

Do ancient cities hold the key to equal, sustainable urban access?

January 22 2014, by Natalie Muilenberg



The researchers completed a pilot study before diving into the larger pre-modern cities project. This map depicts the residential neighborhoods and nearby services investigated in the pilot study.

How far away is your school? Are there more fast food joints than farmers markets in your neighborhood? Is your doctor close enough to help you in an emergency?

Today, more than half of the world's population – that's more than 3.5

billion people – lives in cities, and cities contain the majority of services like schools, markets, and hospitals. Experts predict that by 2030, urban area will double worldwide, shifting more people into cities. However, to some, access to urban services is not readily available.

Unequal access is already a concern in Arizona: Food deserts spread through inner city Phoenix and the Valley's urban sprawl hikes up water prices for those on the urban fringe. So while some can eat healthy, others are left with fast food restaurants and convenience stores, and while some have affordable water prices, others sacrifice.

At Arizona State University, a team of scientists and students hope that maps and archeological finds will unearth historical patterns of city access that can guide equal access for modern cities. Now in its second stage, the National Science Foundation-funded project Service Access in Pre-Modern Cities aims to give context and clarity to a complicated question: Why do some people have access to urban services and others do not?

Co-principal investigator Abby York, a political scientist and senior sustainability scientist in ASU's Global Institute of Sustainability, and a diverse team of sociologists, archaeologists, anthropologists, and geographers compare service access in 30 archeological and historical non-Western cities. Services include marketplaces, places of worship, and assembly space. The team investigates specific factors like city size, wealth, governance, political context, and their effects on service access.

"We're trying to understand why we observe the patterns we do," says York, also an associate professor in the School of Human Evolution and Social Change and a graduate faculty member in the Institute's School of Sustainability, where she serves on thesis and dissertation committees.

"We're looking at a whole range of potential drivers like wealth accumulation and patronage to understand why access is distributed the

way it is and how the city and community is developed around the access."

For archeological sites, like Empúries, Spain, only material evidence can be used for scientific inferences on how the cities were formed thousands of years ago. Historic cities, like Chester, England; Lamu, Kenya and Bhaktapur, Nepal, can be studied using old maps, contemporary accounts, and archival documents. Using these data sources, undergraduate and graduate students from the School of Human Evolution and Social Change map services and their corresponding access points in a Geographical Information System. The interdisciplinary team uses spatial analytic, statistical, and qualitative comparative methods to understand how and why access is distributed across cities.

The combination of methods and time periods provides a more comprehensive view of the world's cities; something that's never been done before.

"We're taking techniques that were developed for modern cities and applying them to historic and archeological cities that have less data," York says. "This allows us to work across disciplines in ways that really no one else is doing. We're even going further and applying sustainability concepts in these different historical and archeological contexts."

When forming the research questions, the team narrowed their scope by referring to today's take on sustainability.

"Sustainability helped us figure out what equity concerns we needed to be worried about; what services we wanted to look at; and how to think about our future direction that will take these ideas and apply them to modern cities," York says.

As part of ASU's New American University goals, the project also provides real-life research opportunities for undergraduates and graduate students. In a modern-day apprenticeship, the scientists mentor the students on methods, critical thinking, and reporting. Some of the students are co-authors on several scientific journal articles produced from the project.

Ben Stanley, a School of Sustainability doctoral graduate, progressed from a student assistant to a current post-doctoral fellow. Already he's gleaned important observations.

"So far, we've seen sort of a bulls-eye pattern in cities, where people in the center of the city have better access than those living on the periphery," he says. "Often the people living on the periphery are lower class or have a different economic social status. That's not the case in all the cities, though."

To Stanley, unequal access to everyday needs comes at a high cost.

"A big part of sustainability is continuing the progressive development of our society and even to some extent, endorsing economic growth," he says. "When you have more equitable access to services, it helps activate the latent potential within more people. If you have a certain subset of population that doesn't have these opportunities, you're losing out on all the potential those people offer, not only for economic development but for other development as well."

After the team finishes their analyses, the third part of the project will compare results to today's cities and neighborhoods. For the first time, a deeply historical understanding of urbanism will be available to city planners, leaders, and policymakers.

The team hopes that a new understanding of ancient and historic cities

will enable society to reevaluate and perhaps improve unequal access to vital urban services in modern cities.

"We need to broaden our understanding of urban access beyond the Western context and recent snapshot of history," York says. "This project opens us up to new human experiences. After our analysis, we'll have a better insight into what could change policy-wise in other cities."

The research could also find new "old" ways of building, organizing, and supporting city life.

"Historically, a lot of these cities were organized by a small group of individuals or communities," Stanley says. "I think there's room for that in modern society. I think sustainability looks at that same idea: that you can have more local provision of goods and services, and at the same time, build communities with social capital with connections that aren't just psychologically healthy, but can have economic impacts as well."

Additional project team members include principal investigator Michael Smith, professor in the School of Human Evolution and Social Change; co-principal investigator Christopher Boone, Senior Sustainability Scientist in the Global Institute of Sustainability, dean of and professor in the School of Sustainability, and professor in the School of Human Evolution and Social Change; co-principal investigator Sharon Harlan, Senior Sustainability Scientist in the Global Institute of Sustainability and professor in the School of Human Evolution and Social Change; George Cowgill, professor emeritus in the School of Human Evolution and Social Change; and Barbara Stark, professor emerita in the School of Human Evolution and Social Change.

More information: Students can learn about research opportunities by emailing Abigail York at Abigail.York@asu.edu.

Provided by Arizona State University

Citation: Do ancient cities hold the key to equal, sustainable urban access? (2014, January 22)
retrieved 20 June 2024 from <https://phys.org/news/2014-01-ancient-cities-key-equal-sustainable.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.