

Spatial Humanities

Facilitator: Dr. Matthew Hannah, Digital Humanities Specialist, Libraries

Presenters:

Dr. Megha Anwer, Honors College

Mapping Victorian Women's Habitation and Violence Encounters

Dr. Elizabeth Brite, Honors College

Animating Material Agencies with GIS Data: an Example from the Archaeology of the Soviet Union

Dr. Katherine Jarriel, Honors College

Modeling Community Interaction in Bronze Age Greece

Amber Nickell, PhD student, History

Mapping "No Place": Eastern and Central Europe's Nineteenth and Twentieth Century Phantom, Indifferent, and Alternative Geographies



Brite, E. B. (2018). The hydrosocial empire: The Karakum River and the Soviet conquest of Central Asia in the 20th century. *Journal of Anthropological Archaeology*.



Modeling Community Interaction in Bronze Age Greece

Katherine M Jarriel

Archaeological evidence of settlements in the Cycladic Islands (Greece) during the Early Bronze Age (ca. 3100-2250 BCE) indicates very small population sizes, poor land for farming, and frequent drought. However, occupation of the islands persisted throughout the Bronze Age. Archaeologists have hypothesized that inhabitants of settlements would have aided one another in times of economic hardship. This presentation explores the logistics of inter-settlement interaction by analyzing movement among Early Cycladic communities. I use GIS to investigate the community interaction that would have been possible between settlements on a habitual basis, i.e. in a journey lasting a single day out and a single day back. I create a cost surface model of ancient land- and seascapes that incorporates environmental, archaeological, and technological variables. The use of a cost surface model allows the analysis of Early Cycladic communities not merely as points in space but as embedded within a contiguous surface of land and sea that was regularly traversed by its inhabitants. These repeated journeys would have formed small worlds – the small-scale, intensive networks of interaction among communities. The results of this analysis show varying degrees of interaction throughout the Cycladic island chain, with islands in the central Cyclades exhibiting high local connectivity and islands at the edges relying more on long-range connections. Most journeys would have required overnight stays at their destination, emphasizing the importance of intercommunity relationships. Finally, reliance on sustained interaction offers a model in which charismatic individuals emerge as community leaders during this time.

Mapping 'No Place': Eastern and Central Europe's Nineteenth and Twentieth Century Phantom, Indifferent, and Alternative Geographies

Amber N Nickell

Kate Brown's *A Biography of No Place: From Ethnic Borderland to Soviet Heartland*, illuminated one of the biggest challenges facing scholars of Eastern and Central Europe today—borders. Focusing on the Kresy, the borderland between Interwar Poland and Soviet Ukraine, Brown examines the historical processes by which "No Place" became a Soviet Place; processes in which an extremely diverse region (ethnically and religiously) became nearly homogenous; a place in which people who identified as "from this place", "a person of this village", a speaker of "the Catholic language," etc... came to understand themselves as Soviet. These people, with their crosscutting, nationally and politically defiant forms of identification, challenged official state geographies and perplexed ethnographers. It was only after the new states and empires of the twentieth century violently sorted them, that they begin conforming to the geography imposed on them. This phenomenon is hardly unique to the Kresy. The nineteenth and twentieth-century maps of Eastern and Central Europe are dotted with "no places" and borderlands, some even argue that the entire region is a borderland, be it the "Shatterzone" of empires, Russia and Germany's "Bloodlands", or "Europe's Gates". While humanities scholarship has brilliantly articulated these complicated geographies in textual form, the maps of this region (these regions), past and present, fail to convey its complicated geography. They remain dominated by falsehoods—solid black

borders, clearly delineated ethnographies, and state-imposed terminologies. Most do not account for Eastern and Central Europe's phantom, indifferent, and alternative Geographies. This roundtable contribution will offer a brief overview of the region's nineteenth and twentieth-century border shifts; examine some of the demographic challenges facing ethnographers and mapmakers; and the ways that these demographics and border shifts did or did not influence regional geographies. It will present some examples of spatial humanists' attempts to represent and/or understand these geographies, indicate future prospects, and consider the ways in which new maps might help humanists better understand their historical subjects.



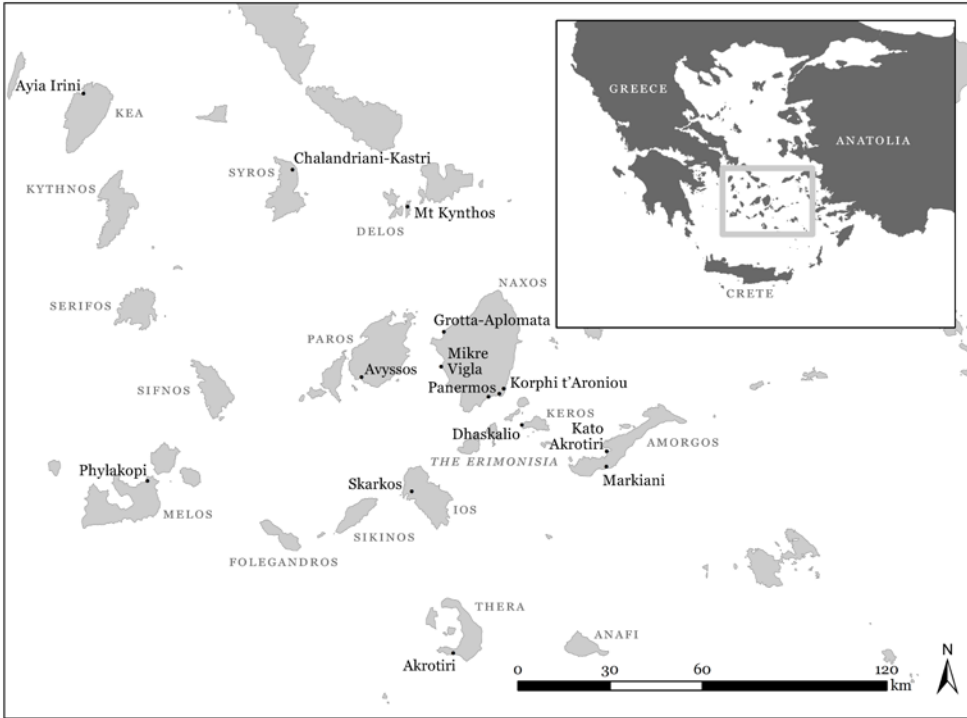
Modeling Community Interaction in Bronze Age Greece

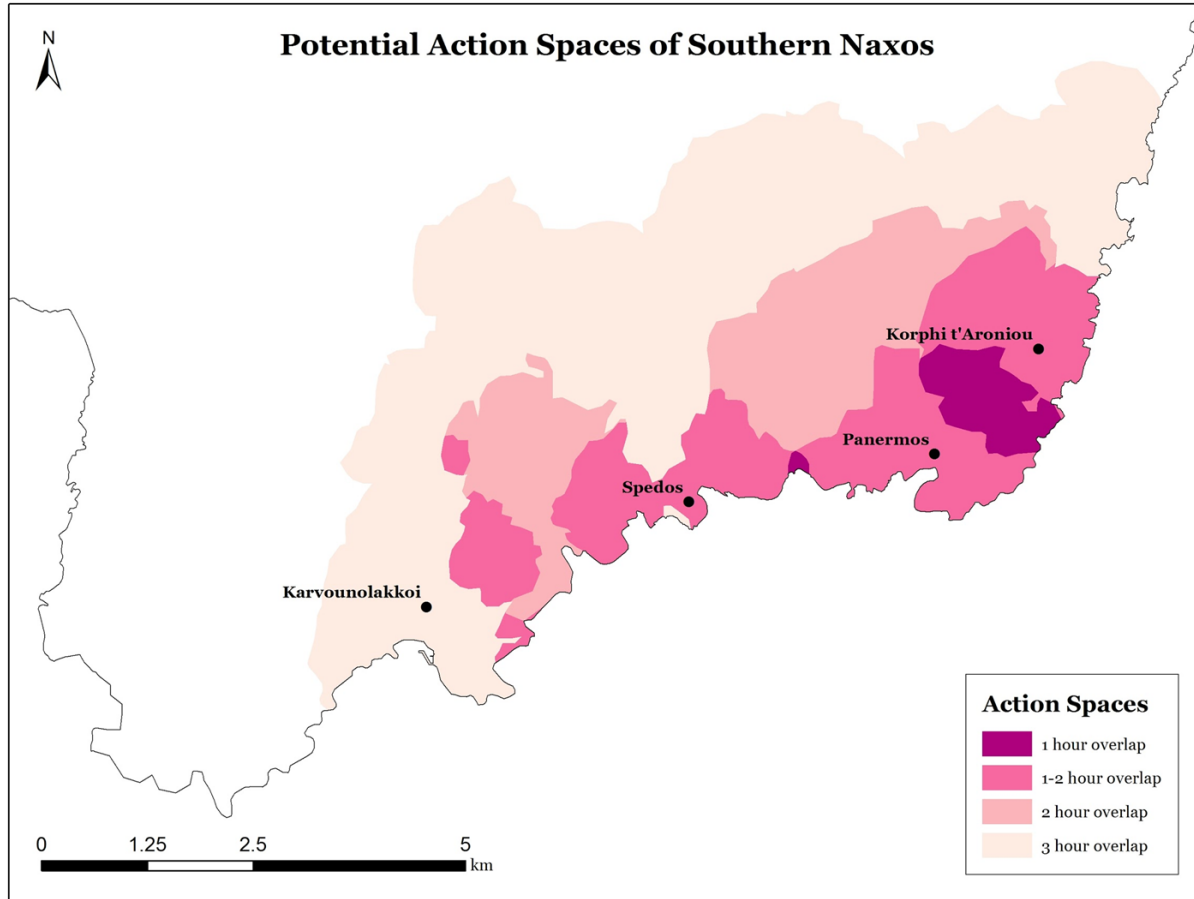
Katie Jarriel
Clinical Assistant Professor
Honors College
Purdue University

Purdue GIS Day Conference
Thursday, November 1, 2018



The Cycladic Islands, Greece





Methods

Input layers

- Base layer of hillslope from ASTER satellite
- Point layer of archaeologically known settlements

Cost of movement based on Tobler's hiking function

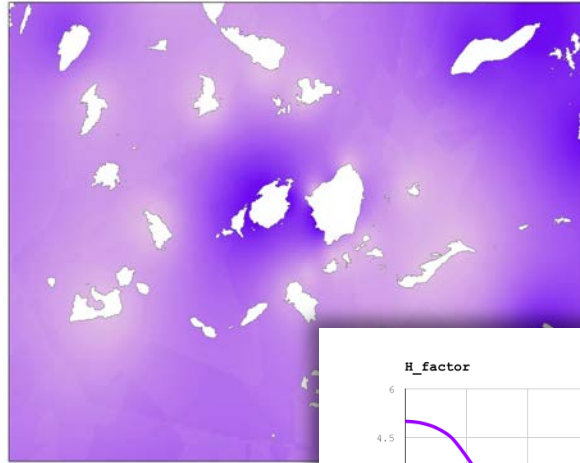
Maximum travel times based on ethnographic comparanda

Output map

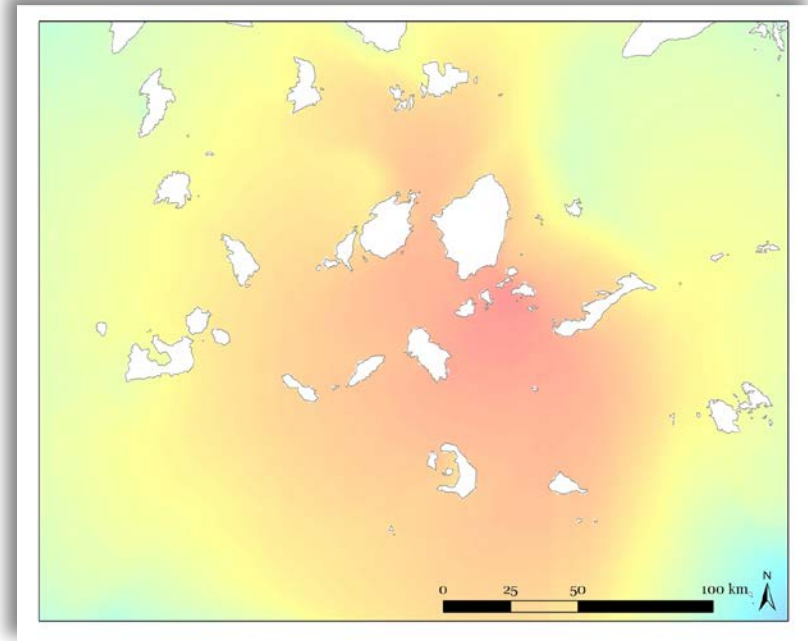
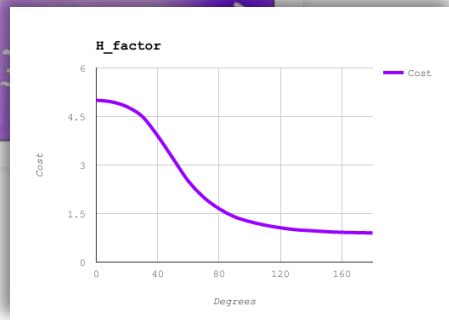
- Isochrones showing "action spaces"- zones of overlap in the landscape where frequent intersettlement interaction likely occurred



*Input cost
raster:
Wind speed*

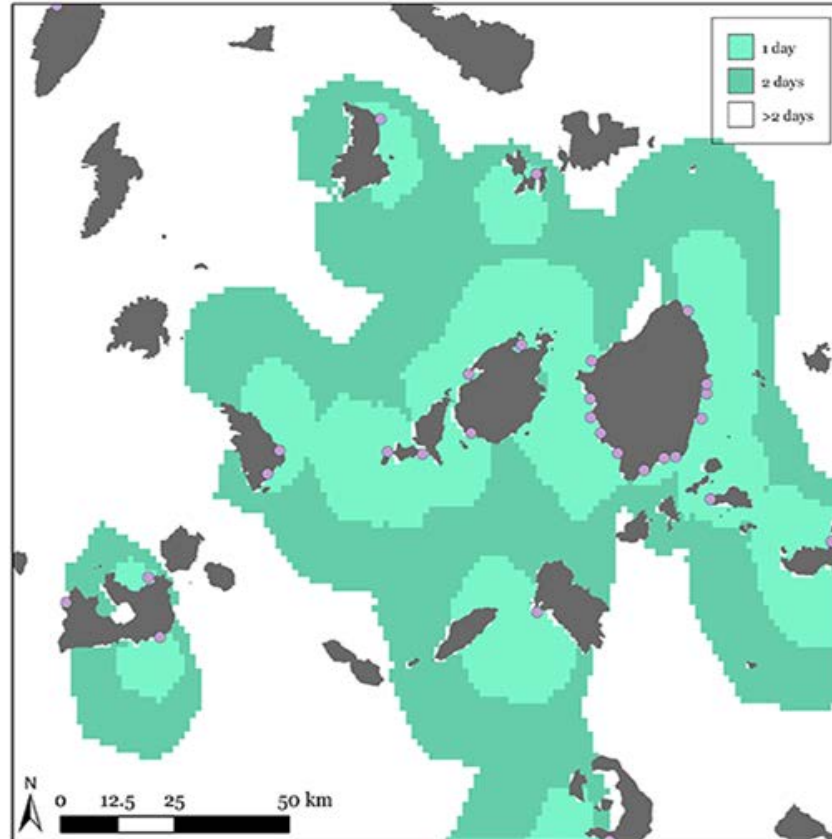


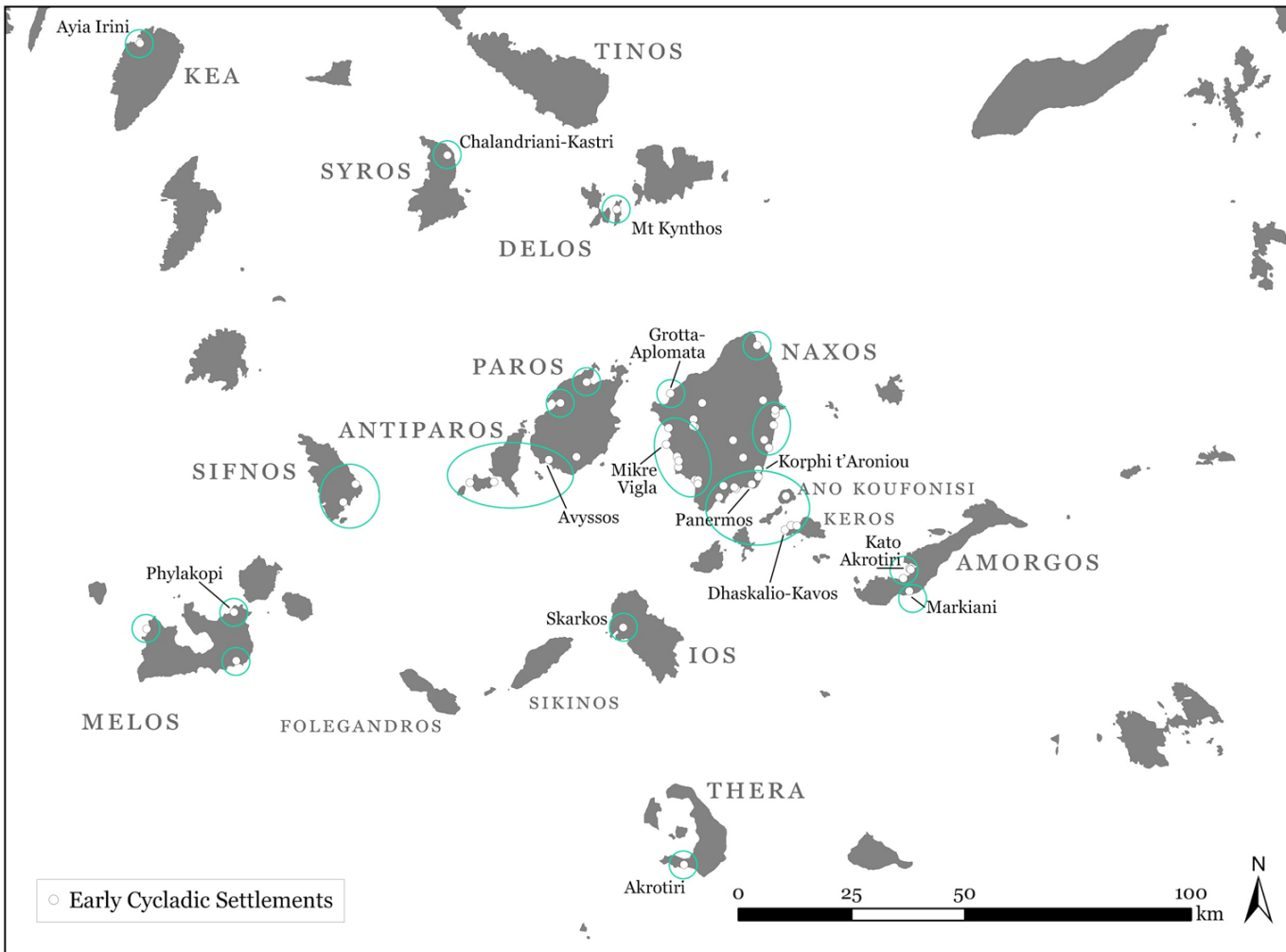
*Horizontal raster:
Wind direction +
H_factor table*



*Output:
Cost Surface*

Seasonal Variation in Travel Times by Month





Conclusions

Varying degrees of interaction throughout the Cyclades

Importance of intercommunity relationships, hospitality

Model for charismatic individuals emerging as community leaders

Left: Zones of small world maritime interaction in the Cyclades