstructed (Holland-Lulewicz & Roberts Thompson, 2022). Biographies of scholars, travel documents, manuscripts, correspondence, scholarly diplomas, trade records, and institutional archives can be treated as relational evidence, revealing patterns of connectivity between communities. This approach allows for the identification of relationships not readily apparent through conventional narrative reading. The process of network reconstruction still requires rigorous source criticism, as historical data is often fragmentary and incomplete, and it reflects the interests of particular groups. Challenges such as missing ties, documentation bias, and unequal archival availability must be taken into account when constructing historical network models. Such methodological awareness prevents the reduction of historical complexity to ahistorical mathematical representations and maintains the link between relational structures and the social contexts that gave rise to them.

The primary contribution of network analysis to Islamic historiography lies in its ability to explain the mechanisms of authority formation and knowledge production through a measurable and interpretable relationship structure. Indicators of centrality, density, brokerage, and structural holes provide information on the relative positions of actors within the knowledge network. The analytical value of these indicators extends beyond statistical mapping, but is also used to understand how intellectual influence, religious legitimacy, and mediation capacity developed through specific social relationships. Central positions are not always synonymous with political dominance or formal status, thus opening up the possibility of identifying actors who have been marginalized in conventional historiography. This approach broadens the scope of Islamic historical analysis by shifting attention away from prominent figures or dominant institutions. The focus shifts to the interactional processes that enable the emergence of authority, the dissemination of ideas, and the formation of scholarly consensus within networks that continually evolve in response to social dynamics.

The interpretive capacity of networks is strengthened when historical relationships are analyzed as multilayered configurations linking intellectual, economic, political, and material activities. The literature on actor-network perspectives demonstrates that the production of social reality involves not only humans but also texts, manuscripts, transportation routes, ports, educational institutions, copying technologies, and various material objects that mediate relations between groups (Freeman, 2019; Schwarz et al., 2025). This perspective broadens the scope of Islamic historiography because intellectual transformation is

not understood solely as the result of human interaction. Manuscripts, books, archives, and mobility infrastructures act as mediators that influence the direction of knowledge circulation. Such readings yield richer interpretations than linear diffusion models, which assume that the movement of ideas proceeds simply from the center to the periphery. Historical structures emerge from layered negotiations among actors, institutions, technologies, and environments interconnected through complex relational networks.

The temporal dimension is a crucial element in network-based historiographic reconstruction because social relations are constantly changing over time. Contemporary historical network analysis emphasizes the importance of dynamic networks in understanding the formation, expansion, fragmentation, and reorganization of historical networks (Su, McAvoy, & Plotkin, 2023). This perspective allows researchers to trace the transformation of Islamic intellectual centers through changing patterns of connectivity between regions. A region can become a center of knowledge by connecting diverse communication channels, scientific communities, and widely distributed resources. As these patterns of connections change, the region's position also transforms (Gui, Du, & Liu, 2024). A temporal approach yields a more accurate understanding of the emergence and decline of centers of intellectual activity without being trapped by static geographical explanations.

The use of network analysis also encourages the integration of quantitative techniques and historical interpretation within a single, complementary methodological framework. Mapping network structures provides insight into the patterns of relationships, the distribution of connectivity, and the positions of actors within the relational system (Borsboom et al., 2021). Historical interpretation is then used to explain the social, political, intellectual, and cultural meanings of the discovered patterns. This integration yields an analysis that transcends the traditional distinction between nomothetic and idiographic approaches. Network data provides an empirical basis for identifying historical patterns, while contextual reading maintains sensitivity to the complexity of human experience. The relationship between numbers and narratives creates a space for methodological dialogue that enriches historical research. This approach also addresses criticisms of the positivistic tendencies in network analysis by treating relational structures not as the ultimate goal of research but as entry points to understanding broader historical processes.

The ability to uncover connections across space provides a basis for reformulating narratives of global Islamic history. Connected history demonstrates that historical change often emerges from encounters between interacting communities, rather than from the internal developments of a particular region. Network analysis provides a tool for tracing the pathways of connectivity that enable these processes. The resulting historical narrative is structured around patterns of

relationships that connect diverse communities across transregional spaces. This approach also allows for a reevaluation of the categories of center and periphery that have dominated historiography. A community's position is determined by its relational capacity within the network, not solely by its geographic location or political power. Such a formulation yields a more dynamic reading of Islam's development and opens space to identify actors and regions that have previously received less academic attention.

Conclusion

Contemporary Islamic historiography demonstrates a paradigm shift toward understanding history as a global network connecting actors, institutions, ideas, and economic activities across regions and periods. Key findings suggest that the development of the Islamic world is best understood through patterns of interconnectedness formed through the mobility of scholars, teacher-student relationships, manuscript circulation, intellectual travel, educational activities, and Indian Ocean trade networks and other commercial routes that accelerated the exchange of knowledge, commodities, cultural values, and religious authority among Muslim communities. The network perspective yields new insights into the formation of centers and peripheries of scholarship, the distribution of religious authority, and the mechanisms of the dissemination of Islamic ideas that are difficult to explain through conventional territorial approaches. Theoretical contributions are evident in strengthening relational perspectives and transnational historiography. At the same time, practical implications are reflected in opportunities to develop digital mapping of scholarly networks and to facilitate the transmission of Islamic scholarship. Limitations of the study remain due to the fragmentation of historical sources, the uneven availability of network data, and the suboptimal application of empirical network analysis using digital databases. Future research agendas should focus on reconstructing cross-regional networks of *'ulamā'*, analyzing Muslim trade connectivity, and integrating quantitative and qualitative methods to explain changes in network structure and the transformation of religious authority throughout Islamic history.

Acknowledgments

Author Contribution Statement

IBP developed the research concept, the methodology, the data analysis, wrote the manuscript, and coordinated the publication process. HAA conducted the literature review, data collection, and content review of the manuscript. MA contributed to data analysis, interpretation of the results, and refinement of the discussion. SRK validated the data, evaluated the methodology, and revised the manuscript's substance. KMC critically reviewed the manuscript, refined the academic language, and approved the final version for publication.

Conflict of Interest

The authors declare that the research, manuscript preparation, analysis, data interpretation, and publication of this article were not influenced by any personal, professional, institutional, or financial interests that could potentially give rise to a conflict of interest. All authors declare that they have no conflicts of interest whatsoever related to this manuscript.

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AI was used solely to enhance language quality, correct grammar, and assist with manuscript formatting. It was not used to generate scientific material, including conceptualization, analysis, data interpretation, argumentation, research findings, ideas, or conclusions. All scientific content, research results, analysis, and academic responsibility in this article are solely the work and responsibility of the author.

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