Deflating the myth of isolated communities

Individual mobility at early settlements raises questions about tenets of culture history

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From its early foundations, two schools of thought have dominated academic anthropology’s perspective on deep human history (1). Whereas cultural evolution has charted broad, step-like trajectories toward large human aggregations, culture history subdivides cultural traditions in space and time. Guided by these perspectives, generations of archaeologists have pegged the transition from mobile foraging to permanent villages as a transformational shift in the human past. But new findings, including the deft integration of multiple lines of evidence by Mittnik et al. (2) on page 731 of this issue, raise questions about the categorical juxtaposition of mobility and sedentism.

More than a century of research has established that mobile foragers characteristically live at low demographic densities and have relatively fluid, wide-ranging social affiliations, whereas decreased degrees of residential mobility correlate with an elaboration of material culture. Reliant on a small number of excavated “type sites” per region and guided by principles from culture history, researchers used this elaboration to define discrete style zones and local traditions, which in turn were equated with specific peoples and cultural groups. As such, patterns of material culture were implicitly wedded to biology, contrasting sedentary groups with their mobile predecessors.

Despite Boas’s (3) early warning that biology, language, and culture rarely overlap neatly, the frequent conflation of biology and culture remains central to the use of culture-historical units in archaeology. Yet, this underlying premise has not been validated empirically. Subsequent to Boas’s admonition, other investigators (4) cogently argued that human communities rarely are bounded or closed. Furthermore, carefully documented studies of forager mobility distinguished between the relative mobility of communities and the movement patterns of their individual residents (5). Declines in community mobility do not necessarily coincide with the absence of individual migration, regular gene flow, or community boundedness (6). Indeed, mobility and migration now are recognized as integral to the human historical experience, even after the advent of sedentism. Migration is no longer used as reflexively to explain changes in culture-historical sequences. Current perspectives on human mobility see it as recurrent, multidirectional, and generally involving small numbers of people (7, 8).

The investigation by Mittnik et al. of an early sedentary community in Germany during the European Neolithic and Bronze Age affirms the simultaneity of decreasing community mobility and complex webs of long-distance individual movement. Their thoughtful research design integrates isotopic, genomic, and archaeological data that link individuals to specific residences. They found that biologically diverse females relocated to the community from multiple, often distant locales. Although men also were mobile (9), the movement of women appears
to be a key mechanism for promoting wide-
spread interaction in central Europe during this era (10, 11). Furthermore, human migra-
tion was not the sole basis for macroscale
connectivity because many of the status-
related items recovered at the settlement
were not crafted locally.

In other global regions, the empirical
foundations for examining the dawn of
sedentism are narrower in scope. However,
an expanding archaeological record and
improved techniques for measuring chro-
nology have similarly revealed individual
mobility, social network permeability, and
broad spatial connectivities (4, 12). Because
the socioeconomic mechanisms and histori-
cal circumstances vary, it is reasonable to
conclude that no uniform, categorical trans-
formation from mobility to sedentism exists
worldwide. Instead, increasing residential
and community stability often coincided
with individual movement, sometimes over
extended distances. The resulting gene flow
impedes a lasting correspondence between
cultural identities and shared genetic an-
cestry across deep time.

If cultural and biological heritage are
not tightly shared by long-enduring units
and if human aggregations and social af-
filiations are open enough to allow for gene
flow, then researchers must reevaluate the
supposition that preindustrial communities
were autonomous, self-sufficient, and iso-
lated. Likewise, scientists can no longer rely

on key tenets of culture-historical framing,
which define long-lived, cultural-biological
units as purely sedentary and directly trace-
able across millennia to contemporary
populations. If the aim of historical social
science is to decipher the human past, then
starting assumptions must be modified as
new information becomes available, and
extent theories built on inaccurate foundations
must be reconsidered. Rather than re-
lying on invalid assumptions to define and
label discrete social groups, archaeologists
should begin by documenting material cul-
tural and bioarchaeological variation across
space and time. Questions about the move-
ment of and interactions among past peo-
bles should be conceptualized in terms of
networks and shifting aggregations, rather
than as closed homogeneous groups.

Archaeologists should question the cat-
egorical juxtaposition of mobility and sed-
entism as applied to humanity’s past and
recognize movement and cultural borrow-
ing as consistent features of human his-
tory, even after the establishment of more
permanent communities. This is not meant
to diminish the importance of decreased
residential and settlement mobility as a
key hinge point in sequences of regional
change. It is well established that increas-
ingly sedentary ways of life foster popula-
tion growth, larger community size (13),
innovation (14), and cooperative relation-
ships (15). However, the specific pathways
and institutional arrangements (household
and settlement composition, modes of in-
teraction, and social formations) appear to
be markedly diverse from region to region.
Applying Mittnik et al.’s multidisciplinary
toolkit to more cases will enable research-
ers to unravel the complex and intersecting
historical paths by which our species ar-
rived at its diverse, yet shared, present.

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