Migrations and Material Culture

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Why Migrations?

- The history of humanity is a history of migration.
- The study of migration requires an integration of genetic, linguistic, and archaeo-
  logical data.
- Opens access to many “big questions” like the origins of language, agriculture,
  political centralization, etc.
A Brief History

- 19th & early 20th century, the era of “pure” culture history: material culture change as migration (replacement of one [material] culture by another [material] culture, assuming movement of people)—persists in Soviet-influenced research.

- Mid-20th century: material culture as a mechanism of adaptation—persists, esp. in N. America.

- Late-20th century: material culture reflects in situ processes (political, historical, symbolic, etc).
“The Baby and the Bathwater”

- Rejection of “pure” culture history led to the rejection of migration as an explanation of material culture change,
- BUT, might migration be an important cultural process (adaptive or otherwise)? It seems to be in both the historic and contemporary worlds.
- HOWEVER, not *in situ*, and thus messy.
The Migration Process
(from Anthony 1990)
Migration Research Today

- Requires a processual perspective.
- Patterns of material culture will vary between cases, but must be consistent with the assumed process.
- Must be a measurable demographic (i.e. genetic) component.
- Might have a linguistic component (?)
Moore and Romney (American Anthropologist 1994) found that language and propinquity account for about the same variance in assemblage similarity (roughly 70%).

Roberts, Moore, and Romney (Current Anthropology 1996) found that propinquity and language each account for about 30% of the variation in material culture assemblages.

Peregrine (SFI presentation 2004) found that propinquity and assemblage similarity predict linguistic phyla equally well ($R^2 \approx .4$).
An Example: Protolanguages and Material Culture

- EHL database of languages and protolanguage reconstructions.
- Encyclopedia of Prehistory organization and data on material culture.
- Stanford’s published reports on Y-chromosome diversity.
Language Taxa

[Map showing distribution of language taxa across the world, including Indo-European, Altaic, Uralic, Kartvelian, Afro-Asiatic, and Dravidian.]
Glottochronology
## Protolanguage Lexemes

<table>
<thead>
<tr>
<th></th>
<th>PIE</th>
<th>PAlt</th>
<th>PAA</th>
<th>PDr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron/Bronze</td>
<td>✔</td>
<td>✗</td>
<td>“iron weapon” “cast metal”</td>
<td>✗</td>
</tr>
<tr>
<td>Cemetery/Tomb</td>
<td>✗</td>
<td>“coffin”</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Wagon/Cart</td>
<td>“wheel”</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Brick</td>
<td>✔</td>
<td>✗</td>
<td>“a block of houses”</td>
<td>✗</td>
</tr>
</tbody>
</table>
Languages and Cemeteries or Tombs ca. 7000 BP
Languages and Wheeled Vehicles
ca. 7000 BP
Languages and Brick Dwellings ca. 7000 BP
Reconstructed kin terms imply that PAA was matrilocal and PIE patrilocal (e.g. Militarev).

Matrilocal cultures have large dwellings (over ca. 80 m²); patrilocal cultures have smaller dwellings (less that ca. 50 m²).
Languages and Large Dwellings, ca. 7000 BP
Conclusion

- “Fertile Crescent” region appears to be the homeland of both PIE and PAA (esp. the region of northern Mesopotamia and the eastern Taurus mountains).
- Northeastern Africa lacks the material culture traits that would support it being the homeland of PAA.
- Dravidian seems to be unrelated to this homeland.
Spread of Languages after ca. 7000 BP
Y-chromosome Diversity
(from Underhill 2004)
Y-chromosome Diversity and Languages
Genes, Languages, and Material Culture?
Discussion

- Need “cultural systematics” to link reconstructed language terms with material culture.

- Kinship and marriage are a key link between language (kin terms), genetics (Y-chromosome and mtDNA diversity), and material culture (e.g. settlements and dwellings).
A Final Thought

- We have been talking along these lines for three years, but have not made much progress.
- Seem stuck in our own research worlds despite fascinating conversations and ideas.
- What’s the next step?