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 archaeological data.
- Opens access to many "big questions" like the origins of language, agriculture, political centralization, etc.

A Brief History

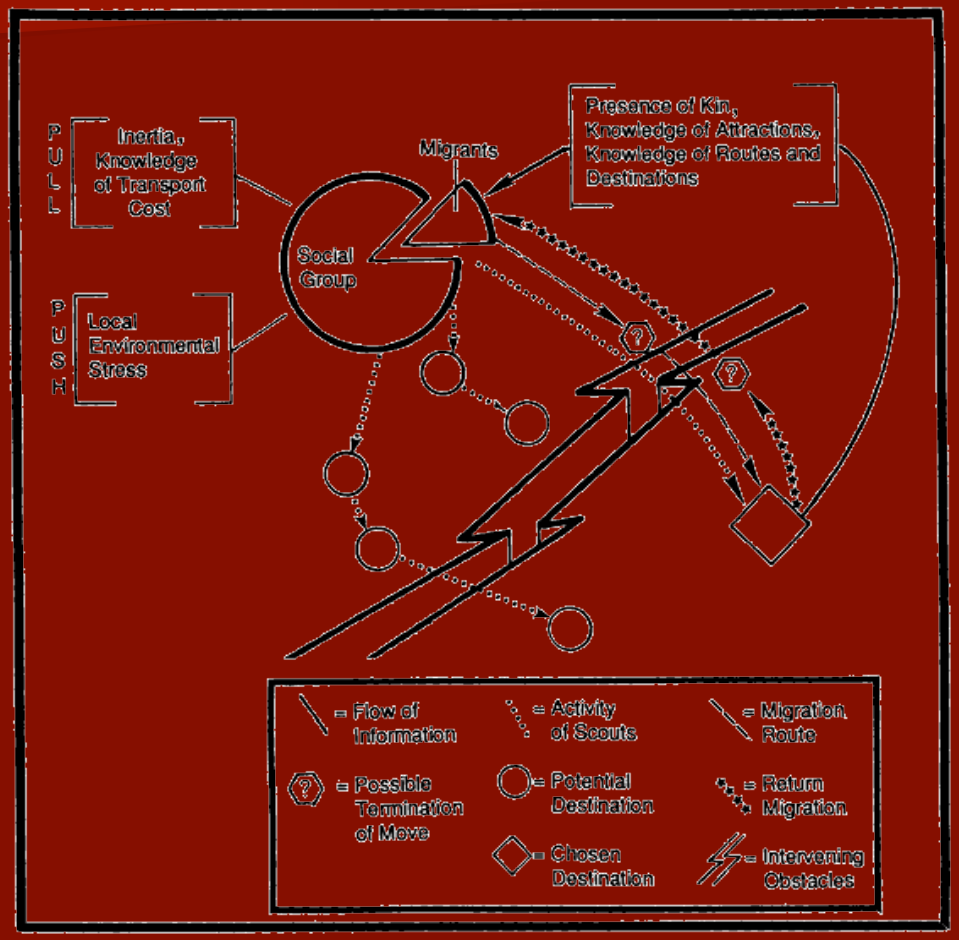
- 19th & early 20th century, the era of "pure" culture history: material culture change as migration (replacement of one [material] culture by another [material] culture, assuming movement of people)—persists in Soviet-influenced research.
- Mid-20th century: material culture as a mechanism of adaptation—persists,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

Material Culture and Language

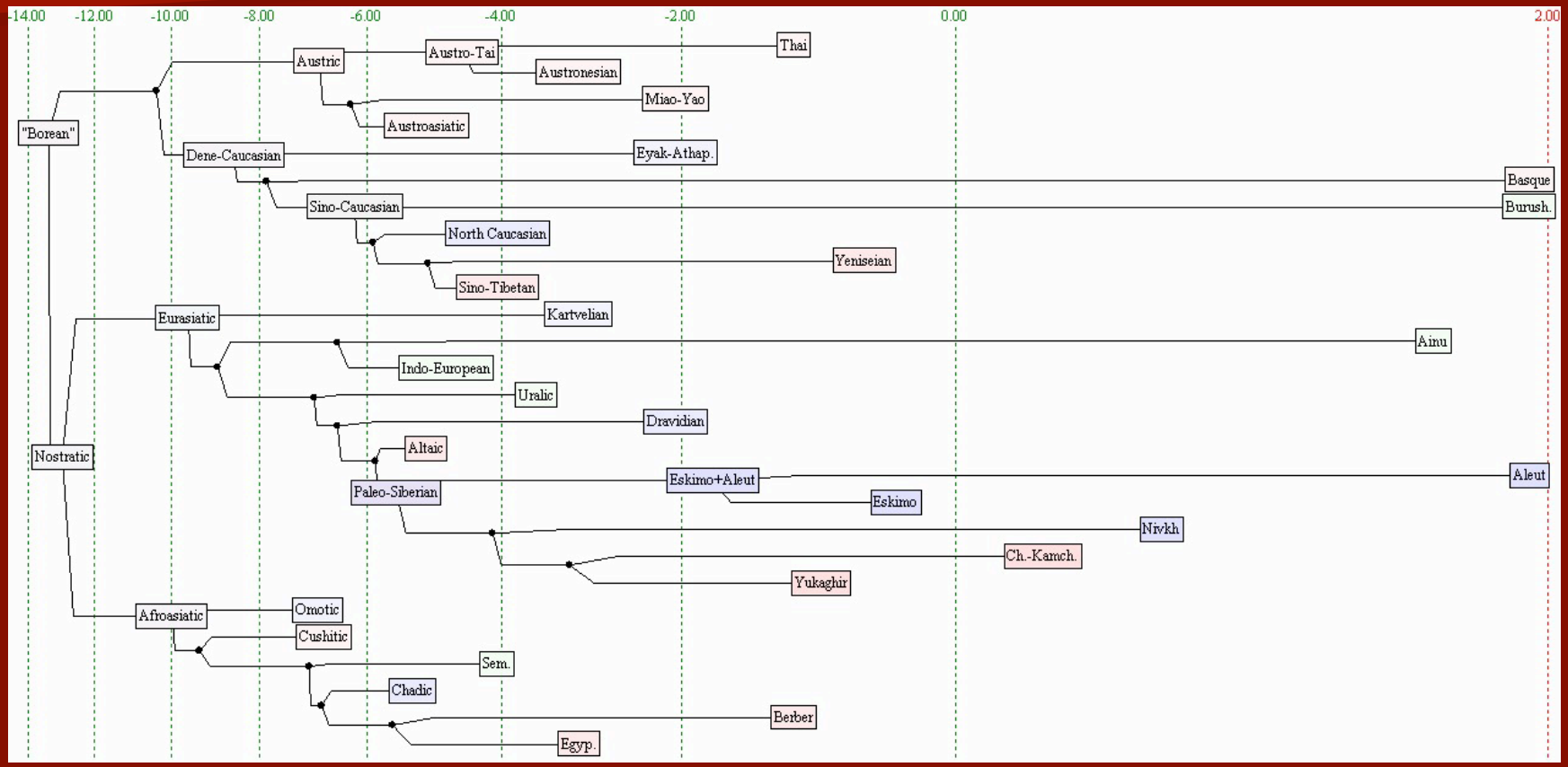
- Moore and Romney (*American Anthropologist* 1994) found that language and propinquity account for about the same variance in assemblage similarity (roughly 70%).
- Roberts, Moore, and Romney (*Current Anthropology* 1996) found that propinquity and language each account for about 30% of the variation 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

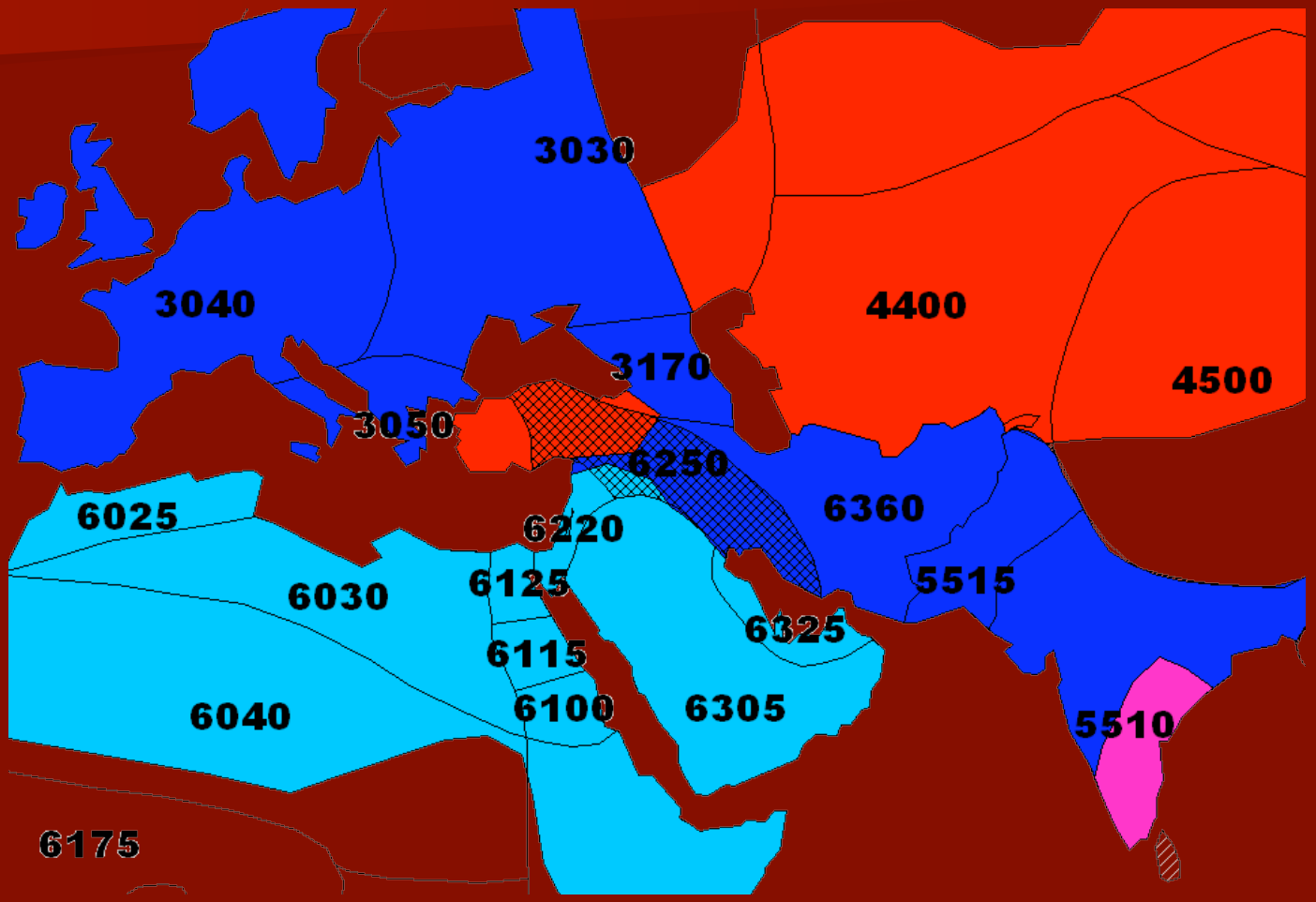
Glottochronology



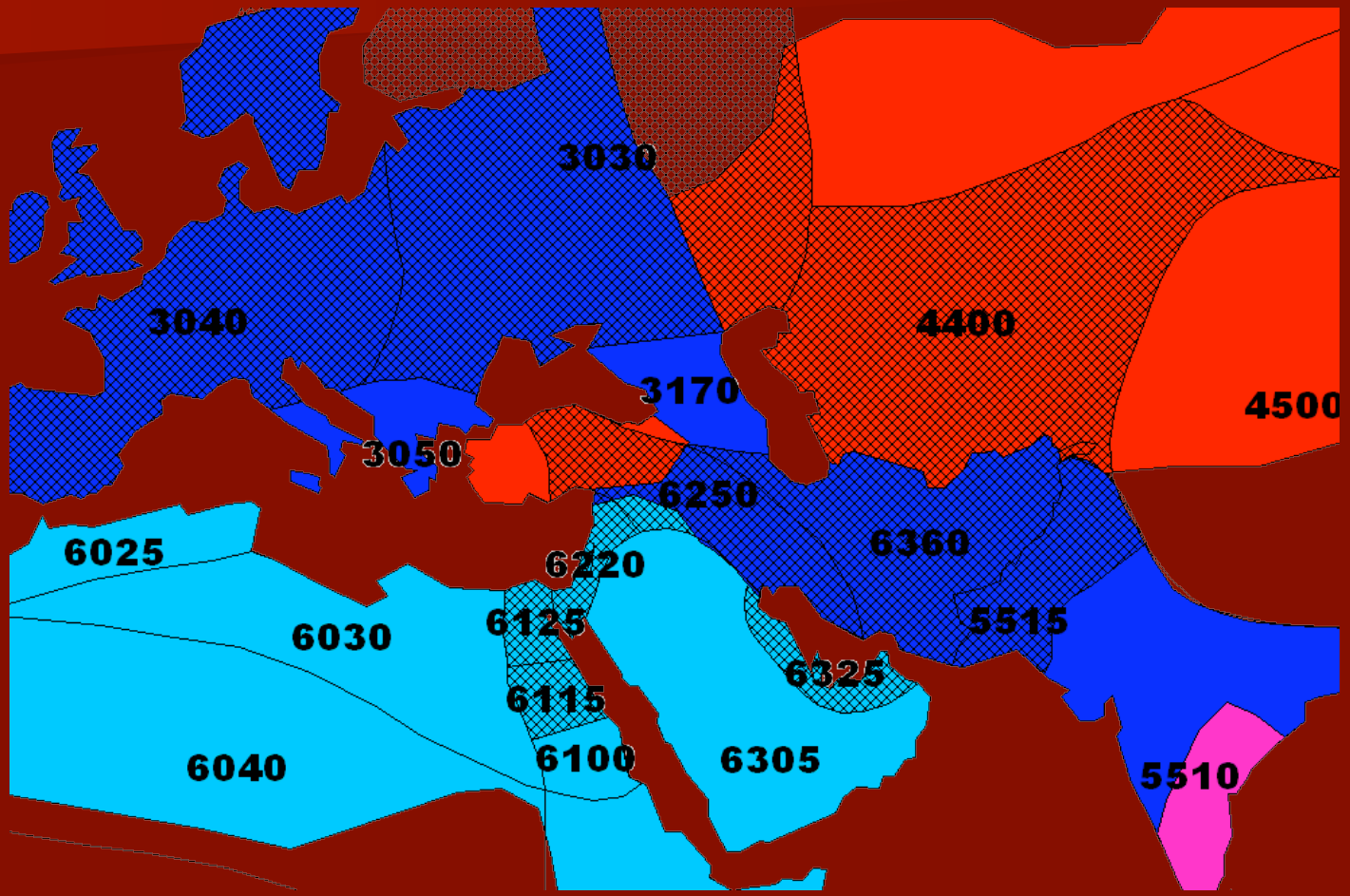
Protolanguage Lexemes

	PIE	PAlt	PAA	PDr
Iron/Bronze	✓	✗	**"iron weapon" "cast metal"**	✗
Cemetery/ Tomb	✗	**"coffin"**	✓	✓
Wagon/Cart	**"wheel"**	✗	✗	✗
Brick	✓	✗	**"a block of houses"**	✗

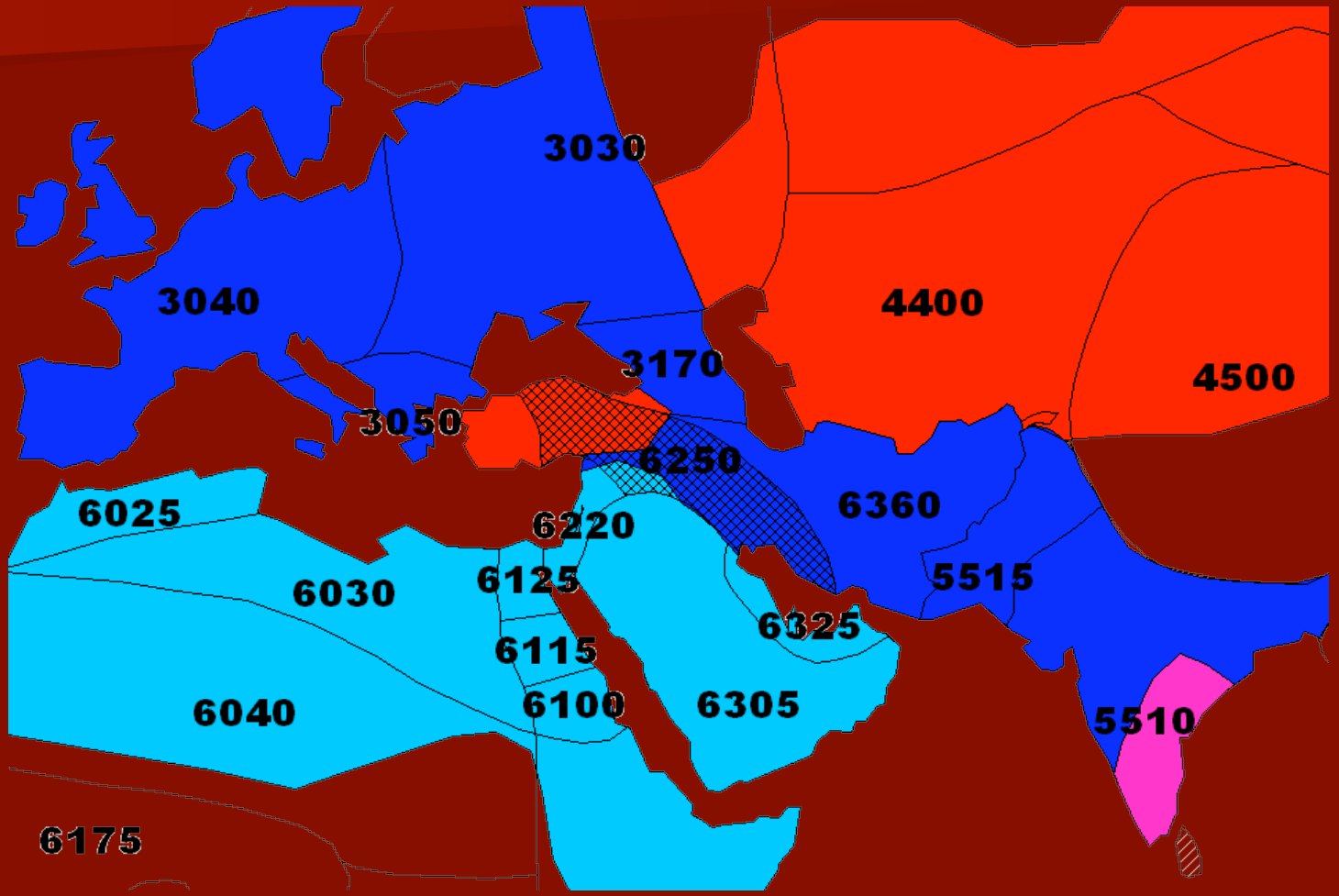
Languages and Metalworking Technology ca. 7000 BP



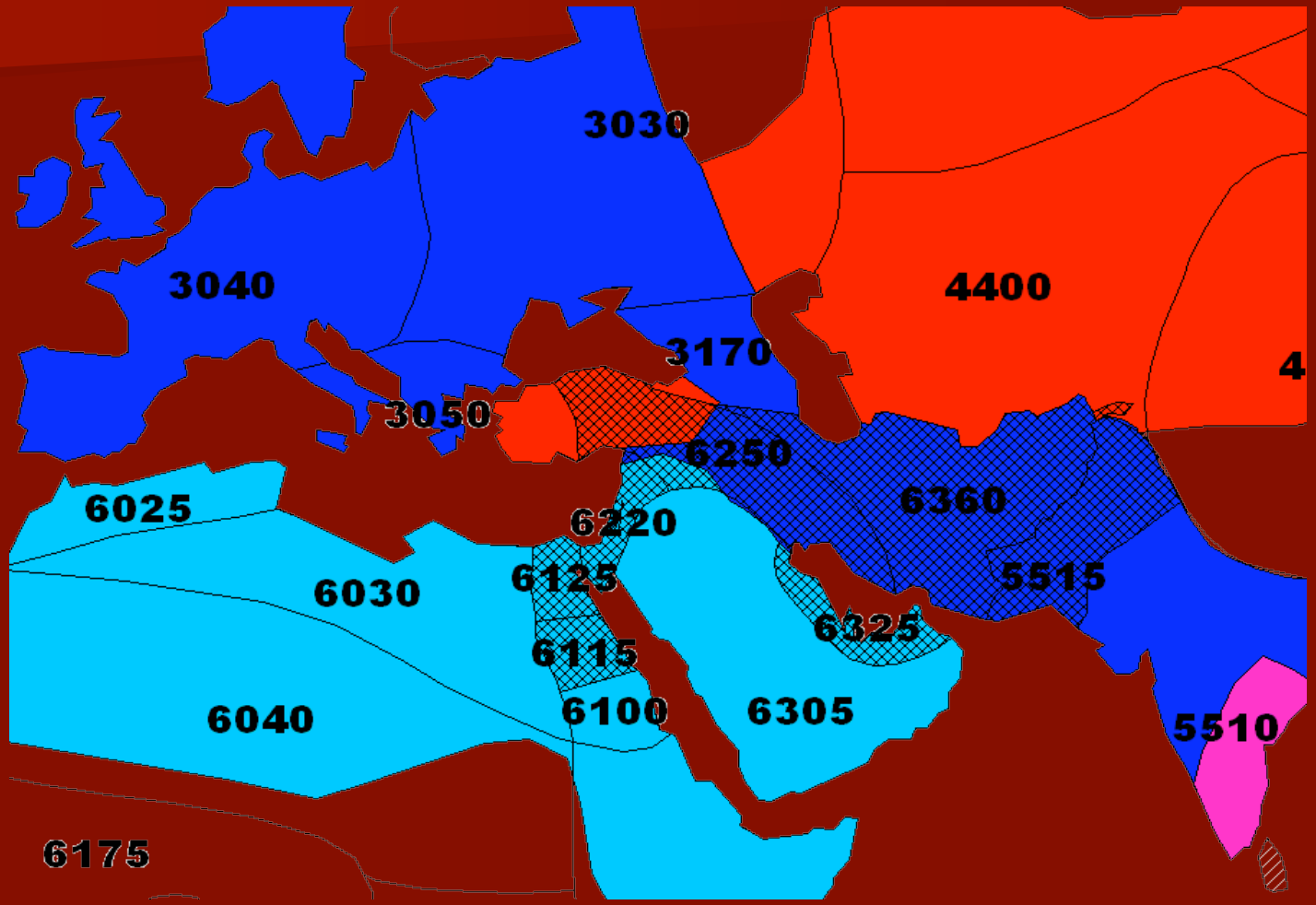
Languages and Cemeteries or Tombs ca. 7000 BP



Languages and Wheeled Vehicles ca. 7000 BP



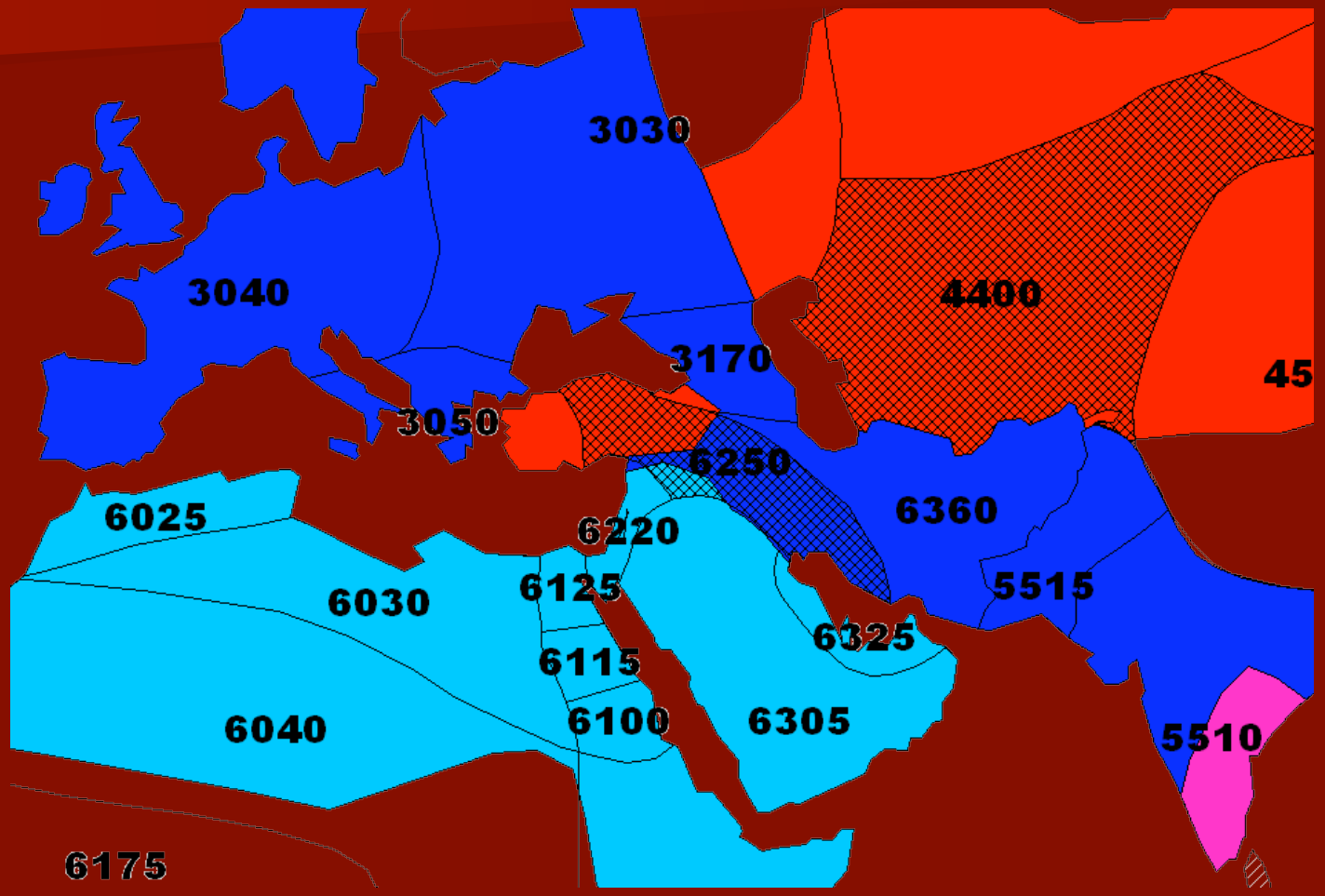
Languages and Brick Dwellings ca. 7000 BP



Post-Marital Residence

- Reconstructed kin terms imply that PAA was matrilocal and PIE patrilocal (e.g. Militarev).
- Matrilocal cultures have large dwellings (over ca. 80 m^2); patrilocal cultures have smaller dwellings (less that ca. 50 m^2).

Languages and Large Dwellings, ca. 7000 BP



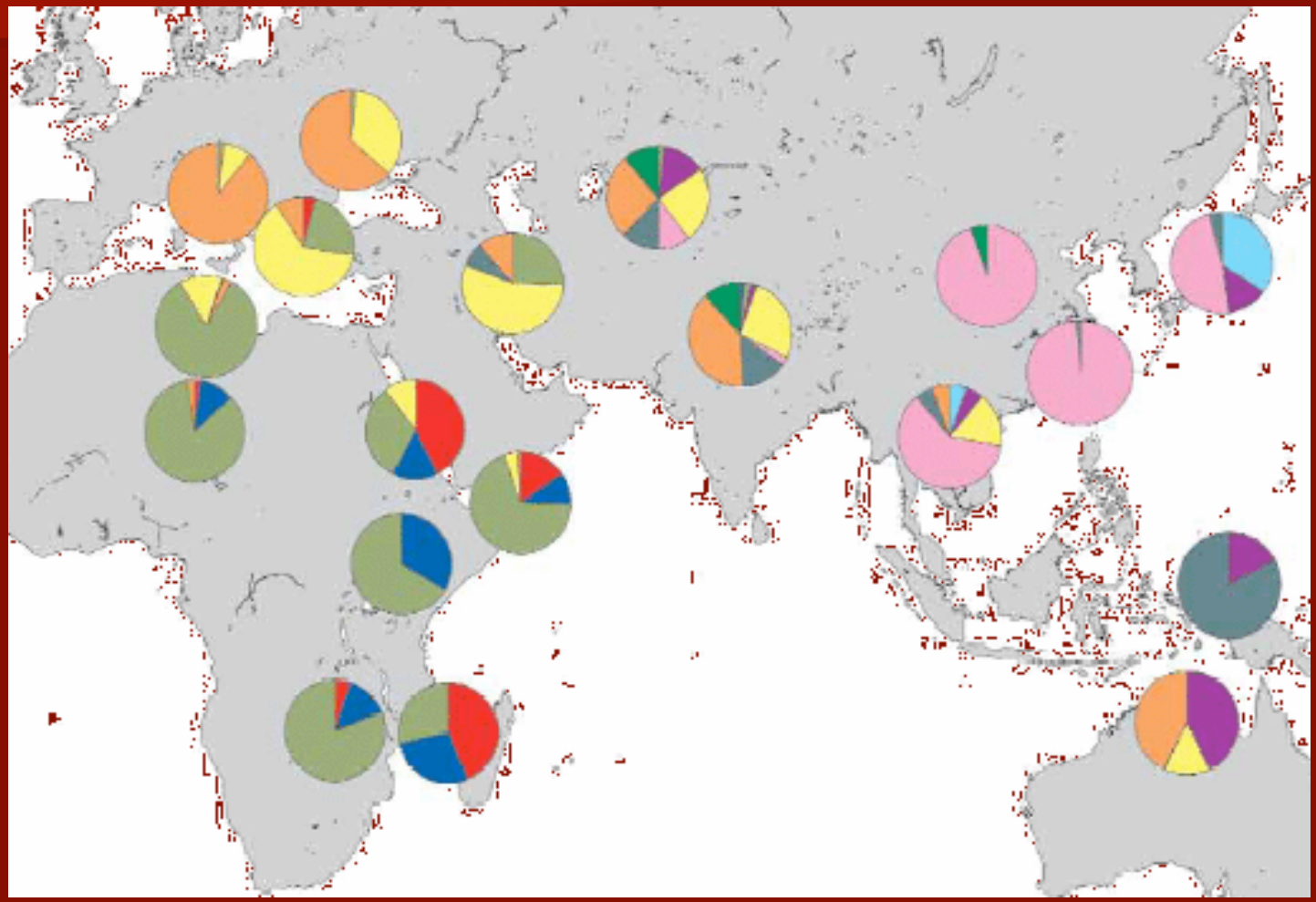
Conclusion

- "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.

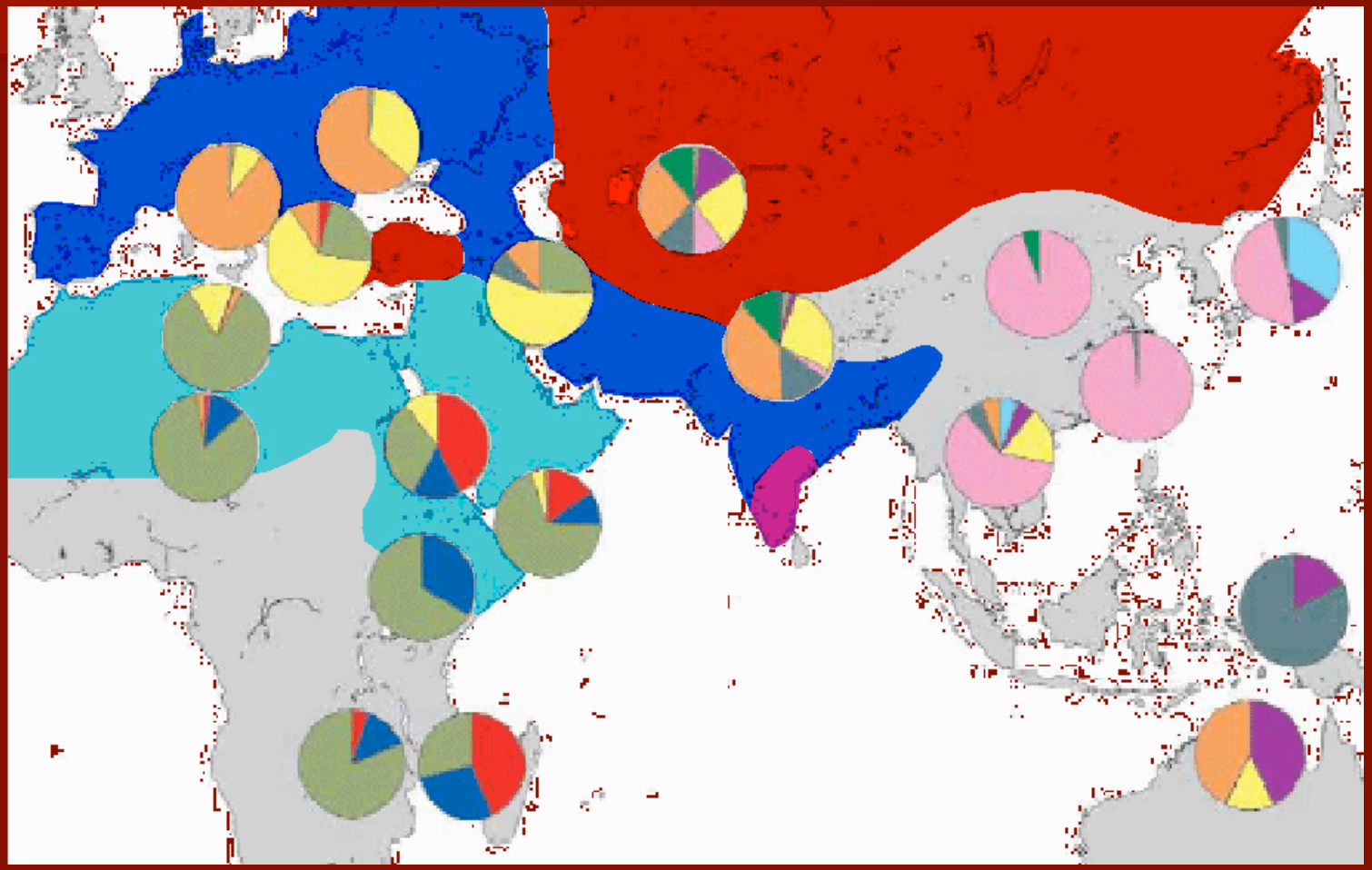
Spread of Languages after ca. 7000 BP

Y-chromosome Diversity

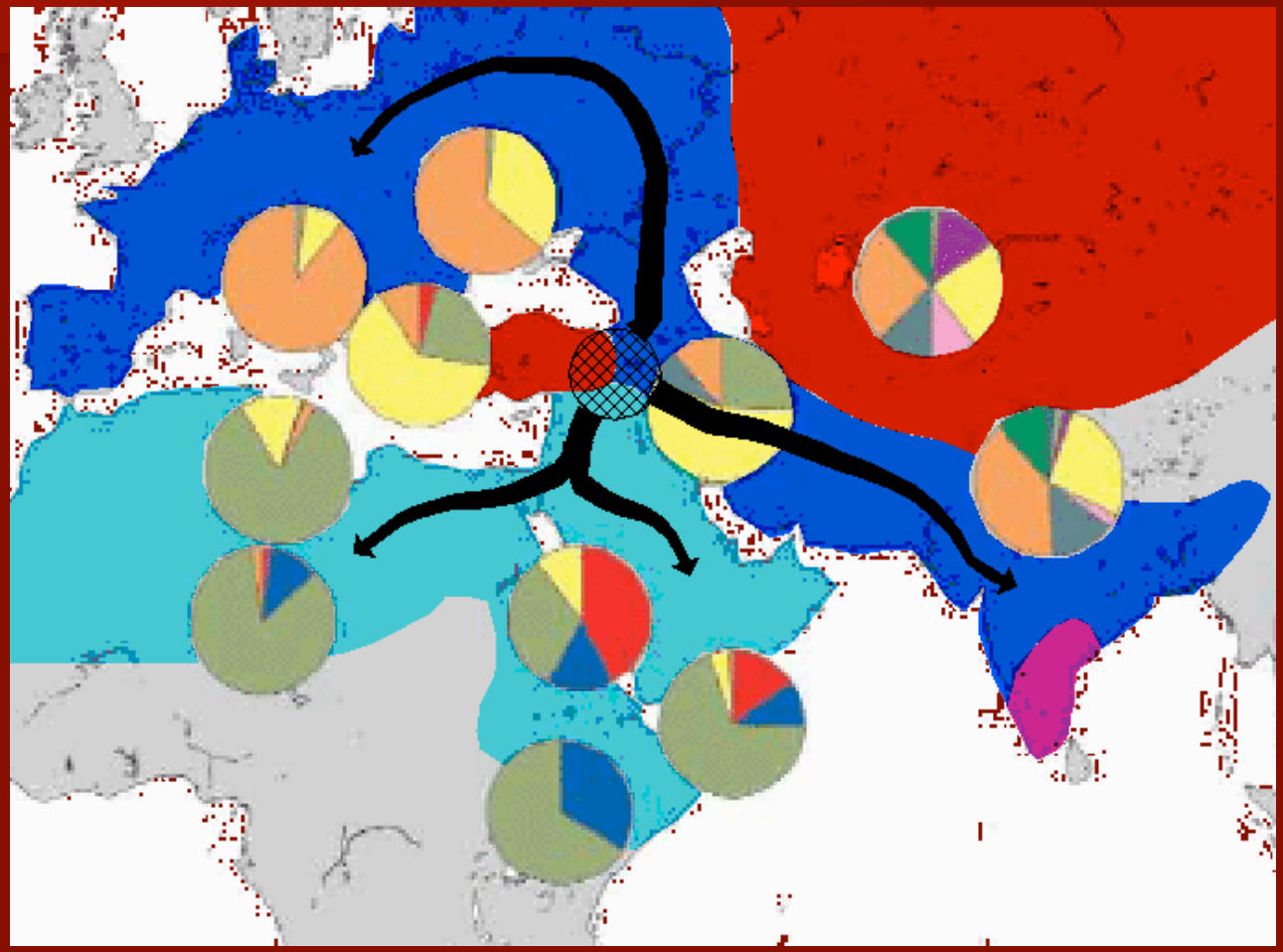
(from Underhill 2004)



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?