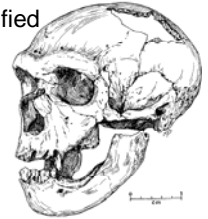


## Neanderthals & Archaic *Homo sapiens*

- I. Early archaic *H. sapiens* & later Neandertals
- II. Middle Pleistocene evolutionary trends
- III. Middle Pleistocene culture
- IV. The Neandertal mystery

## I. Early Archaic *Homo sapiens*

- Some dispersed *Homo erectus* evolved
- Large variation within & between samples
- All the specimens are classified *Homo sapiens*



## II. Middle Pleistocene Evolution (CIRCA 400,000-125,000 y.a.)

- Fossils exhibit a mosaic of traits (primitive & modern)
- While the fossils from each continent differ, the physical differences are not extraordinary.
- Common physical trends:
  - increase in brain size (1450+ cc)
  - a change in the skull from pentagonal to globular
  - maintain long, low braincase
  - short and stocky

## II. Middle Pleistocene Evolution

### Computer Reconstruction of Neandertal

Notice protruding brow and jaw (skin color and hairiness are speculative).

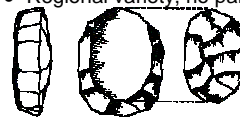


## II. Middle Pleistocene Evolution



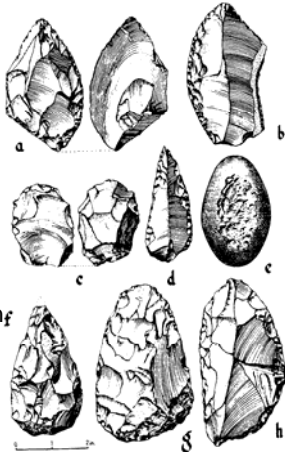
## III A. Middle Pleistocene Culture: Tools

- African and European archaics invent the Levallois technique for tool making.
- Acheulian tools are still around but the Mousterian becomes more common
- More variety in tools (burins, scrapers, etc.)
- Regional variety, no particular "types"



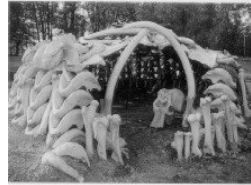
### III A. Mousterian

- Named after le Moustier, France
- Flake-based
- Pressure flaking
- Retouching common



### III B. Middle Pleistocene Culture: Dwellings

- Definitive dwellings with fire show for the first time by 400 kya
- Terra Amata and Mezin



### III C. Middle Pleistocene Culture: Hunting

- Many early H. sapiens probably drove large animals off cliffs.
- Weapons large and clunky.
- No missiles.
- Some suggest "encounter strategy".
  - Shipman & Trinkhaus and fractures
  - Site location



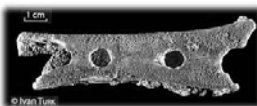
### III D. Middle Pleistocene Culture: Burials

- Neanderthals flexed the bodies of their dead
- We later see deliberate burials containing grave goods like animal bones and stone tools, even flowers at Shanidar.
- All by 100 kya

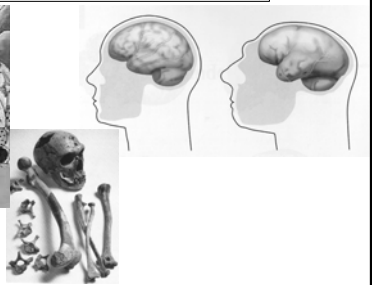


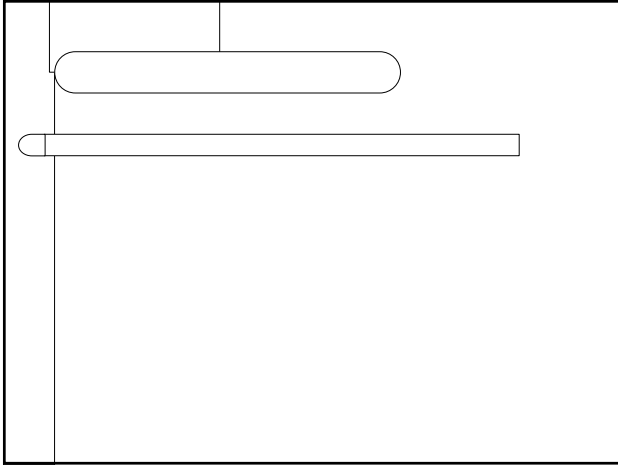
### III E. Middle Pleistocene Culture: Complex Symbolic Behavior

- Burials and grave goods indicate something
- Cave bear skull collections
- Fires over some burials
- Possible evidence of music?
  - (undated bear femur flute)
- Compassion
  - La Chapelle (Elderly)
  - Shanidar1 (Disabled)



### III E. Middle Pleistocene Culture: Complex Symbolic Behavior





## Taxonomic Issues

- The classification of individual fossils in "archaic *Homo sapiens*" is viewed by many as imprecise, since this is an ill-defined evolutionary group.
- Several early archaic specimens are interpreted by paleoanthropologists as showing derived features different from *Homo sapiens*.
- Neanderthals are viewed by numerous researchers as representing a distinct species, *Homo neanderthalensis*.