

## 人骨考古學:解讀人類骨骸

教課教師: 岡崎 健治

### 課程概述及目標

本課程是人骨考古學的入門介紹。人骨考古學為整合生物人類學和考古學的一項領域, 其目標為重建過去人類的生活面貌, (例如: 慣習行為、墓葬習俗、飲食、健康情況以及個體之間的暴力行為…等)。因此, 人骨考古學的研究目的與考古學是一樣的。然而, 人骨考古學有其獨特的材料與研究方法。也就是說人骨考古學家使用生物人類學的技術對人的骨骼個體進行檢視, 而考古學家一般而言即研究由這些個體所產出的物質。因為考量到本堂課材料的特性, 大部分的課堂會使用具體材料(骨骼標本、其相關模型及照片…等)。

在實驗室的實際操作演練方面, 期望學生能夠達到判斷骨骼部位、性別、大致年齡的要求。透過本堂課的教學, 學生將能達到描述或理解人骨考古學家如何從人骨遺骸中讀取訊息的方法此外, 本課程將更進一步地要求學生能對於人體與週遭生活環境之間關係的改變模式進行討論

### 評分方式

評分方式將以每次課堂上的小考、三次的實際操作演練以及兩次考試作為評分基礎。每次的小考我將會記錄在評分表中。而實驗室的操作練習計畫於台大解剖學暨細胞生物學科的人骨典藏室進行, 此設計主要為了使學生能掌握本學科的學習技巧。期中、期末考方式將針對學期間在人骨考古學上所講授的內容, 作綜合性的簡答題以及申論題測驗。

每週小考(即出席率).....20%; 實驗室實際操作演練.....10 %

期中考.....35 %; 期末考.....35%

### 教科書

1) White T.D., Folkens P.A. (2005) *The human bone manual*. Academic Press.

### 參考書

1) Roberts C., Manchester K. (2007) *The archaeology of disease*. Cornell University Press.

2) Katz M., Berg S., Sund B., Soric (2008) *anthropology skeleton*. Wiley-Liss.

3) Larsen C.S. (1997) *Bioarchaeology: Interpreting behavior from the human skeleton*. Cambridge University Press.

除了指定的教科書之外, 擬額外預備一些閱讀文章(PDF檔或者影印)讓學生研讀。每次上課前必須完成的指派閱讀作業。本課程將以閱讀文章為基礎進行課堂講授、學生發表與討論。講授與討論所使用語言將可能彈性地從中文轉換到英文, 特別是技術性的用語方面。因此學生必須在每週上課前在閱讀的文章內針對其技術性用語之定義先做好註解的準備。

日程表

## Human osteoarchaeology

| week | Topic                                    | Contents                                                                                                                                                                                                | Place                        | Readings*                           |
|------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------|
| 1    | <b>Introduction</b>                      | course description and goal / bioarchaeology and its surrounding fields / field and laboratory procedures / bone biology / anatomical terminology                                                       | Anthropological Department   | HB Ch 2-4, 6, 18                    |
| 2    | <b>Osteology I</b>                       | vertebrae and thorax / skull                                                                                                                                                                            | Anthropological Department   | HB Ch 7, 9, 10                      |
| 3    | <b>Osteology II</b>                      | shoulder and upper limb / pelvic and lower limb                                                                                                                                                         | Anthropological Department   | HB Ch 11-16                         |
| 4    | <b>Laboratory exercise I</b>             | Let's identify the elements and features of skeleton                                                                                                                                                    | <b>Anatomical Department</b> |                                     |
| 5    | <b>Adult sex reconstruction</b>          | innominate bone morphology / cranial bone morphology / discriminant functions based on metrical data                                                                                                    | Anthropological Department   | HB Ch 19.1, 19.2, 19.4              |
| 6    | <b>Adult age estimation</b>              | pubic symphysis / auricular surface / cranial sutures / dental wear / paleodemography                                                                                                                   | Anthropological Department   | HB Ch 19.3.2, 19.3.3, 19.3.6-19.3.8 |
| 7    | <b>Laboratory exercise II</b>            | Let's judge the sex and age of adult skeletal individuals                                                                                                                                               | <b>Anatomical Department</b> |                                     |
| 8    | <b>Dentition</b>                         | dental terminology / permanent teeth / deciduous teeth                                                                                                                                                  | Anthropological Department   | HB Ch 8                             |
| 9    | <b>Midterm exam</b>                      |                                                                                                                                                                                                         | Anthropological Department   |                                     |
| 10   | <b>Juvenile osteology</b>                | tooth formation and eruption / skeletal growth and development / juvenile age estimation / infant mortality and infanticide in pre-industrial time                                                      | Anthropological Department   | HB Ch 19.3.1, 19.3.4, 19.3.5        |
| 11   | <b>Laboratory exercise III</b>           | Let's identify the elements and features of dentitions, and estimate the age of juvenile skeletal individuals                                                                                           | <b>Anatomical Department</b> |                                     |
| 12   | <b>Oral disease and diet</b>             | dental caries / antemortem tooth loss / periapical abscess / periodontal disease / calculus / dental attrition / enamel hypoplasia / subsistence and oral health / sex differences of caries prevalence | Anthropological Department   | HB Ch 17.7, 19.10; AD Ch 4          |
| 13   | <b>Nutritional and metabolic disease</b> | cribra orbitaria / porotic hyperostosis / scurvy / rickets / osteoporosis / urbanization and community health                                                                                           | Anthropological Department   | HB Ch 17.3, 17.4; AD Ch 8           |
| 14   | <b>Activity pattern</b>                  | degenerative joint diseases / biomechanical adaptation / musculoskeletal stress marker / occupation and habitual practice / masticatory loading and cranial form                                        | Anthropological Department   | HB Ch 17.6; AD Ch 6; BA Ch 5-7      |
| 15   | <b>Infectious disease</b>                | non-specific infections / treponematosi / tuberculosis / leprosy / animal domestication and pathogene                                                                                                   | Anthropological Department   | HB Ch 17.2; AD Ch 7                 |
| 16   | <b>Cultural modification and trauma</b>  | tooth abrasion / cranial deformation / cremation / foot-binding / fracture / surgery / postmortem lesion / inter-personal conflict and war                                                              | Anthropological Department   | HB Ch 5, 17.1; AD Ch 5; BA Ch 4     |
| 17   | <b>Biodistance</b>                       | metric and nonmetric data / race or geographical variation / 'Two Layer' hypothesis for the population history of East Asia / 'Out of Taiwan' model                                                     | Anthropological Department   | HB Ch 19.6-19.9; BAHS Ch 16         |
| 18   | <b>Final exam</b>                        |                                                                                                                                                                                                         | Anthropological Department   |                                     |

\* HB = The Human Bone Manual; AD = The Archaeology of Disease; BAHS = Biological Anthropology of the Human Skeleton; BA = Bioarchaeology; Ch = chapter