



Race, Ancestry or Ethnicity? The Age-Old Problem in Forensic Anthropology

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Perspective

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In forensic anthropology, the biological profile of a deceased person is an essential step in identifying the victim. This statement is true in all cases and even more so when dealing with untraceable corpses where there is no suspicion of identity. Consequently, the diagnosis of species, sex, age and stature, as well as the evaluation of any bone and dental pathological features are crucial aspects [1]. Another essential element to be investigated is the geographic origin of the deceased. But should this last aspect perhaps be referred to by the term “race,” “ethnicity,” or “ancestry”? In forensic science, these terms are used so inconsistently that they are very often used interchangeably or ambiguously. The term “race” has always been the subject of intense debate at the international level from different perspectives and involving a variety of disciplines. Traditionally, four main races of people have been distinguished in the past: Caucasoid, Negroid, Mongoloid, and Australoid [2]. This distinction was based on the legacy of a bygone era and ascribed only a biological meaning to the word “race”. Indeed, in biological anthropology, the term “race” in humans usually refers to the notion that humanity can be divided into a discrete number of groups based on biological characteristics, usually corresponding to regions of the world. Confusion and resulting misuse have increased as some people have used over the years the term “race” only in its biological meaning, while others have used it as a socially constructed concept to identify groups of individuals [3].

Until a few decades ago, forensic anthropologists used race to identify discovered skeletal remains and simply did their work without thinking about race theory. Few anthropologists, regardless of discipline, had done

any scientific work on humans and human races, which should have included formulating and testing theories and hypotheses, and instead relied on confirmation bias in publications from earlier ages. Between the 1990s and 2000s, discussions began in 1992, when Lieberman et al. published the results of a survey showing that 50% of physical anthropologists accepted the concept of “race” and 42% rejected it [4]. This result initiated the major split in the discipline over “race”, where there was a clear division over what exactly “race” meant and whether or not it had anything to do with biology. The main argument for including race in the forensic report was presented as pragmatic: narrowing the field of possible individuals and creating a list of missing persons [5]. It was also claimed that this was a routine task for the forensic anthropologist and consisted of assigning a person to one of the “Big Three: Black, White, and Asiatic (including American Indian)” [6]. For the first time, however, it was recommended that the word “race,” which was defined as socially loaded, be replaced by the term “ancestry” so as not to confirm the unscientific premise of race. Indeed, in the meantime, it had become increasingly clear that understanding race in an exclusively biological sense was inappropriate. In fact, differences between races are not based on precisely identifiable biological traits, but rather differences in the expression (frequency) of a number of traits (gene expressions) are observed, but must be assessed quantitatively and consistently. In this respect, the trait list approach is very insidious, because confirmation bias has been a very present phenomenon in research in past years: if you expect to find something, you will. However, the term “ancestry” has caused some confusion, and Ousley S, et al. [7] in 2009 noted that despite the overlap in population

variation, there are a large number of biological races that can be classified by geographic origin (presumably ancestry) [7].

Moreover, tracing the history of populations is extremely complicated because many factors are involved, including environment, diet, and natural selection. Thus, ancestry is not simply the accumulation of neutral changes over time (which correspond exactly to geographic origins), but human variation can be shaped by multiple evolutionary forces in different places in the world. Thus, the term ancestry refers to a person's ethnic origin or lineage, to a person's "roots," or to the birthplace of his or her ancestors. It should be emphasized, therefore, that ancestry often does not necessarily correspond to a person's place of birth [3,8]. In this debate, the term "ethnicity" has never received much attention because it describes the culture of people in a particular geographic region, including their language, heritage, religion, and customs.

Much has been said and written on this subject, and what is presented here is but a glimpse into this intense debate that continues to this day. There continue to be differing and conflicting views on the subject, but some broad outlines of what has become the prevailing view in anthropology have been outlined over the years and repeated in recent decades by numerous authors and in the American Anthropological Association (AAA) Statement on Race [3]:

- Evolution, not race, explains human biological variation and race-as-biology is based on the false notion of fixed, ideal, and unchanging types;
- Human variation is continuous, allele frequencies or DNA variations tend to change gradually, and therefore there is no clear point at which one race begins and another ends;
- Human biological variation includes many traits that usually vary independently;
- Genetic variation within so-called races is much greater than variation between them;
- There is no way to classify people uniformly by race, and it is impossible to define racial groups in a stable and universal way, and if groups cannot be defined, no scientific generalizations can be made about them.

It follows that there is overwhelming evidence that race is not biological. Biological races such as Negroid and Caucasoid simply do not exist. There are no genetic traits that all Blacks possess but not non-Blacks; likewise, there is no gene or group of genes that is common to all Whites but not to non-Whites. Race is not determined by a single gene or group of genes. Nor are races characterized by significant differences in gene frequency, that is, in the frequency of occurrence of certain types of genes. These data refute the assumption that racial subdivisions reflect fundamental

genetic differences. Thus, the rejection of race in science is now almost complete.

Even in forensic anthropology and the forensic sciences, attempts have been made to bridge this divide by moving to the term "ancestry," which largely serves as a substitute for the term "race," and indeed the terms can (and are) used interchangeably. The pejorative terms associated with race (e.g., "Caucasoid," "Negroid," and "Mongoloid") have been abandoned and replaced by the continental terms "African," "Asian," and "European" associated with ancestry; yet these inappropriate terms continue to be used in the forensic anthropology literature [5]. However, it is becoming increasingly clear that the assessment of ancestry is the weakest assessment in forensic anthropology, with an indirect link to biology because it is inherently disconnected from an independent and objective assessment of human variation. Indeed, unlike some other parameters of the biological profile, it is not possible to determine whether an assessment of ancestry is strictly correct. On the other hand, it is equally incorrect to describe humans as a homogeneous species without biological variation. Overall, then, while the terminology has changed, the approach, the discussion, the methods, the implementation of the theory, and the discussion of evolution have not. Further thought and research will be necessary to dutifully address all of these aspects, but it must also be recognized that globalization will increasingly alter human population variation in the future. It would therefore seem most appropriate to continue along the path already taken of moving away from racial typology in favor of a more nuanced anthropological and biological approach.

References

1. Tambuzzi S, Maderna E, Steffenini D, Gentile G, Cattaneo C (2022) Can skin histology be a useful tool for ancestry assessment in forensic settings? Ancestry assessment based on melanin pigment. *Leg Med (Tokyo)* 57: 102058.
2. Meyers *Konversationslexikon* of 1885-1890
3. Ousley S, Jantz RL, Hefner JT (2017) From Blumenbach to Howells. The slow, painful emergence of theory through forensic race estimation. In: Boyd CC, Boyd DC (Eds.), *Forensic Anthropology: Theoretical Framework and Scientific Basis*. John Wiley & Sons Ltd, New York, USA, pp. 67-97.
4. Lieberman L, Hampton L, Liettlefield RE, Hallead G (1992) Race in biology and anthropology: A study of college texts and professors. *J Res Sci Teach* 29(3): 301-321.
5. Ross AH, Pilloud M (2021) The need to incorporate

human variation and evolutionary theory in forensic anthropology: A call for reform. *Am J Biol Anthropol* 176(4): 672-683.

6. Saur NJ (1992) Forensic anthropology and the concept of race: If races don't exist, why are forensic anthropologists so good at identifying them? *Soc Sci Med* 342(2): 107-111.
7. Ousley S, Jantz R, Freid D (2009) Understanding race

and human variation: Why forensic anthropologists are good at identifying race. *American Journal of Physical Anthropology* 139(1): 68-76.

8. Winburn AP, Hewitt BA (2021) Evaluating population affinity estimates in forensic anthropology: Insights from the forensic anthropology database for assessing methods accuracy (FADAMA). *J Forensic Sci* 66(4): 1210-1219.

