Questions to consider

Describe the African replacement model of modern human evolution

Key points:

1. modern *Homo sapiens* evolved in Africa
2. migrated recently once to Europe and Asia
3. *H. sapiens* replaced local species without interbreeding
4. No genes from the earlier populations persist in modern human populations

What is the evidence to support the African replacement model?

Key pieces of evidence:

DNA (Pääbo) of several Neanderthals suggest no hybridization (Fig. 19.21 in F&H)
(This is based on DNA sequences)

Describe the Multiregional evolution model (similar to Out of Africa again and again model)

Key points

1. *H. sapiens* evolved concurrently in Europe, Africa and Asia
2. Multiple migrations out of Africa over vastly different time periods
3. Each expansion event was followed by interbreeding across geographic regions; maintained continuity as single species
4. Evidence of both distant and local archaic genes in current populations

What is the evidence to support the Multiregional evolution model?

Key pieces of evidence:

No evidence of abrupt replacement technological changes in fossil record to indicate complete replacement without hybridization.

No evidence that fossils of *Homo* show abrupt changes due to complete replacement; instead there is continuity of distinctive regional traits.

Multiple different genes (autosomal, mitochondrial, Y-DNA)

Considering the evidence, which model do you think is more convincing?