The early practice of Physical Anthropology by the Renaissance Portuguese physician Amatus Lusitanus (1511-1568)

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Introduction

The foundation of Physical Anthropology is often attributed to Johann Friedrich Blumenbach (1752-1840), a German professor of medicine, naturalist and collector of human skulls[1-3]. On the early history of this field of knowledge, human variation in terms of race and racial classifications were the dominant epistemological perspectives[4-9], yet interesting observations regarding human biodiversification, and often neglected by historians of anthropology, were already documented since Classical Antiquity and subsequent periods[10].

One relevant case comes from the Renaissance, with the pioneer observations on the anatomical variability of human skulls made by Andreas Vesalius (1514-1564)[11], a remarkable figure of modern Anatomy[12] on his groundbreaking book De humani corporis fabrica (1543) (Figure 1). Vesalius “placed physical anthropology on a precise basis [...] with a tentative beginning in comparative anatomy”[13, 14].

The birth of modern Anatomy, with the shifting of the old Galenic and Hippocratic paradigms and the rupture with the structures on human dissections[15, 16], endorsed the scientific study of tissues and organs, including bones and teeth (Figures 1 and 2).

However, little is known to what extent the early anatomists made use of human bones to investigate and try to find answers to specific anthropological problems. To explore their works may provide insights on the deepest roots of the history of Physical Anthropology.

Aims

This work aims to describe what can be considered one of the earliest evidences of the practice of Physical Anthropology performed by the Portuguese physician Amatus Lusitanus (1511-1568) and to show how the Renaissance medical texts represent an interesting and unexplored source for the history of this field.

Amatus Lusitanus

Amatus Lusitanus (1511-1568), pseudonym of João Rodrigues, can be considered as the archetype of the European Renaissance physician[17] and is recognized as an influential figure of this period[18,19]. He studied Medicine in the prestigious University of Salamanca, lived in several countries, was professor of Anatomy at the University of Ferrara and treated some prominent persons of the Renaissance (see Figure 1 for a short biography).

Between 1551 and 1561, this physician published 7 volumes entitled Curatiónum medicinalium centuriae, each containing 100 cures reporting medical cures treated by him in several European countries (Figures 3 and 4).

The last cure, from the 4th century (dated from 1553)[20] is entitled:

"Where it is taught how a left-handed boy, i.e. with more agility on the left hand, could not be brought to the use of the right hand, and at the same time on the weight of human bones and skin."

On this century, Amatus reports his attempt to understand handedness by measuring the weight differences between left and right humeri, as follows:

“When in the past years we dissected many and various bodies, aiming the exact knowledge of anatomy, we were not satisfied only by sectioning bodies and examining particles, [...] we found many novelties never written before [...] and additionally we weighed bones, comparing those from the right side with the left ones, and this weighing allowed us to find an explanation to our intent (understanding handedness). When weighing the left and right arm bones (from the elbow to the shoulder) using a two arm scale, with the right in one side of the scale and the left in the other side, I found that the right one, or right arm bone, presented a much higher weight than the left bone."[20] (Figure 4)

Discussion and final remarks

The 100th cure of the 4th centuries of Amatus reveals that interesting issues that nowadays are within the scope of Physical Anthropology were already debated on the 16th century through the analysis of human bones. Handedness continued to be a feature of this field of inquiry, on the archaeological but also on forensic settings[21].

Research regarding the skeletal morphology and handedness has been growing on recent decades, focusing on different approaches, such as, differences in size and robusticity of the limbs, analysis of asymmetry in bone mineral density and on articular diseases (e.g. osteoarthropathies), among other approaches[22].

On the other hand the study of the weight of bones also did not fall into oblivion, yet evolving to other dimensions either in archaeological and in forensic settings, for example, estimating the living weight based on the skeleton weight, assessing the relationship between body mass and cremation weight, interpreting burial practices, estimating the minimum number of individuals from commingled human skeletal remains and issues related to human identification[23,24].

In sum, this work provides new clues regarding the practice of Physical Anthropology in the 16th century performed by the Portuguese physician Amatus Lusitanus and shows the importance of Renaissance medical writings for the history of this discipline.

References