

Last class

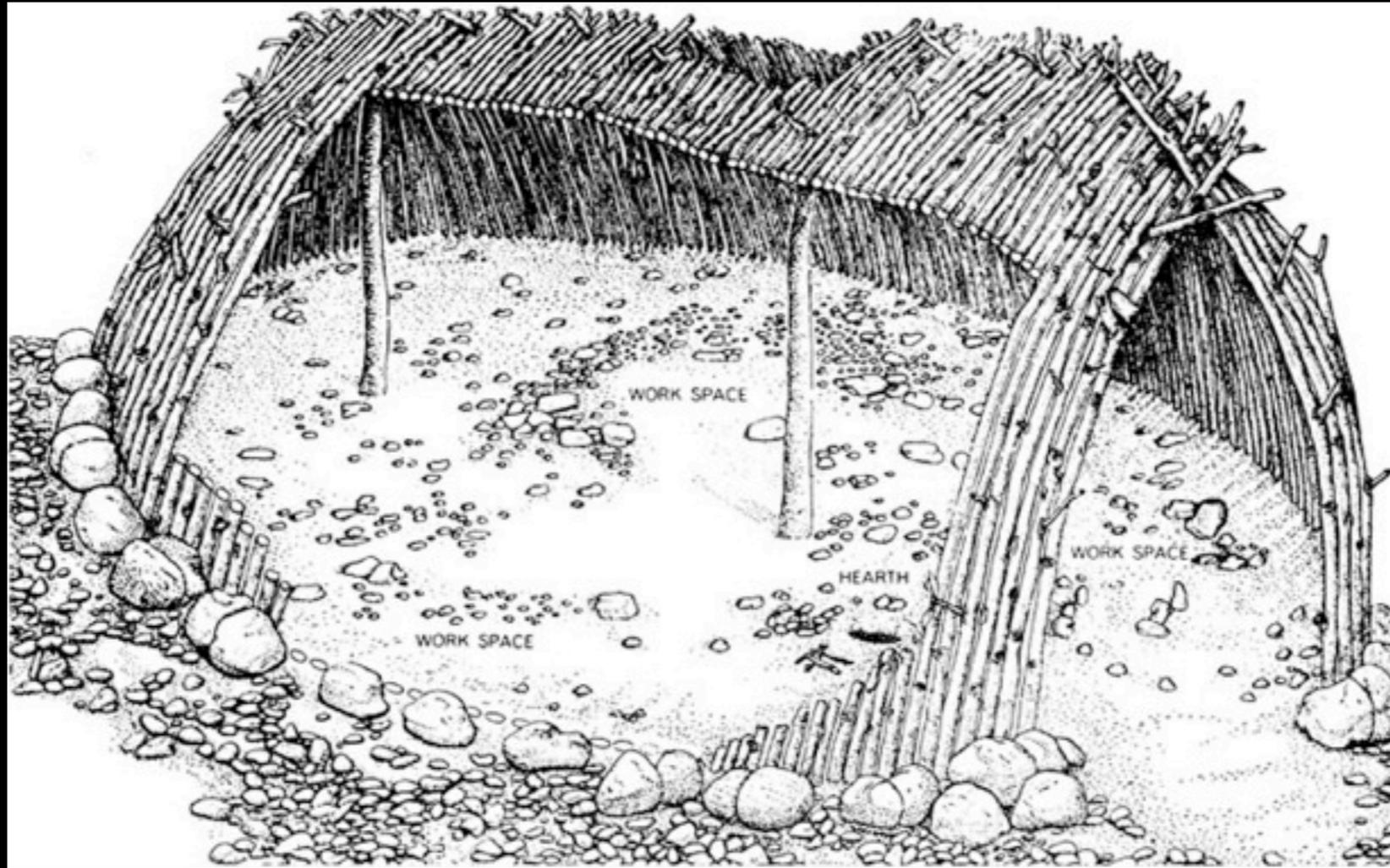
- Who were the Neandertals?
- Where and when are they found?
- What are their distinctive morphologies?
- Why do we separate Neandertals from other archaic humans?

More...

- What is the relationship of the Neandertals to the other archaic humans and to modern humans?
- Why are Neandertals often considered to be separate than the other archaic humans?

Archaic behavior

- All the archaics no matter what you call them show similarities in their behavior
- Shelter building
- New stone tool making techniques
- Organized hunting behavior - spears - big game hunting
- Burial



Wood Shelter, 300,000 years ago
Terra Amata, France

Linton.



Acheulean handaxes

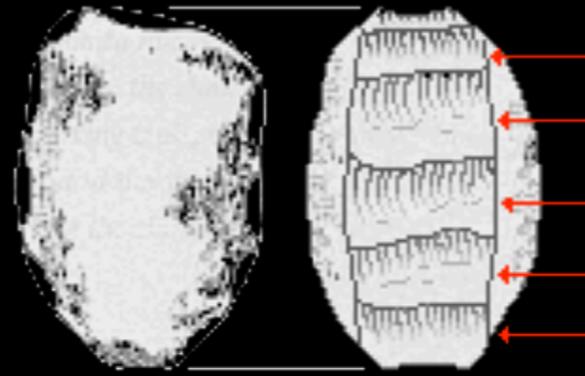


53.—Lower Acheulean implements from St. Acheul 1. A typical boucher; 2. an "amande" or ovate boucher; 3. a scraper. (After Commont, *L'Anthropologie*. $\times \frac{1}{2}$.)

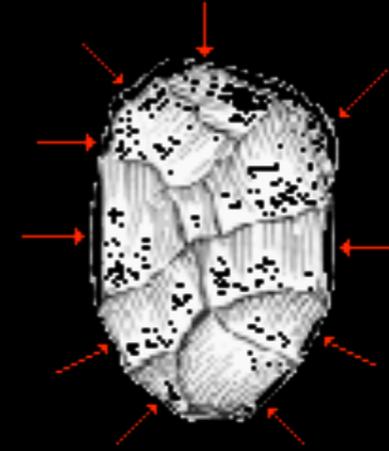




A large cobble of brittle fracturing rock (e.g., flint) is selected.



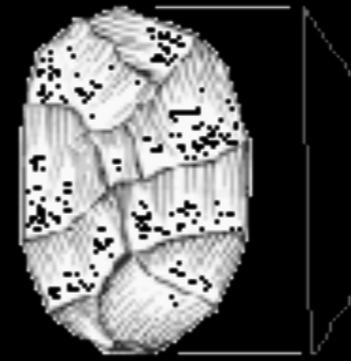
The cobble is percussion flaked around its perimeter to prepare the core



One side is percussion flaked to produce a tortoise shell shape.

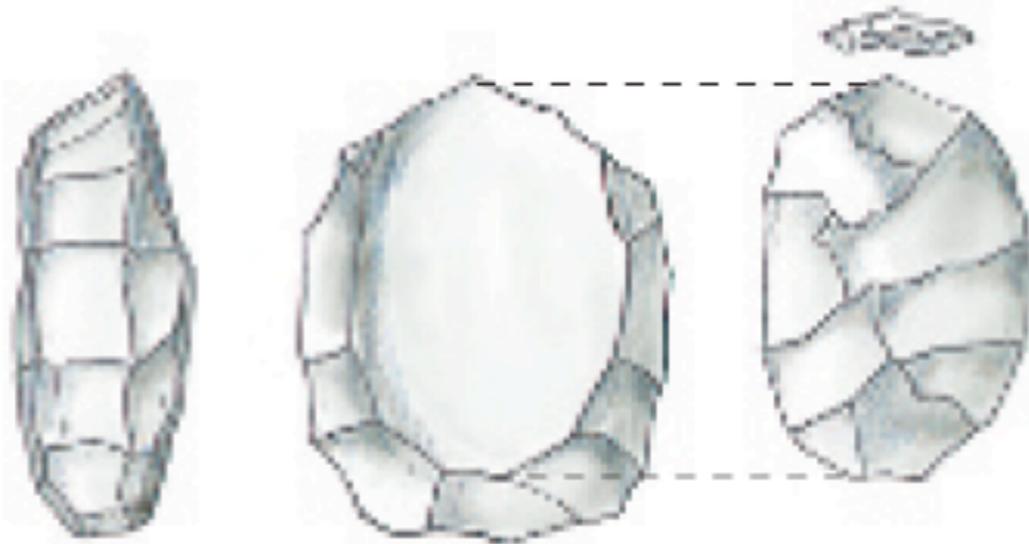


A heavy percussion blow at one end of the cobble removes a large flake that is convex on one side and flat on the other.

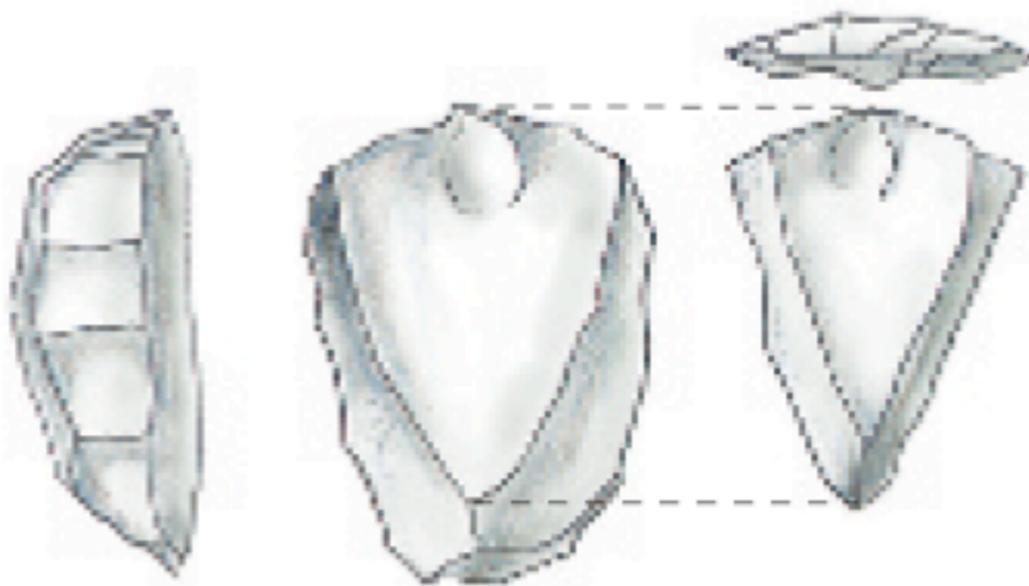


This Levallois flake is now ready to be used immediately for scraping and cutting or to be shaped into a specialized tool.

THE LEVALLOIS TECHNIQUE



Levallois core and flakes

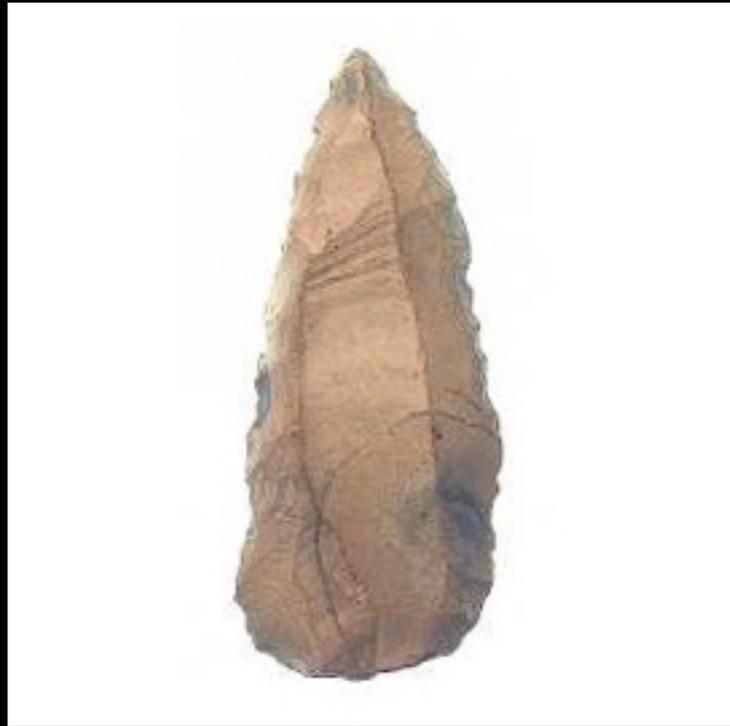


Levallois point and core

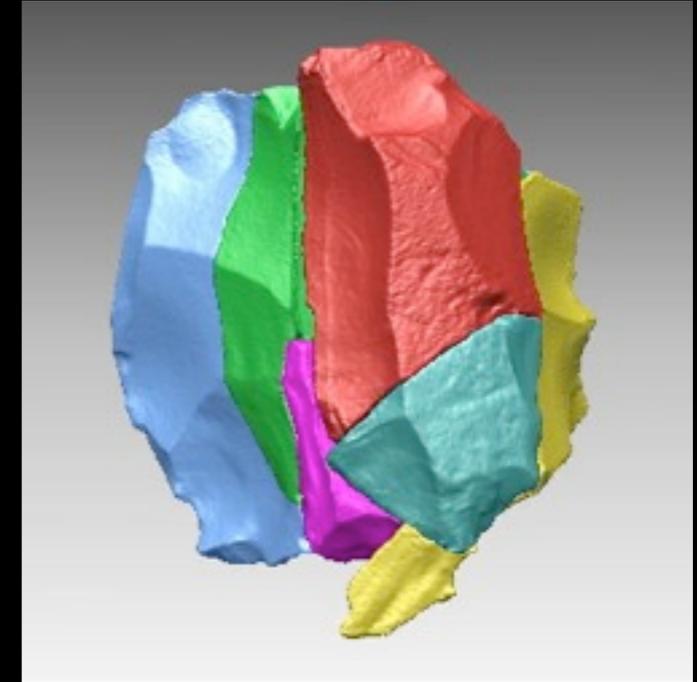
(a)



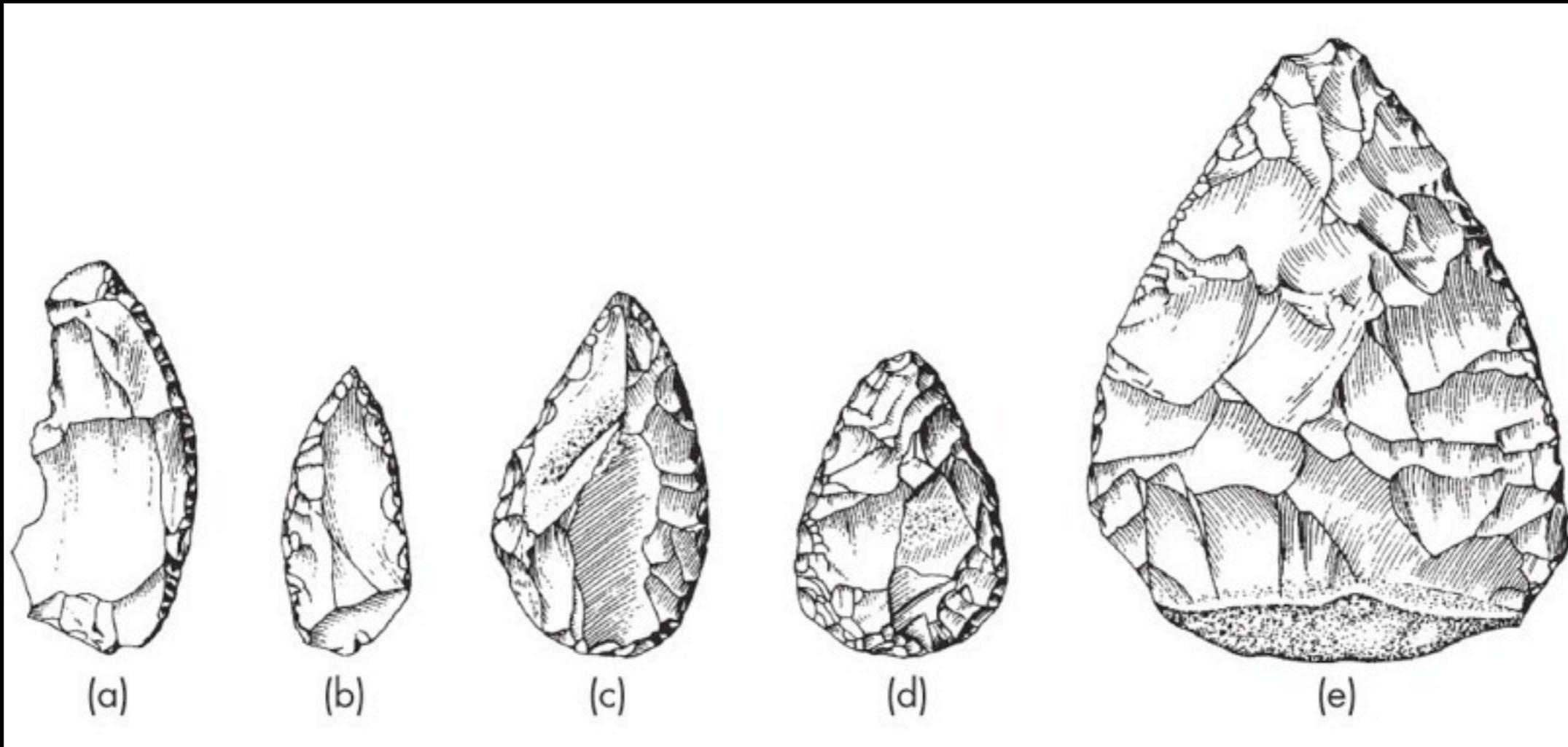
(b) A flint Nodule



J140 / 946



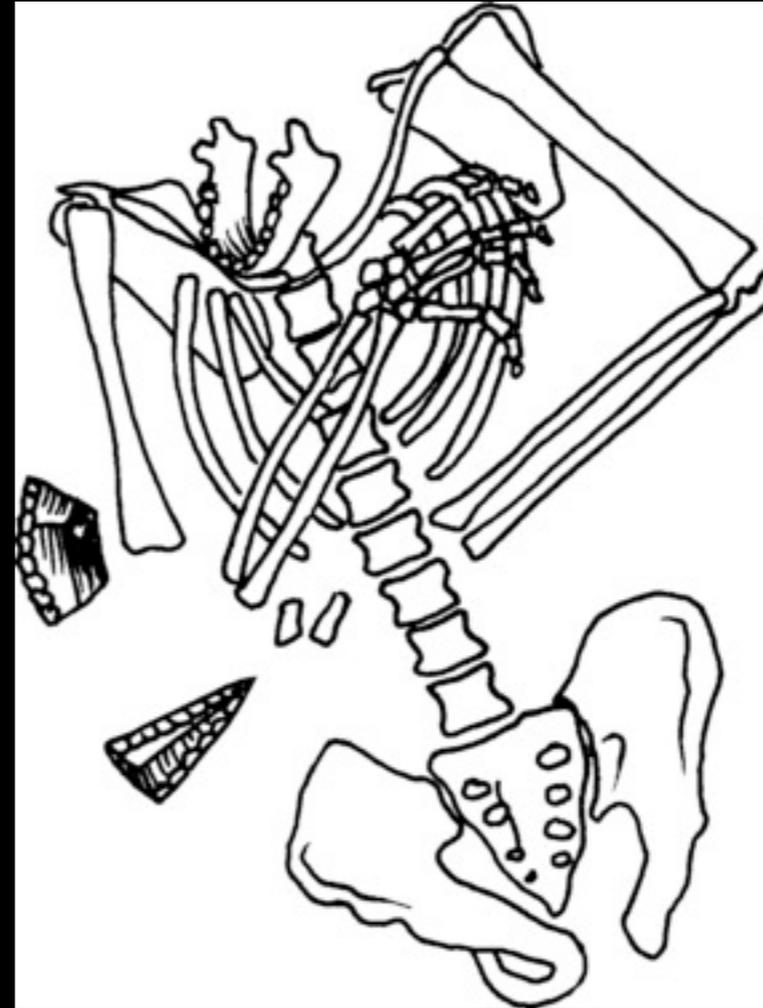
Levallois Technique



Mousterian tools
a,c: scrapers, b,d:points, e: hand axe



Neanderthal Child burial from Syria



Kebara

Cultural features

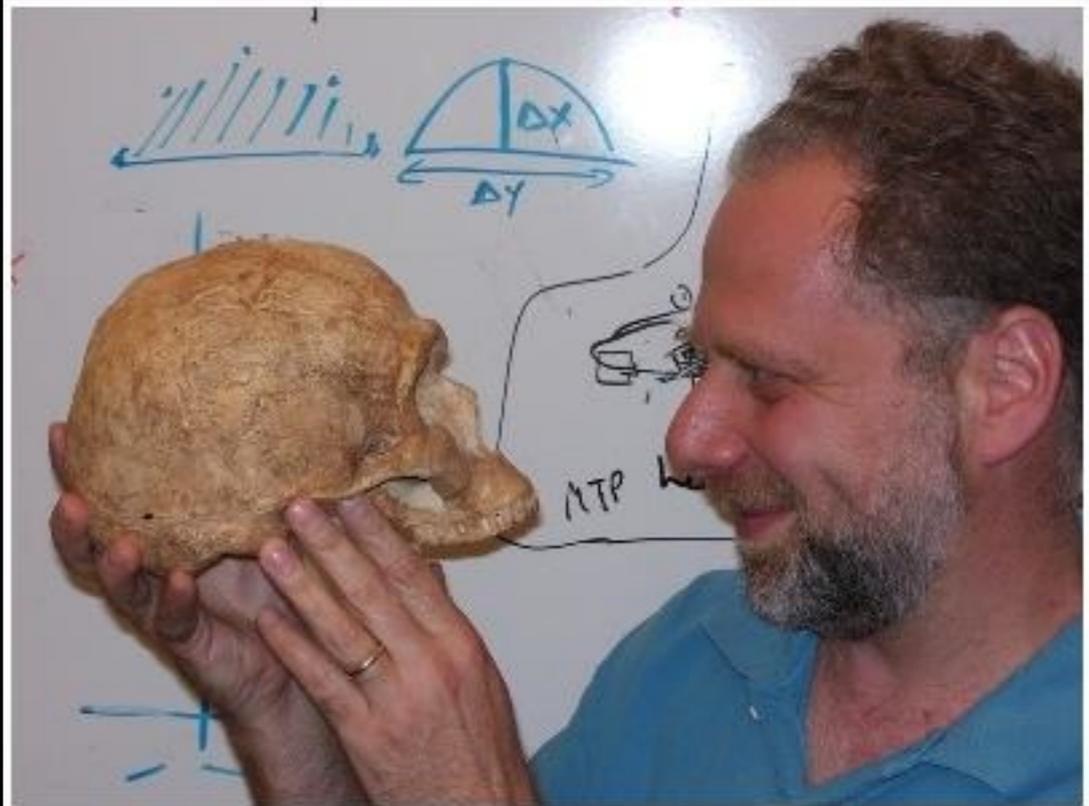
- Take care of injured and elderly
- Buried their dead
- Evidence of personal adornment
- Evidence of community living
- Language gene - FOXP2



- Show mix of modern and archaic features
- Show mix of modern and archaic behaviors
- More modern behaviors than some of the “anatomically modern” *Homo sapiens*



Modern reconstructions



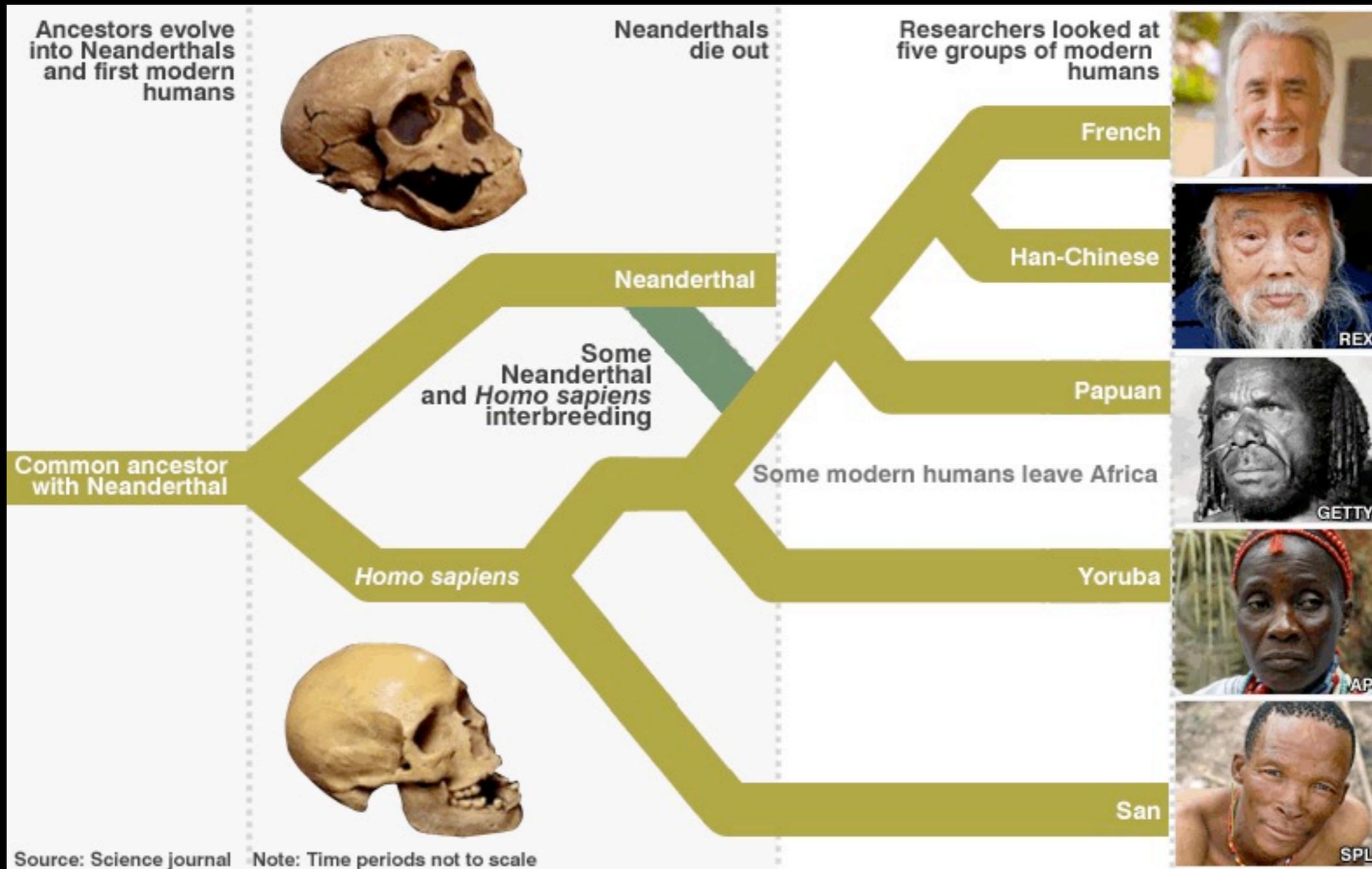
Dr. Daniel Lieberman



“Modern” Humans

- Start to appear around 160,000 years ago in Africa
- What makes them modern?
 - Mostly more gracile than the archaics
 - No miraculous moment when it first appears

Neanderthal DNA



Modern features

- high, rounded cranium
(greatest breadth high on the parietals)
- less suprastructure development
- tall, nearly vertical frontal bone
- face larger under the cranium



Modern features

- mean cc 1350 (range 1000-2000)
- small teeth
- CHIN
- early ones show more primitive technologies, later share technologies with Neandertals



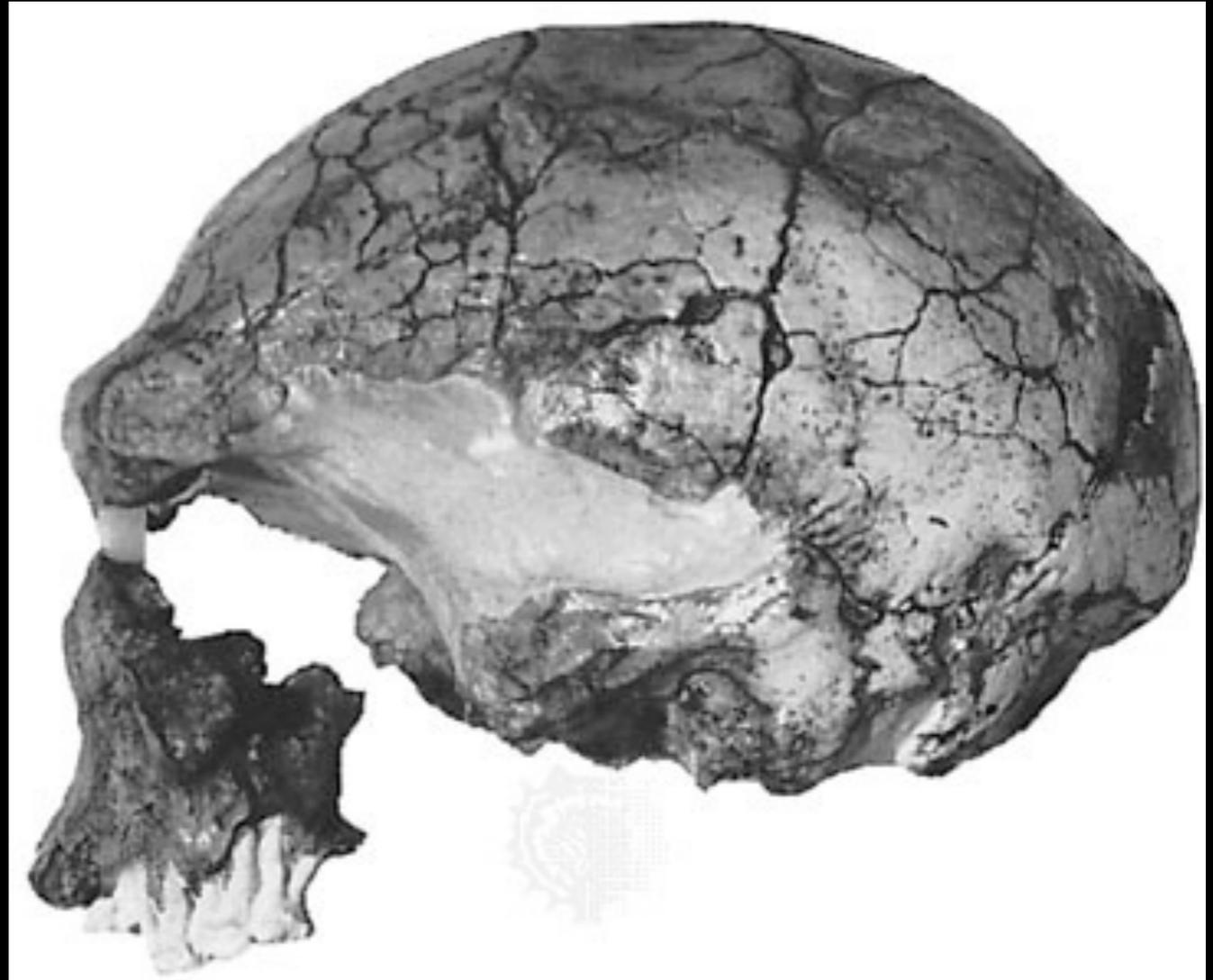


Modern variety



Herto Bouri
Ethiopia
160,000-154,000

Laetoli 18
129,000-108,000



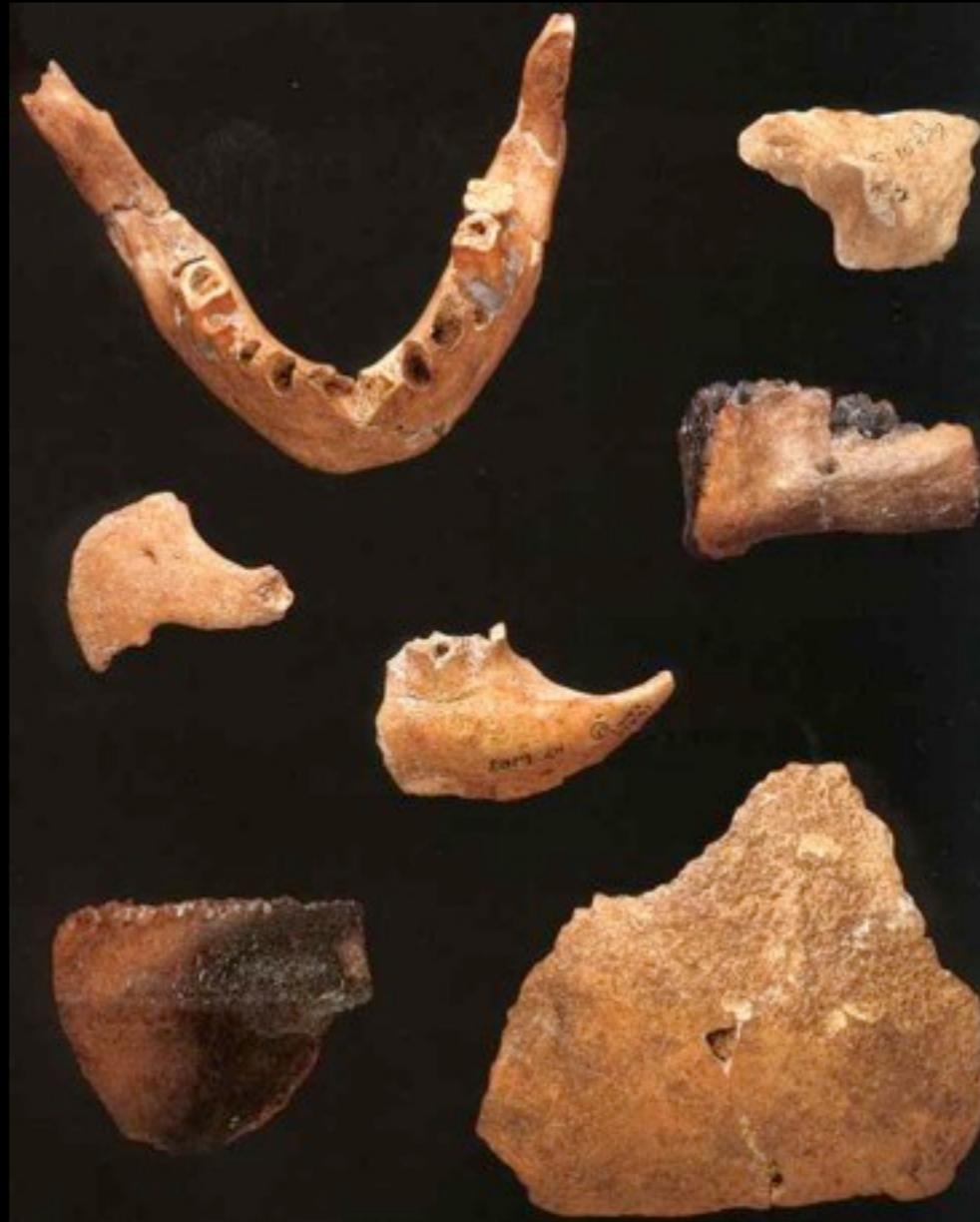


Omo
130,000 - 60,000

Omo 2



Klasies River Mouth 118,000-60,000



Jebel Irhoud
127,000 - 87,000





Florisbad
100,000

African Moderns

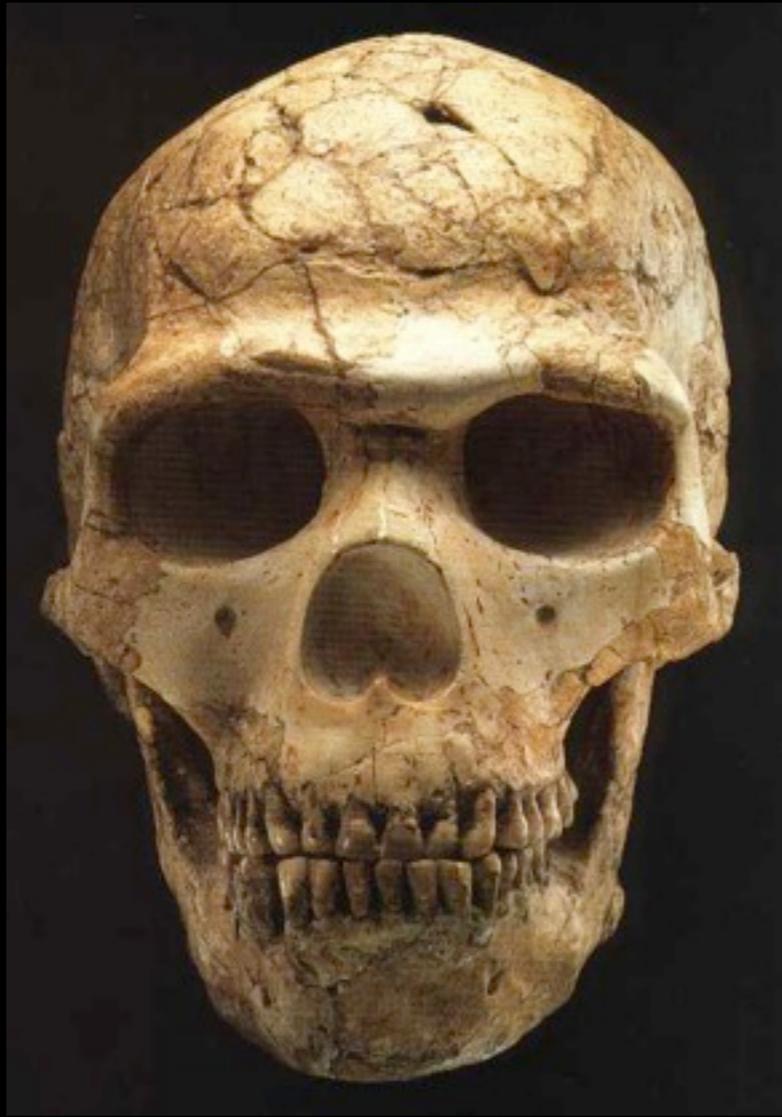
- Earlier than elsewhere in the World
- 100,000-160,000
- Mosaic of morphologies, leaning towards the modern

Western Asia

- Moderns either simultaneous with Neandertals or leapfrogging them
- Mosaic



Qafzeh



Skhul

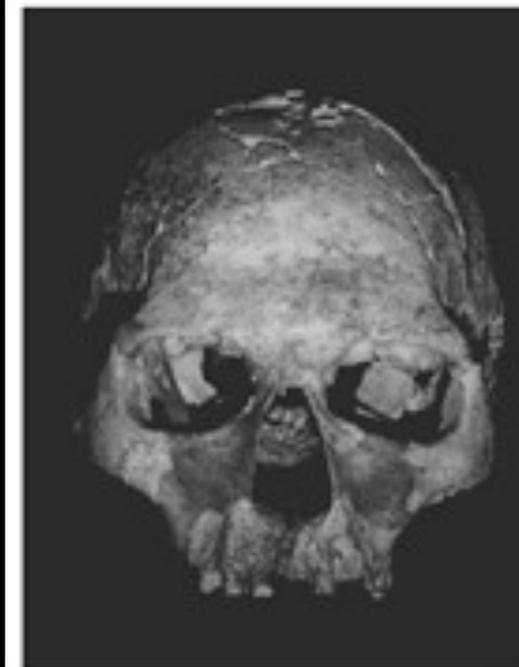
Chinese early
Anatomically Modern
date to about 70,000



Upper Cave 101



Liujiang



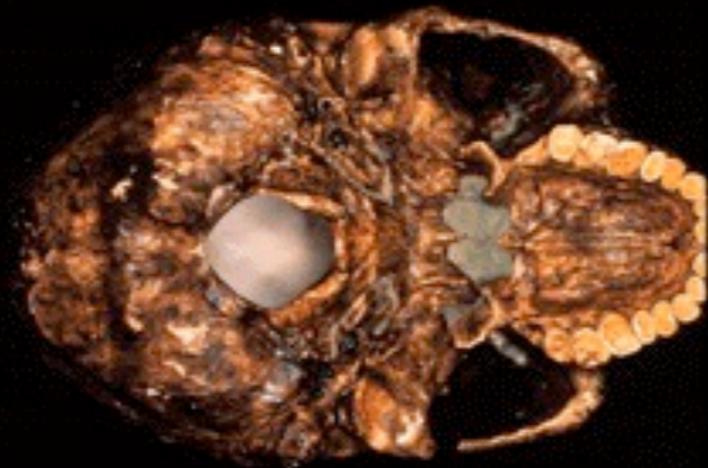
Minatogawa 1



Baoji M7

Fig. 2 Facial skeletons of Upper Cave 101, Liujiang, Minatogawa 1 and Baoji M7, all to the same scale. Note width of mid-face, orientation of malars, shape of nasal bones (not preserved in Minatogawa 1), height of face and height of nasal aperture.

Zhoukoudian
Upper Cave
30,000

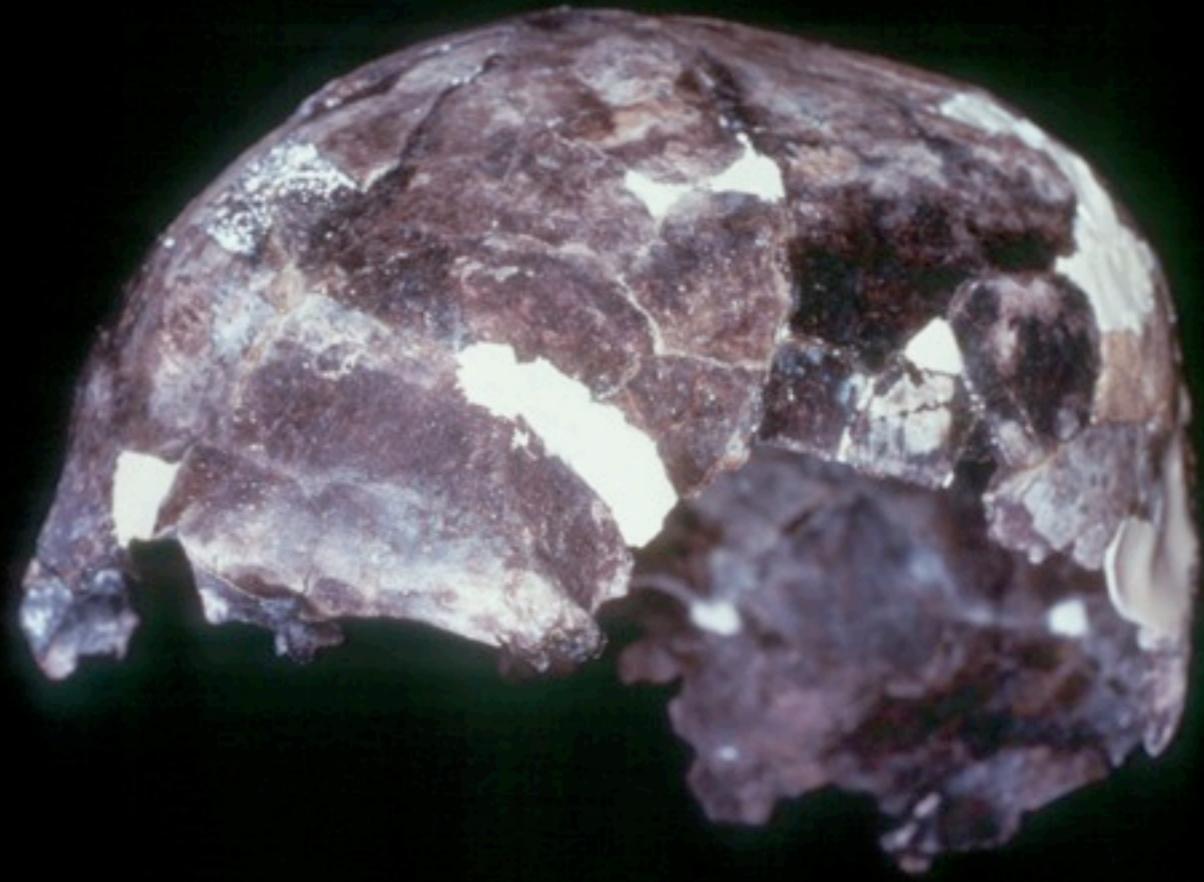




Wadjack



Mungo





Willandra Lakes



Coolbool Creek
14,000 ya

Asia summary

- Modern from at least 70,000
- With some very robust features
- On Australia from about 60,000



Predmost



Cro Magnon

Where and When

Africa	160,000-120,000
Near East	100,000
Asia	70,000
Europe	30,000