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FORENSIC DENTISTRY VS. PALEODONTOLOGY

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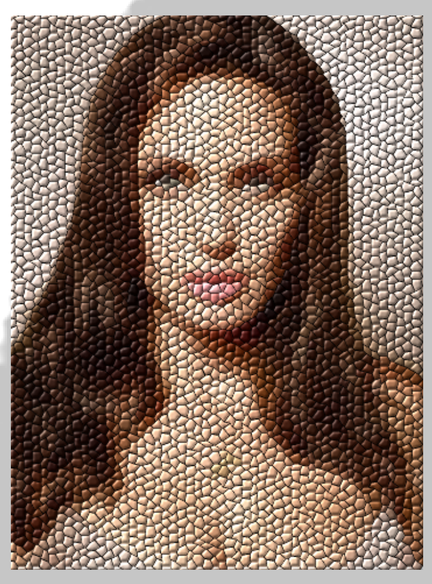
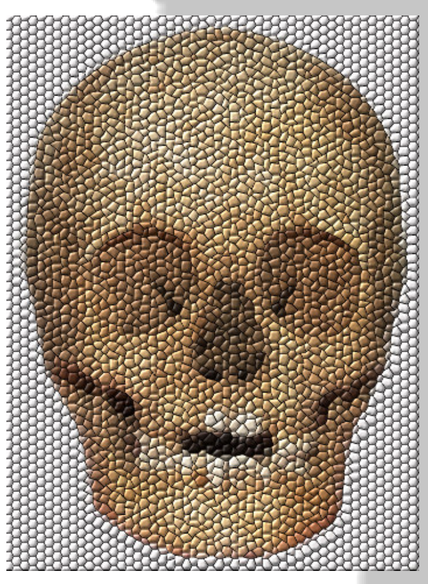


INTRODUCTION

Forensic dentistry and paleodontology are two disciplines sharing common observational platforms and methodology, but not a common purpose. The aim of this paper is to provide a short overview and comparison of these two disciplines in order to highlight their similarities and differences.

Forensic dentistry **or forensic odontology is the study of teeth and stomatognathic system in legal proceedings in the interest of justice. Forensic dentistry covers a wide variety of topics including individual or mass identification (including age and sex assessment) and bite mark analysis.**



Paleodontology **is a discipline investigating teeth, features of stomatognathic system and oral health of ancient populations or early forms of life through skeletal or fossil remains.**

The *cut-off point* between human remains as archaeological and forensic vary considerably between countries and it is not always a simple chronological boundary. There is no regulation that determines when human remains are considered to be from archaeological contexts, and when they are considered to be part of a forensic investigation. A general rule is that human skeletal remains dated to the end of the 19th century are usually considered to be from archaeological contexts.

IDENTIFICATION

RECONSTRUCTION

AIM

Although forensic dentists and paleodonotologists very often use the same methods, the aim of their work is different. Identification of an unknown body is one of the most important parts of forensic dentist's work. Matching the unknown body and the *name of the missing person* is of the highest importance in forensic dentistry. This has less or no importance in paleodontology, because single bodies or skeletal remains of individuals are in the majority of cases used for *reconstruction of life* of the whole population. Making the *dental pathology profile* of earlier human populations (including data about dental caries, antemortem tooth loss, periapical abscess, enamel hypoplasia, dental calculus and alveolar resorption) yields valuable clues regarding diet, food preparation, nutrition and subsistence. The distribution of dental diseases by age, sex and status group can aid in the identifying the differential effects of nutritional stress within a population. Diagnosis and interpretation of dental illnesses in paleodemographic contexts are important steps in the attempt to reconstruct past lives.

METHODS

Paleodontology combines methods used in forensic dentistry and interprets the results in archaeological circumstances.

- Sex determination (cranial traits, odontometrics, tooth morphology)
- Age assessment (cranial suture closure, teeth development and eruption, tooth wear)
- Dental profile (kind of dentition, enamel hypoplasia, antemortem tooth loss, postmortem tooth loss, dental caries, periapical abscesses)
- Periodontal health (alveolar bone resorption, dental calculus, dehiscences and fenestrations of alveolar bone, furcation involvement)
- Orthodontic anomalies (tooth position anomalies, dental arch anomalies, occlusion anomalies)

CONCLUSION

Forensic dentists and paleodontologists have been quick to recognize that a multidisciplinary approach is essential if they are to interpret correctly unidentified skeletal human remains of recent or archaeological origin found in excavations.

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