Anthropological Applications of Osteology

By: Roxanne Lamson, Claire Jackson, Mikaela Carroll, Melissa Hoffmann, Ali B., Leslie Arellano
Osteology: the study of bones

- can help determine age, sex, medical history of the individual

- indicators found in the bone can have cultural indicators and former occupations
Figure 1.1 Osteology and associated scientific disciplines.
Forensic Osteology

A significant tool for Forensic Anthropologists (Roxanne Lamson)
Uses for Forensic Osteology

1) Settlement for insurance claim
2) Settlement of estate
3) Social Security benefits
4) Allowing surviving spouse to marry
5) Burial of remains within religious context
6) Establishment of “corpus delicti” (Evidence for a crime)
Career using Osteology: Forensic Anthropology

Duties:

- Identify:
  1) age
  2) sex
  3) medical history
  4) probable cause of death of the individual
     a) foul play or no?
     b) accidental, natural, homicide, or suicide

- provide expert testimony in court

Requirements:

- Masters; Ph.D recommended
- internships, fieldwork, clinical experience
- American Board of Forensic Anthropology (ABFA):
  1) needs a bachelor's degree in Anth/related field (minimum)
  2) Possesses a doctoral degree in bio/physical anth. (10 years + of school!)
Career using Osteology: Forensic Anthropology

Job Facts*:

-Projected Job Growth: 4% for all anthropologists

-Average Salary: $64,290 annually for Anthropologists

*U.S. Bureau of Labor Statistics
Archeology

The study of human activity through the recovery and analysis of material culture
Claire Jackson
What is Archaeology?

Its subjects are past societies and cultures, ranging from the exploration of human origins and early hunter-gatherer communities to ancient environment and ancient arts and cultures.

A core part of archaeology is the dual method involving fieldwork and laboratory analysis.

As it is often studied in a joint degree with anthropology, history, or art history.
Careers in Archaeology

Graduates in archaeology go on to work as professional archaeologists, in museum education, curation, conservation and heritage.

Other career options include

- FIELD TECHNICIAN / CREW CHIEF / FIELD SUPERVISOR
- PROJECT ARCHAEOLOGIST / MANAGER
- SHPO ARCHAEOLOGIST
- GIS SPECIALIST

Typical employers:

- archaeological contractors
- local government
- university archaeology departments
- national heritage agencies
- independent archaeological consultants
Physical Anthropology

Also known as Biological Anthropology. (Leslie Arellano)
Why we use Physical/Biological Anthro.

- Used when analyzing the evolution of humans.
- To understand the causes of human diversity.
Careers: Physical/Biological Anthropology

Academic Positions

- College/University: genetics, zoology, and biology.

Non-Academic Positions

- Applied Anthropometry
- Museums
- Zoos
- Forensic Sciences
- Government agencies
Paleontology

Fossils and Primate Evolutionary Implications (Ali B.)
Uses of Paleontology

Associated most commonly with dinosaur excavation, but encompasses a much broader discipline of work. (A B.S. is required for most entry level positions, most likely will need M.S., possibly a PhD depending on how specific career becomes)

-Biology (fossils, isotope study, comparative osteology)

-Geology (also fossil study, dating sites, study earth’s history)

-Paleoanthropology (Focus on past (ancient) human life/reconstruction. Shares similarities with archaeology and forensic anthropology. Environmental/ climate reconstruction, palaeobotany, ect.) Anything having to do with reconstructing past human life.
Significance of Paleoanthropology (With an Osteological context)

Filling in the Gaps of the Human Evolutionary Tree

-Just as forensic anthropology allows the discovery and identification of human remains, palaeoanthropology does the same for ancient hominoid (all apes, including humans) remains found.

  -I.e. Comparative Bone Morphology

  -Allows for the discovery of new hominid (all modern and extinct great apes) / hominin (Any species more closely related to Humans than Chimpanzees) species which provides more answers to the many questions found in the study of human evolution.

  -I.e. Dentition

  -Reveals past diets and pathology (diseases) of ancient sites.
Careers in Paleontology

- Archaeologist (specifically an excavator/collector)
  - Can work with Museums
- Comparative Osteologist
  - Compare bone morphology of hominoid (all ape) species
- Palaeoanthropologist
- Paleontologist
- Geologist
- Human Evolutionary Biologist
  - Study DNA sequences found at palaeo sites from osteological remains
Uses of Anatomy

Anatomy is a branch of science concerned with the bodily structure of humans, animals, and other living organisms, through the dissection and separation of parts.

Those with an anatomy degree can work in an array of sectors such as government, pharmaceutical companies, hospitals and scientific research firms.
# Careers in Anatomy

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<thead>
<tr>
<th>Biomedical Research/Medical Scientist</th>
<th>Nursing</th>
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<tbody>
<tr>
<td>-Post Graduate degree needed</td>
<td>-Bachelor’s degree required</td>
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<tr>
<td>-Start as a Research Associate</td>
<td>-Advanced knowledge in anatomy</td>
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<td>-Working to uncover the cause of human disease and develop programs to improve health outcomes</td>
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<td>-Medical degree required</td>
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<td>-Specialize as a Radiologist</td>
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