Intrasite Trade and Exchange: A Look at the Late Bronze Age Tel Lachish Network

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Abstract

This study uses Social Network Analysis to explore trade at Tel Lachish, a Late Bronze Age polity in southern Canaan. Mapping the places of origin of imported artifacts and comparing them with their excavation contexts reveals that Canaanite (local), Cypriot, Egyptian, Anatolian, and Aegean materials were the most common, suggesting both accessibility and cultural value. In contrast, imports from Syria and Mesopotamia occurred less frequently. Through this approach, archaeologists can move beyond static artifact counts to reconstruct the dynamic networks that shaped exchange, interaction, and identity at Tel Lachish.

Introduction

By applying Social Network Analysis to archaeology, we can better understand settlements and their social interactions. The Late Bronze Age is known for expansive trade and exchange networks between polities within the Mediterranean Basin and the Near East (Knappett, 2013). For this study, a city-state in southern Canaan, Lachish, is analyzed to determine where imports are coming from, where they are found on the site, and if there is any correlation.
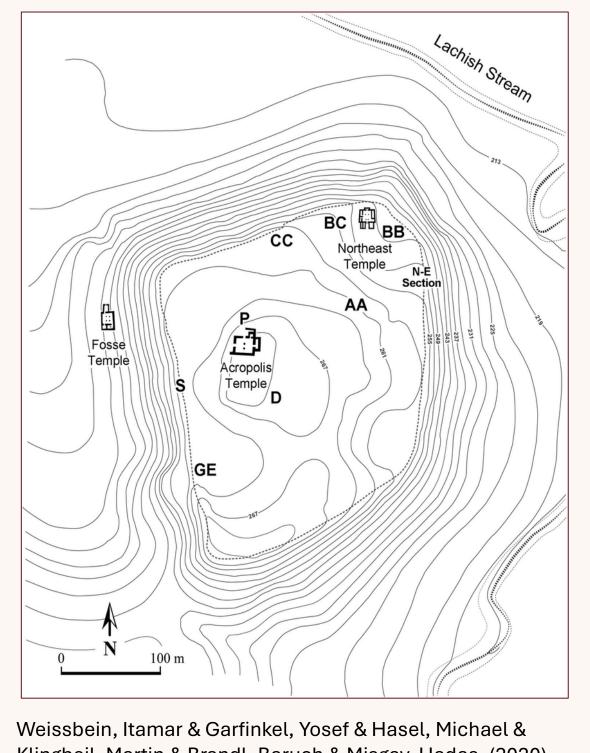
Site of Tel Lachish

Lachish was a significant polity in the southern Levant in the Late Bronze Age. This polity was connected to the Via Maris to the west, and the King's Highway to the east. Archaeological excavations at Lachish provide insight into the city's many international connections.
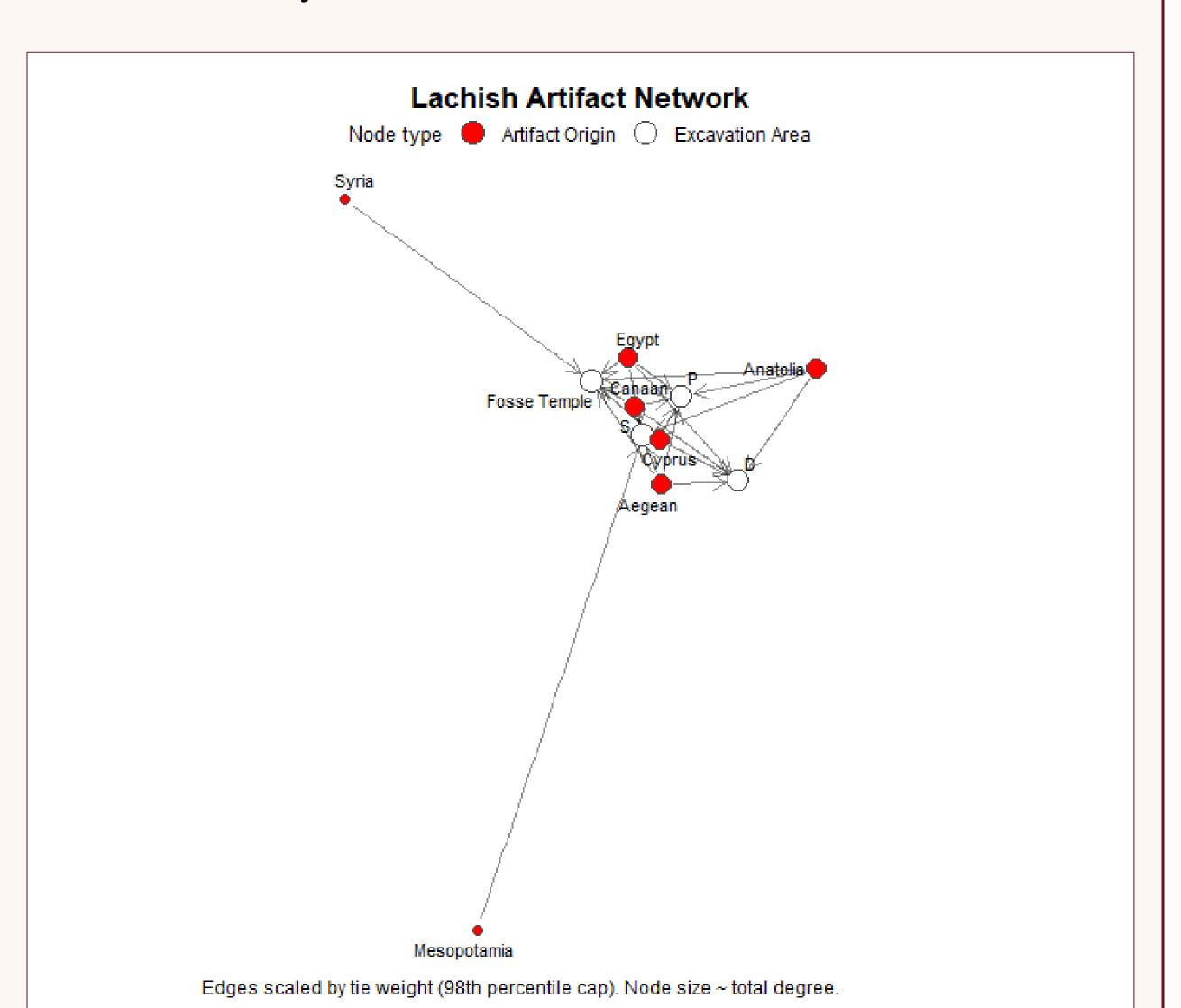

Aerial view of Tel Lachish (Credit: Emil Aladjem)
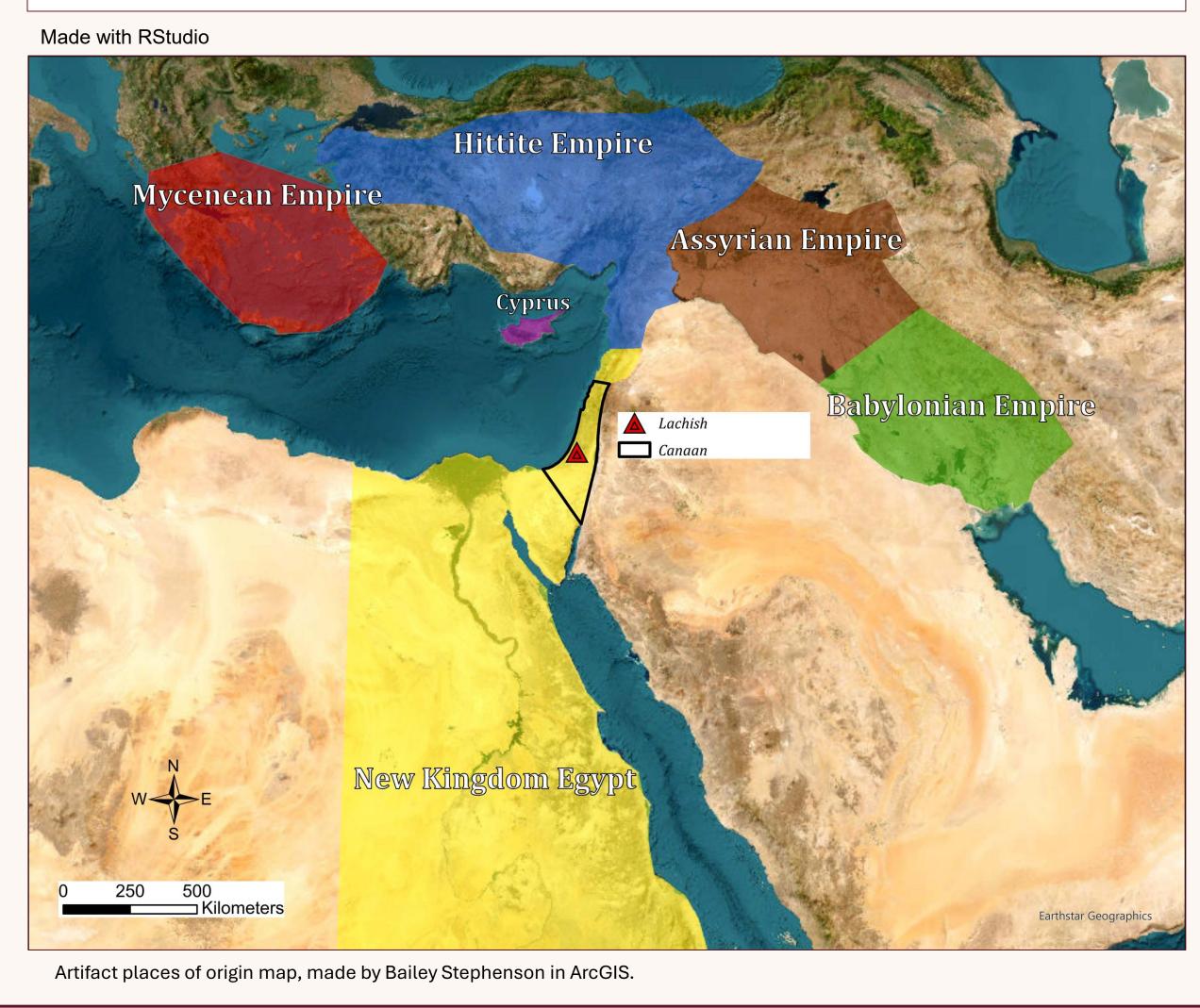
Areas of the Site

This study looks at the Late Bronze Age Areas of excavation identified within *The Renewed Excavations at Tel Lachish.* This includes the Fosse Temple, Area P, Area S, and Area D. The Fosse Temple grows throughout the Late Bronze Age in both size and the number of imports the temple contained. Areas P and D were associated with cultic activities and domestic spaces. Area S contained a pillared building suspected of being a public forum as well as domestic spaces.

Weissbein, Itamar & Garfinkel, Yosef & Hasel, Michael & Klingbeil, Martin & Brandl, Baruch & Misgav, Hadas. (2020).

Methodology

A Social Network Map, made of red nodes representing artifact places of origin, white nodes represent the Late Bronze Age Areas excavated at the site, and edges represent the imported artifact, display the international network found within Lachish. The data for this analysis were collected from site reports. That information was put into an Excel document. The Excel document was then imported into RStudio to create this network map. Various statistical analysis were run to create the results section.
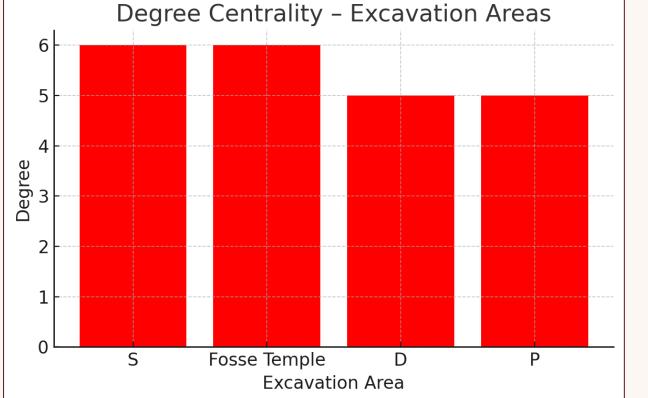

Lachish Artifact Network
Node type ● Artifact Origin ○ Excavation Area
Edges scaled by tie weight (98th percentile cap). Node size ~ total degree.
Made with RStudio

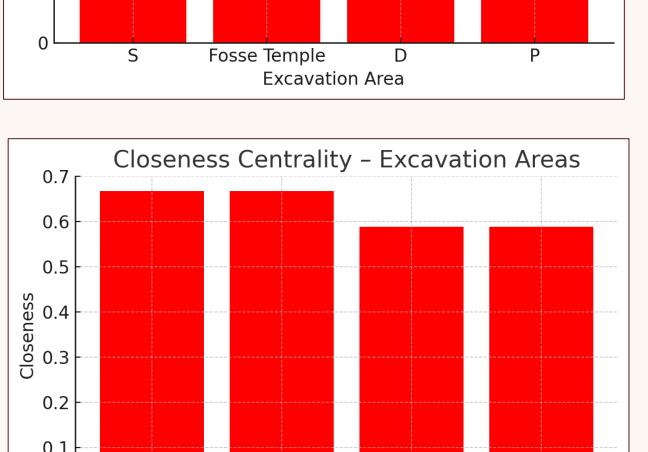Artifact places of origin map, made by Bailey Stephenson in ArcGIS.
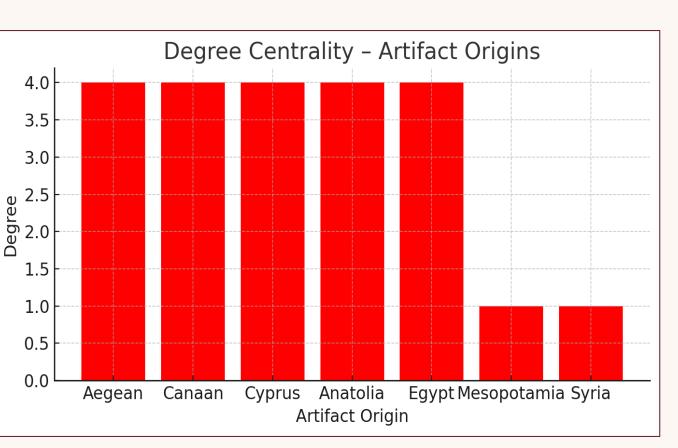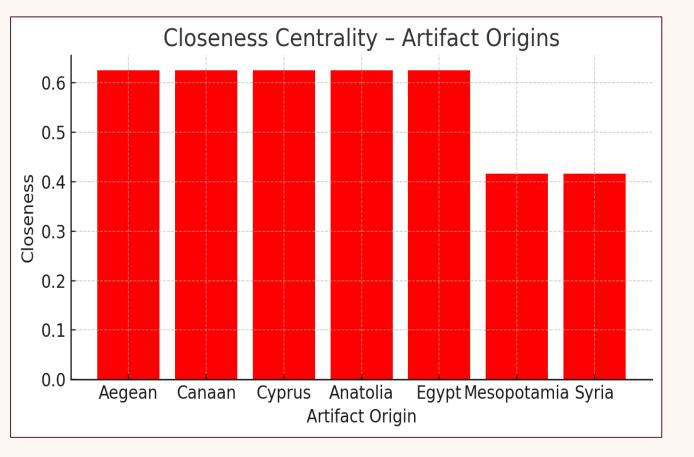
Acknowledgement and References

Results

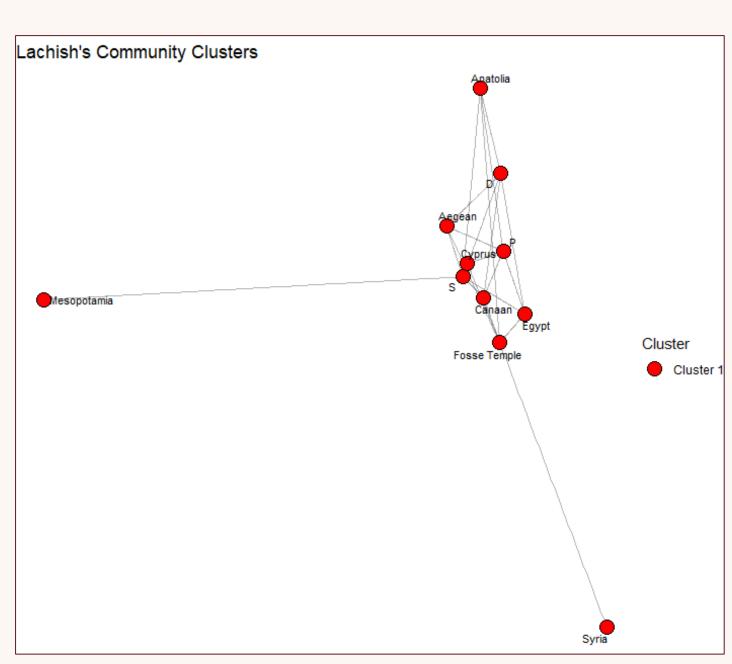Scan the QR code to see statistical interpretations.

Discussion

The Fosse Temple and Area S emerge as the most central nodes in terms of both degree and closeness centrality, indicating that they served as primary hubs for the circulation of imported goods. Areas D and P, the domestic spaces, suggest a secondary roles in material movement. The artifacts found originate from Canaan (local), the Aegean, Cyprus, Anatolia, and Egypt relatively evenly, whereas Mesopotamia and Syria remained marginal, reflecting limited or prestige-oriented contact. Cluster analysis indicated that all nodes formed one cohesive interaction network, demonstrating the integrated nature of exchange at Lachish.

Conclusion

This Social Network Analysis demonstrates that the imported materials at Tel Lachish reflect a pattern of connectivity, accessibility, and exchange within the broader Late Bronze Age trade network. These results suggest that Lachish functioned as a well-connected hub within Late Bronze Age exchange networks; linking local, regional, and international polities within the globalized Mediterranean. Further research will include a broader look at the Southern Levant's role in the Late Bronze Age trade and exchange network.