

**Coming Together:
Comparative Approaches to Population Aggregation and Early Urbanization**

9th IEMA Visiting Scholar Conference

April 2-3 2016

University at Buffalo, SUNY

ABSTRACTS

CONFERENCE ABSTRACT

The current, fast-growing tendency of people moving from small settlements to cities has resulted in increased scholarly interest into the origins and different aspects of population nucleation. Coalescence has been a global phenomenon for human societies during the past several millennia, and the long-term perspective of archaeological research has a great potential to provide insights into how urban environments formed and their implications for humanity.

The search for a universal definitions of terms such as 'urban' and 'city,' has frequently distracted scholars from investigating the processes of how ancient aggregated settlements evolved. Through the reorganization of smaller scale social units into more complex configurations, early centers of economic and political organizations occurred throughout the world at various times and places, and in fundamentally different socio-political contexts. Their architectural and functional characteristics varied extensively, and their evolutionary trajectories took dramatically diverse courses. Nevertheless, one common feature of these nucleated settlements was that they offered a variety of opportunities to their residents that overrode the multitude of challenges of living in close quarters.

To understand the formation, development, and organization of aggregated settlements in their wider spatial and temporal contexts, a multi-scalar perspective in a diachronic framework must be employed. By combining this approach with state-of-the-art field and analytical methods, we now are in a position to identify those various factors and processes that resulted in the movement of people to large centers, and contributed to the sustainability, or unsustainability, of these sites.

This symposium will focus on prehistoric population nucleation and ancient urbanization in a cross-cultural framework. An international group of anthropologists, prehistorians, and classicists will explore the integrative mechanisms that brought large populations together, the social practices and institutions that fostered the maintenance of aggregated settlements, as well as the impacts of aggregation on socio-cultural developments. In order to interpret variations in early population nucleation, the geographical focus will include Europe, the Near East, and the New World, and participants will consider the following topics: 1) socio-economic conditions of early population nucleation and urbanization; 2) benefits and disadvantages of coalescence; 3) decision-making and cooperation at aggregated settlements; 4) changes in social organization, economy, and identity stimulated by aggregation; 5) socio-cultural types, political configurations, and layout and functions of settlements; and, 6) long-term mechanisms of integration and disintegration in settlement trajectories.

PAPER ABSTRACTS

Aggregation and Urbanization as Fundamental Drivers of Social Change

KEYNOTE LECTURE

Michael E. Smith

Arizona State University
USA

Population aggregation—the concentration of formerly dispersed people into villages, towns, and cities—is one of the most fundamental and consequential processes in the history of human society. Much social science research has focused on the negative consequences of urbanization—increased levels of stress, crime, poverty, and alienation. But research in several disciplines has also highlighted positive consequences of aggregation. Not only is economic efficiency promoted, but per-capita productivity and innovation rise as cities become more populous and denser. These scaling effects, long recognized for contemporary cities, have been explained in a comprehensive framework which highlights population size (scale) as a major driver of socio-economic change.

The analytical framework of scaling theory is sufficiently general to apply to both contemporary and premodern cities, and scholars have begun to publish applications to ancient and historical urban systems. The results suggest that the basic process of face-to-face social interaction in settlements is a creative and dynamic driver of social change and transformation, in the past and the present. When this perspective is applied to the earliest cities, traditional models are turned on their heads. Archaeologists formerly viewed state formation as the definitive social transformation, with cities created as an unintentional by-product of state development. New research, on the other hand, suggests that urbanization may have *preceded* the earliest states, and that the generative processes of urban social interaction in fact created the institutions and complexity we associate with states.

The implications of this new thinking for archaeology are clear: (1) we have the data to document early processes of aggregation and urbanization; and (2) our research contributes to a better understanding of some of the most fundamental human social transformations in the past and the present. Our task now is to carry out rigorous comparative analyses and model building so that archaeological data can improve social science knowledge on a much broader scale.

Synoikismos: Formation and Form of Ancient Greek Cities

Bradley A. Ault

University at Buffalo, State University of New York
USA

Following the Late Bronze Age “collapse” of Mycenaean civilization (ca. 1200 BC), the formative Greek states and the palace centers that spawned them had vanished. What emerged in their wake over the course of the following centuries was the city-state or *polis*, a system with a remarkably different pedigree. Bottom-up formations rather than top-down creations, established by people and populations, rather than implemented by aristocratic monarchies. At least 1,000 such city-states existed in the Greek world, some 600 in the Aegean homeland and another 400 in colonial settings abroad. That is how successful this

system proved to be. And by the fourth century BC, as much as one-third of the population of Greek urban-dwellers lived in cities that had been newly founded since the eighth century BC.

This paper will explore not only the mechanisms of Greek city-state formation, but the character of their urban core, and especially how this organization reflected their social and economic profile.

Urbanism at a Crossroad: Trade, Settlement, and Society in Early Bronze Age Anatolia

A. Nejat Bilgen

Dumlupınar University

Turkey

Laura Harrison

University at Buffalo, State University of New York

USA

Throughout its history, Anatolia was a crossroad of people, ideas, and goods. This land bridge between Asia and Europe is more than a transit zone; it also supported the emergence of distinctive local cultures by cultivating interaction between neighboring groups and homegrown traditions.

In the Early Bronze Age (ca. 2500-2000 BC), a trend toward urbanism developed in western Anatolia, leading to the rise of a new kind of settlement, ranging in size from 3-10 hectares, with tightly packed rowhouses that were, in certain instances, arranged around a central public space. While these centers are relatively modest in size, they display signs of centralized planning and architectural elaboration, and suggest the emergence of an elite social class.

As urbanization took hold, a network of local and long-distance exchange, fueled by a nascent metals trade drove commerce between Anatolia and its neighbors. An overland route stretched from the Syro-Mesopotamian heartland to Northwest Anatolia, and a maritime route circulated throughout the Aegean islands reaching the western Anatolian coastline. The maritime route was disrupted around 2200 BC when the Aegean island cultures fell into decline, but the overland route remained vital, and urbanization continued to thrive across the Anatolian plateau well into the second millennium BC, culminating in the rise of the Hittite Empire.

This paper considers the reciprocal relationship between urbanism and inter-regional trade by examining archaeological data from the site of Seyitömer Höyük, in the Kütahya region of western Anatolia, during the final centuries of the third millennium BC. Although this region is often ignored or erroneously considered a cultural backwater, it was actually an important crossroad that maintained ties with the Aegean and Mesopotamian worlds. The analysis focuses on the distinctive style of architecture and urbanism at Seyitömer Höyük, its relationship to the broader tradition of urbanism in the region, and the ways in which patterns of mutual exchange allowed this site to sustain itself amidst changing inter-regional dynamics.

Settlement Aggregation and Geopolitical Realignment in the Northeastern Woodlands

Jennifer Birch

University of Georgia
USA

Eastern North American archaeology has benefited from historicized approaches that seek to understand the relationship between the long-term emergence of social and political complexity, and the lived experiences of households and communities. This paper will draw upon archaeological and ethnohistoric datasets pertaining to Northern Iroquoian societies of the northeastern Woodlands to explore the relationship between the lived experiences of coalescence and broader shifts in the geopolitical fabric of Northern Iroquoia. Research shows that multi-linear adaptations and negotiations by local populations and newcomers occurred at various social and spatial scales.

In the fifteenth and sixteenth centuries AD, Northern Iroquoian societies experienced simultaneous processes of endemic warfare and settlement aggregation. This was a period of significant geopolitical realignment, including the formation of nations, confederacies, and initial European contact. People came together into large, palisaded towns. In these towns, a greater degree of social complexity emerged, including “urban” planning, centralized leadership, and the intensification of long-distance exchange. While it has been known that these events occurred within roughly a century and a half (ca. AD 1450-1600) new data on community organization and Bayesian modeling of AMS dates from across southern Ontario provide a refined chronology for these events, which permit more detailed explanations of the historical trajectories of politogenesis in Iroquoia.

The picture that emerges is one of increasing political complexity, which fostered the formation of strong horizontal links in the context of a highly segmented society. At the same time, archaeological and ethnohistoric evidence points to a significant degree of asymmetry in socio-political relations, both at the community level and within the Wendat confederacy council.

Coming Together in the Iron Age: Population Aggregation and Urban Dynamics in Temperate Europe

Manuel Fernández-Götz

University of Edinburgh
United Kingdom

Recent research has shown that Iron Age urbanization processes in temperate Europe were a non-linear phenomenon, which included changing and dynamic cycles of centralization and decentralization. In general terms, it is possible to establish the following sequence in the area immediately north of the Alps: (1) a first wave of centralization occurred in the so-called *Fürstensitze* or ‘princely sites’ of the sixth and fifth centuries BC; (2) a period of decentralization, which some authors have linked with the ‘Celtic migrations’ recorded in classical sources; and (3) a new phase of centralization that would lead to the development of large unenclosed centres, and of the fortified *oppida* in the second and first centuries BC. This sequence is in marked contrast to the developments that can be observed in wide areas of the Mediterranean world, where many major settlements show a continual, relatively gradual development from the Early Iron Age to Roman times, and sometimes even up to the present day.

This paper will summarize the new evidence for the different stages of Iron Age urbanism, discussing the social dynamics that lie behind the appearance, abandonment, and reappearance of major agglomerations in temperate Europe during the first millennium BC.

Trypillia Mega-Sites—The First Cities in Europe?

Bisserka Gaydarska

Durham University
United Kingdom

Little known until recently, the largest sites so far discovered from fourth millennium BC Europe—the Trypillian mega-sites of Ukraine—have received significantly more attention in the past eight years. Despite their impressive size of up to 320 hectares, traditionally they have been viewed as overgrown villages, and only a handful of Ukrainian archaeologists have posited a proto-urban development. Such views were based on aerial photographs, first-generation Russian geophysics, and limited excavations. The recent involvement of two international teams—an Anglo-Ukrainian and a German-Ukrainian—in the field investigations of the Trypillia phenomenon has invigorated the debate about the characteristics of these sites, their emergence and sustainability, and their place in global settlement trajectories.

This presentation will build on the results of these two international projects, focusing on high-precision geophysics, AMS dating, sediment coring, intensive systematic field walking, and selective excavations. It will revolve around four key issues: the population number of the mega-sites, on-site (production) and off-site (agricultural) practices, the possible impact of the latter on the environment, and the contemporaneity of mega-sites in the Bug-Dnieper region. The discussion will be framed by pros and cons about the possible urban development in Europe as early as the first half of the fourth millennium BC.

Visual Competition Strategies in Roman Urban Architecture: Micro-Viewshed Analysis at Pompeii

Alan Kaiser

University of Evansville
USA

Over the last thirty years, the study of Roman urbanism has experienced a complete paradigm shift. No longer do we focus on monumental architecture as the pinnacle expression of the urban phenomenon, but instead have come to focus on human interaction with the entire urban landscape and how that landscape embodied cultural norms.

While the theoretical shift has been enormous, we have been struggling to find new ways of gathering data, so that some of our new conclusions can be based on inductive rather than deductive reasoning. Fortunately, advances in computer technology, particularly Geographic Information Systems software, have opened up opportunities for us to make observations about the urban environment that were difficult, if not impossible, using traditional paper plans. Viewshed analysis is a GIS tool that has been around for more than forty years, yet its use in classical cities is still in its infancy.

This paper takes a step toward the maturation of this technique by exploring the small-scale view from city streets and what it can tell us about how the elite homeowners and non-elite

shopkeepers utilized quotidian architecture to win the fierce competition for attention in the crowded and dynamic thoroughfares of Pompeii.

Contextualizing Aggregation and Nucleation as Demographic Processes Leading to Cahokia's Emergence as an Incipient Urban Center

John E. Kelly

Washington University in St. Louis
USA

For nearly fifty years the large Mississippian town and mound complex, Cahokia, has been viewed as North America's only pre-Columbian city. To a large extent this was based on a trait list used by Childe to define a city. Since Childe's early efforts our understanding of what it means to be a city has expanded significantly beyond a simple list.

Nonetheless, Kelly and Brown (2014) have recently argued that Cahokia and the surrounding region represent the beginnings of the urban process in the eastern woodlands of North America. It is important to realize that after some five centuries this process was truncated as indigenous societies became part of a much larger global system. While our recent discussion has focused on Cahokia's unique cosmological configuration of four quadrilateral plazas centered on a large, 30-meter high earthen platform mound, this ritualized core of large earthen platform mounds, large constructed plazas, and massive wooden architecture comprises a landscape encompassing over 100 hectares. This built environment is at the heart of a ritual city covering nearly 15 square kilometers, and has its roots in the site's late Emergent Mississippian community.

This discussion is focused on the demographic and social processes leading to urbanism in the central Mississippi river valley. These processes trace back some three to four centuries earlier when populations initially aggregated into small villages, and then within a century these smaller settlement units nucleated into larger communities resulting in much larger, urban settlements. Especially important to our understanding of this process is the social and cosmological mechanisms employed in the organization at the most fundamental level of settlement as they were the building blocks involved in integrating more people into larger spaces that resulted in the urban center of Cahokia and other nearby towns.

Why Athens? Population Aggregation in Attica in the Early Iron Age

Robin Osborne

University of Cambridge
United Kingdom

This paper takes up the challenge of the conference, and of Michael E. Smith's keynote lecture to ask how population aggregation, urbanization, and state formation relate in Early Iron Age Attica. Scholars have long noted and debated the sudden appearance of new population nucleations in Attica, and the coincident rapid increase in numbers of burials across Attica and in Athens itself in the eighth century BC.

Thirty years ago, Ian Morris proposed to see a story of state-formation in the increased number of burials, in which a higher proportion of the population claimed the right to burial in a manner that archaeologists can recover, and the community came both to regulate the ways in which individuals used space, and to use spatial arrangements to create social

order. That picture, however, ignored both the subsequent marked decrease in visible burials and the whole question of how the changes in Athens related to what was happening in the rest of Attica.

This paper takes up the question of the movement of population between Athens and the rest of Attica, and asks what part was played in Athenian state formation by the presence of groups in newly urban Athens who could be differentiated not because they were more or less wealthy, or did or did not come from particular families, but because they came from a particular place.

"...the nearest run thing...": The Genesis and Collapse of Bronze Age Centers in the Maros Valley of Southeastern Europe

John O'Shea

University of Michigan
USA

Around 2000 BC the settlements of the Maros Culture reached their widest extent across southeastern Hungary, western Romania, and northern Serbia. It was at this time that the Bronze Age settlement of Pecica Șanțul Mare was established. Over the next 500 years, Pecica rapidly rises to become the pre-eminent Bronze Age center in the region; controlling the distribution of metals and domestic horses throughout the Carpathian Basin, and then with equal rapidity collapses, and is entirely abandoned.

Renewed research at Pecica Șanțul Mare affords a fine-grained view of the interplay of factors, which led to the genesis and then collapse of this important Bronze Age polity, and provides important clues as to why state formation failed among the Bronze Age societies of Central and East Europe.

If You Build It, Will They Come? Will They Stay? The Mycenaean Port Town of Kalamianos

Daniel J. Pullen

Florida State University
USA

The process of population aggregation into nucleated urban settlements is often not explicitly modeled, but rather seen as the inevitable by-product of political and economic intensification in a society. Some, such as Michael E. Smith, have proposed that population aggregations came before the socio-political intensifications often associated with urban settlements. In this paper, I propose to look at a different situation, one of "top-down" urbanism, that is the imposition of an urban community by an external power into a region lacking such agglomerations, in order to examine what organization, structure, and resources might be needed for such an urban community to thrive.

The port town of Kalamianos on Greece's Saronic Gulf was established by one or more palatial centers of the Argive Plain (Mycenae, Midea, and/or Tiryns) in the mid-fourteenth century BC (LH IIIA2) to take advantage of shifting and expanding maritime trade patterns in the Saronic Gulf and beyond. A tremendous outlay of capital and labor was invested in constructing the 7.2-hectare town with its buildings, streets, and circuit walls, and at least 15 hectares of agricultural terraces outside of the circuit walls, and 2 hectares of terraces within, were constructed at the same time. Yet, Kalamianos failed to last beyond the collapse of the

palaces ca. 1180 BC (end of LH IIIB), and indeed no urban aggregation was ever to exist here thereafter.

This situation raises many interrelated questions of the sustainability of an urban settlement, and how an organizational elite could ensure the success of that urban settlement. Some questions to be addressed include:

- What role did the (palatial) elites play in the founding of this settlement?
- What arrangements were made for that settlement's self-sufficiency?
- What role did the (palatial) elites play in the daily maintenance of this settlement?
- How connected was the hinterland to the urban core at Kalamianos?
- Was the terraced area sufficient to supply the food needed for the urban settlement?
- What was the degree of centralized control over agricultural production and distribution in the Kalamianos region?
- Would Kalamianos have depended upon one of the palatial centers for provisioning of the inhabitants, in some system of rations or mobilization?

Separation and Unity: Spatial Organization and Social Order at Neolithic Settlement Complexes on the Great Hungarian Plain

Pál Raczky

Eötvös Loránd University
Hungary

The first tell settlements were established in present-day Greece and Bulgaria in southeastern Europe in the mid-seventh millennium BC. Horizontal settlements representing various levels of integration, from hamlets to small villages, maintained a dynamic interaction with these tells. In the Carpathian Basin, Early Neolithic villages emerged with explosive intensity along the Danube and Tisza rivers around 6000 BC, and as opposed to the southern Balkans, networks of dispersed, ephemeral settlements characterized by a scattered layout evolved.

Recent, large-scale excavations in the Carpathian Basin suggest a specific trend during the Middle Neolithic. Circular ditch systems commonly occurred in the central zones of new, large settlements across the Linearbandkeramik area ca. 5300-5200 BC. In Eastern Hungary, on the Great Hungarian Plain, deposits accumulated resulting in vertical growth within these enclosures. This process reflects new attitudes to space, and coincided with the emergence of novel ritual activities inside an area that had previously been physically separated from habitation zones at many nucleated sites on the Plain by the beginning of the Late Neolithic, ca. 5100-5000 BC. These activities followed rules that were fundamentally different from those practiced in the social context of horizontal sites. Parallel to this process of demarcation, a conscious effort may have occurred to elevate the area within the enclosures. Using a term coined by Andrew Sherratt, the construction of an "Ersatz-Tell," a monument began. Around the same time, circular enclosures were built west of the Danube. Yet these ditch systems, and their counterparts across Central Europe, were usually uninhabited, and were devoid of everyday activities.

We argue that tells in Southeast Europe and enclosures in Central Europe represent a visual expression of similar inherent contents although in different cultural contexts. This hypothesis is best represented by the symbolic and physical unity of the Polgár-Csőszhalom tell and its circular ditch system, located within the interaction zone of two major cultural complexes in Europe. The complex monument, systematically developed by the growing community,

brought about new forms of social integration that contributed to community cohesion and identity construction.

Beyond 'Oriental Despotism': The Origin of Urban Developments in Dry-farming Syria and Anatolia

Clemens Reichel

University of Toronto/Royal Ontario Museum
Canada

Home to some of the earliest state societies in the world, the ancient Near East plays a pivotal role in discussions of the mechanisms that led to the emergence of early urban civilizations. Past discussion of this area focused on ancient Sumer in southern Iraq, where early cities emerged between 4000 and 3000 BC in an alluvial landscape that was created by and continues to be shaped by the rivers Tigris and Euphrates. Numerous scholars—notably Karl Wittfogel—saw this area as a quintessential “hydraulic society,” in which adverse environmental conditions resulted in human responses—notably irrigation, canal and dam building—that led to labor organization, social differentiation, and craft specialization, and hence created momentum towards urbanism.

The discovery of numerous urban centers during excavations in northern Syria and southern Turkey over the past decades, however, has changed this picture significantly. Located in areas where rainfall is sufficient to sustain dry-farming, these cities cannot have been brought about by the coercive forces of irrigation agriculture, highlighting the fact that Near Eastern urbanism did not have a singular origin but could emerge under a wide array of different environmental and geopolitical preconditions.

Using several key sites in northern Syria (notably Hamoukar and Tell Brak) this paper will lay out the available dataset and propose an alternative model for how “northern urbanism” might have evolved.

Integration and Disintegration: The Role of Kiva Architecture in Community Formation and the Construction of Identity in the Prehispanic U.S. Southwest

Susan C. Ryan

Crow Canyon Archaeological Center
USA

Researchers in a number of fields have come to recognize the vital importance of the built environment not only as material culture, but as symbolic expressions of the larger cultural framework through which social relations are produced and reproduced. Over the last half-century, studies have demonstrated how architectural characteristics—such as building size, shape, and the presence of various architectural materials, features, and furnishings—have a direct influence on human behavior and interaction, and are material manifestations of worldview ideologies. One of the most important functions of the various elements within a structure are the encoded messages that convey group identity and provide clues into ancient social organization. This study raises the question of how the built environment reflects identity formation and dissolution during periods of community integration and disintegration.

Specifically, this will be achieved through the analyses of ancestral Pueblo vernacular architecture dating from the Pueblo II (AD 900-1150) and Pueblo III (AD 1150-1300) periods in the northern, middle, and southern San Juan regions in the northern Southwest in order to shed light on communities of practice and their social, temporal, and spatial production techniques. This research examines public and residential kivas—or round rooms used for communal and domestic activities, respectively—to address how architecture emphasized the ways in which structures were actively mediated by production groups, and how their architectural signatures reflect identity during periods of population aggregation and dispersal at the household and community levels.

Aggregation and Dispersal from a Long-Term Social Perspective: Rural Landscapes of the Northwestern Iberian Peninsula from the Iron Age to the Early Roman Period

Inés Sastre

Spanish National Research Council
Spain

Brais X. Currás

University of Coimbra
Portugal

The European Iron Age is currently undergoing a debate regarding forms of social organization. The move away from aristocratic paradigms rooted in purported Celtic systems, and the increased interest in regional studies has revealed greater social variability than previously noted. Meanwhile, the concept of Romanization has been critically reviewed and homogenizing interpretations have also been rejected. In this context, the northwestern part of the Iberian Peninsula is of enormous interest. A combination of regional studies and theoretical approaches has produced alternative insights into Iron Age and provincial societies in the area.

The Iron Age societies, between the eighth and third centuries BC, are characterized by a particular settlement type in northwestern Iberia: the *castro*. These small, fortified settlements enjoyed political independence and economic self-sufficiency. This situation only changed around the second century BC, when Rome appeared as a transformative power just beyond the region. Hence, the final phase of the Iron Age brought a sharp change in the southernmost coast, usually defined as the core area of the so-called Castro culture. Changes include a tendency towards population concentration in larger *castros*. Social interpretations for the Iron Age are strongly conditioned by this later record, which is often considered as the most valid reference for the whole period, and as self-evident proof of a ranked society.

In our paper, we propose an alternative vision. The *castro* society, reflected by the pre-second century BC record, was based on the struggle to arrest hierarchical tendencies by using “assertive egalitarianism.” These anti-hierarchical tendencies explain both settlement patterns and production systems. The segmentary balance, which can be documented in the organization of space within and outside the *castro*, began to unravel under Roman pressure during the military campaigns of the Late Republic. Later, the conquest under Augustus imposed a new fundamental change marked by the construction of a provincial system based on *civitates* whose capitals do not resemble classic models of monumental urbanism as they are eminently rural in nature.