Detecting Disability:
A Plan for an Interdisciplinary Osteoarchaeological Pilot Study Applying the Index of Care to a Romano-British Population.

María Serrano Ruber, MSc.
School of Archaeology, University College Dublin

Introduction

- **Inspiration:** Bioarchaeology is increasingly incorporating feminist, queer and disability studies to better understand variation in past human lives.
- **Aims:** To examine quality of life, degree of disability, and access to healthcare for individuals with impairments in 3-4th Century Romano-British Irchester, UK.
- **Approach:** Multiple lines of bioarchaeological and osteoarchaeological evidence within a disability studies framework.

Materials and Site Background

Irchester is a Roman town situated in the Middle Nene Valley, near modern day Northampton, UK (Fig. 1, 2). Due to its key position in the Northamptonshire trade network, it developed into an urban centre in the 1st C AD during the British Iron Age, with continuous occupation throughout the Roman occupation until the 4th, and possibly 5th C[1]. Cemeteries have a total MNI > 130, likely drawing from urban population and surrounding rural areas[1].

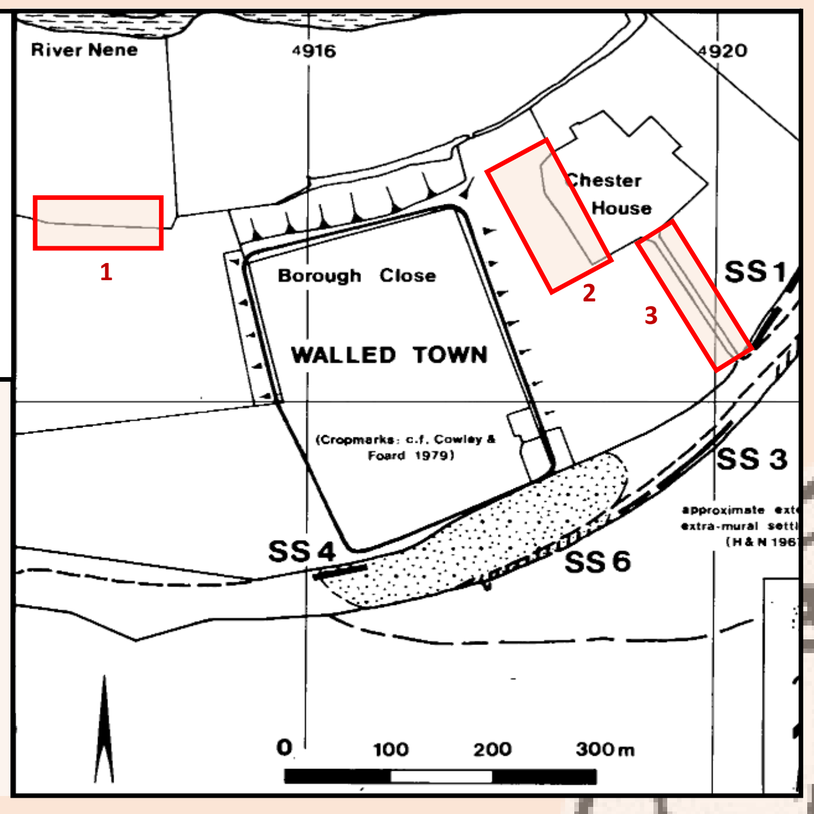

Fig. 1 (L): Map of the U.K. marking Irchester in context;

Fig. 2 (R): Map of 1981 excavation of Irchester, outlining the later cemetery excavations in red. 1) Car Park cemetery; 2) Orchard excavation; 3) Lime Avenue cemetery.

Fig. 3: Examples of skeletal impairments observed in preliminary skeletal analyses of the subsample, including **1) extensive tooth loss**—difficulty eating, potentially needed adapted diet; **2) severe shoulder osteoarthritis**—limited unilateral shoulder mobility and chronic joint pain; **3) spinal joint disease and slight scoliosis**—chronic backpain and mobility issues.

Methodology

The study will occur in five steps:

1. **Macroscopic skeletal analysis**: Demographic data (age, sex, stature)[2,3,4] and paleopathological lesions related to physical impairment (e.g. trauma, joint disease) and chronic illness (e.g. tuberculosis, leprosy).
2. **Index of Care:** macroscopic data will be examined through the IoC framework to reflect on the accommodations an individual would have needed in life[8].
3. **Dietary Isotope Analysis:** Changes in dietary patterns may point to tooth loss, loss of jaw mobility, loss of autonomy, or change in social status[9].
4. **Biomechanical Loadbearing CT analysis:** Differences in cortical bone density can occur due to partial paralysis or unilateral loss of mobility.
5. **Establish Life Course:** Combining the above data, a detailed timeline of an individual's life can be established, elucidating their lived experiences of disability[5].

Based on identified trends associated with the increased urbanisation of the Iron Age to Roman transition.

- Increased dental disease, trauma, infections, joint disease, stress markers, metabolic disorders[6].
- Increased prevalence leprosy and tuberculosis – directly associated to population density[7].
- Increased dietary Nitrogen values – associated to fish consumption, malnutrition, physiological stress [6].

Combining all these approaches, I will use cultural context to assess how different demographics experienced their disabilities differently, and understand whether age, sex, and social status affected individuals' access to healthcare in Romano-British society.

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Images— Background image: *Images of the Human Body* (2000) Pepin Press. **Fig. 1 + 2:** Windell, D. (1984). Irchester Roman Town: Excavations 1981-1982. *Northamptonshire Archaeology*, 19: 31-51. Adapted from Figure 2 in original. **Fig. 3 and icons**: created by the author.