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Review of *Atlas of Human Cranial Macromorphoscopic Traits*

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Atlas of Human Cranial Macromorphoscopic Traits. Joseph T. Hefner and Kandus C. Linde, 2018. Academic Press, Cambridge. XXXI + 324 pp. \$150 hardcover or \$0 PDF on ResearchGate. 978-0-12-814385-8.

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Prior to beginning this book review, I would like to address some of my personal biases. I have been trained in biological anthropology during a time where less emphasis is being put on morphoscopic traits. In fact, many are starting to move away from race/ancestry/population affinity in its entirety, often to remove racial biases still obviously prevalent throughout the American criminal justice system. In 2020 and 2021, we have transitioned to a period some are referring to as the Post George Floyd Movement Era in regard to the ever-ongoing civil rights movement and criminal justice reform in the US and across the world. Over the last year and a half, there has been a renewed fervor to de-racialize biological anthropology and its subsets and review the effects of racial biases in both forensic anthropologists and the policing systems that they assist. This has been largely pushed by Elizabeth A. Digangi and Jonathan Bethard in their Letter to the Editor of the Journal of Forensic Sciences in June of 2020 and their article “Uncloaking a Lost Cause: Decolonizing ancestry estimation in the United States” in January of 2021. With all this being said, my personal biases are in direct competition with the concept of cranial macromorphoscopic traits and their use in ancestry estimation, which may influence my review of this text.

The *Atlas of Human Cranial Macromorphoscopic Traits* is a guide and standardization of macromorphoscopic traits and their correlations with biological ancestry. The authors, Dr. Joseph Hefner and Kandus Linde, attempt to provide a visual

guide to the variations and character states of each of the macromorphoscopic traits.

Dr. Joseph T. Hefner is a Board-Certified Forensic Anthropologist and Assistant Professor at Michigan State University. Kandus C. Linde is an Archaeologist with a private cultural resource management firm and works and lives full time at the “Skinwalker Ranch.”

The preface and the introduction to this text fully establish the goals of the text, specifically that this atlas should provide students with a comprehensive resource to learn about human variation in the skull. The authors go on to say that they do not want this book to be a replacement for a student/mentor relationship and hands-on work, but to help guide these; I fully agree. Students of all ages and capacities should be as hands-on as possible to encourage deeper understanding and appreciation of their work. Similar to the commonly used *The Human Bone Manual* (White & Folkens, 2005), an atlas of this kind could be used in a course or in the field to help with a more practical approach to understanding the listed traits.

Also in the introduction, the authors discuss the history of macromorphoscopic traits, in both their early history in the early 19th century and their more recent history in the late 20th and early 21st centuries. This section also seems to be a justification for writing this text; no one else had previously gone to this level to try to standardize macromorphoscopic traits. However, as much as the authors discuss the history of macromorphoscopic traits, they fail to provide much nuance. One of the authors’ main historical topics is Earnest Albert (E.A.) Hooton. He studied cranial macromorphoscopic traits to differentiate “micro- and pseudoraces of humans.” With this, the authors do not provide any discussion on race classifications nor the racist history of biological

anthropology. The authors also seem to praise Hooton for his “keen eye for skeletal variation” and his “pedagogic prowess,” but again fail to provide much nuance. As discussed in Rafter’s 2004 article (published in *Criminology* 14 years prior to the publishing of this atlas), Hooton was a known eugenicist of race, of anyone who exhibited physical (cranial) traits that he viewed as criminalistic, and anyone who was impoverished, disabled, or utilized social welfare systems. As anyone could imagine for the early to mid-twentieth century, these likely would have had racial prejudices, even if that is not what Hooton had intended. The lack of acknowledgement of these issues is likely a symptom of the systemic issues of physical anthropology. We too often praise whom we have always praised rather than looking back through a more critical lens and realizing that not everyone should be celebrated for their ideas.

Chapter two of the text provides a very brief description of each of the traits addressed in the following chapters. It also contains illustrations of the skull with each of the features labeled, which provides readers with an understanding of where each trait is in relation to the others. This chapter is organized first by view, then by chapter number, which is more conducive to learning with a skull in your hands. This may have been a better way to organize the entire text, rather than placing the traits in alphabetical order for the chapters. Chapters three to nineteen each cover a trait, with a format of a description of the trait, a list of the nomenclature related to the trait, a description of the gross anatomy surrounding the trait, the growth and development of the trait and surrounding bones, the functional morphology, the data collected, descriptions of the character states, and finally photographs organized by character state. This organization would be good for a student to get a baseline idea of the trait,

then be able to see how this trait is expressed. Personally, I would have placed the data collected after the pictures, which would allow readers to have a visual understanding of each of the character states before seeing how these states correlate with the data.

Throughout the chapters describing the different traits, the authors provide the data for that particular trait that they had collected and compiled into the Macromorphoscopic Databank. This is very useful for those wondering how the variations within the traits are represented in each ancestral category and variations by sex within those categories. While this data is very useful, the ancestral categories are not so. I believe it to be nearly common knowledge that the term Amerindian is not as widely accepted as Native American or Indigenous Americans (though some within the community still do prefer American Indian). In addition, the E-slur may seem all encompassing for Inuit and Yupik peoples (as well as other Northern North American indigenous groups) but is considered a slur by many in those communities. While I understand that this was possibly a result of how the remains were labeled upon study, the authors could have relabeled them for use in the database and in their text. I believe this to show a lack of contact with the peoples whose ancestral remains were used. Remains should be respected, and the use of a slur in the labelling of remains is blatantly disrespectful. From the perspective of an Inuk, Sonny (@ugrunna), “settlers have used it to oppress us and used it as an insult for decades” (2021). With this, the authors go beyond giving credit to early researchers, but also quote them, which leads to the use of other slurs, including the ne- word for black people (pgs. 13, 45, 89, 209). These quotes and discussions feel useless given that most of the research around them has been correct, revised, or dismissed. The authors could have simply stated, “these

are the previous researchers and they sorted people into racist categories based on the trait being discussed.” The authors could have even placed a statement that read something like, “prior researchers abused these traits and used racial slurs, some of which may appear in this book as examples,” and the quotations would have been more acceptable. Hefner and Linde made very poor choices in terms of creating a more inclusive environment and fighting against the racist past of the field.

Chapter twenty provides a brief description of the analytical methods that can be used in the estimation of ancestry within the context of combining the analysis of several macromorphoscopic traits. Especially in the context of forensic anthropology, the use of these analyses would greatly increase the confidence in the results and hold up more rigorously under the scrutiny of a court. The brief, yet succinct, descriptions provide readers with a solid introduction to each method and the tools needed to conduct those analyses. The inclusion of more chapters like this in other texts would be useful across many fields.

Chapter twenty-one acts just as the title of the chapter indicates: the authors concluding remarks. The authors do address that while they have many samples and photographs, they could not ever hope to provide the full context of human variation. With an estimated 107 billion people who are alive and have ever lived, this understanding is more important than ever. The authors also include that there is very little known about the connections between genetics and macromorphoscopic traits. I believe that this point should have been more heavily focused on throughout the text. While many traits may be correlated to different people groups, so little is known about the genetic origins of these traits, that correlation may not equal causation. The authors

did bring up a very interesting point in facial reconstruction. If we could find genetic markers that align with different facial features, we may be able to create more accurate facial reconstructions. However, we should still be cautious of this, as human variation exists along clines and genetic stereotyping can be dangerous for reinforcing racist ideologies. Again, the authors of the text discuss Hooton and his contributions to the study of macromorphoscopic traits with no mention of his despicable ideals.

If you ignore all the text and only focus on the pictures, the book is successful in its purpose: to provide a guide and standardization for macromorphoscopic traits. For most of the text, the pictures do provide a visual description of the human variation expected in each of the traits, which could be valuable if not in the context of ancestry estimation. I would not recommend this book to anyone, even if they are specifically interested in cranial macromorphoscopic traits. Despite being written in 2018, it seems to be surprisingly out of date, and the authors clearly did not consult anyone from the people groups to whom the skeletons belong to get their perspective of how the data should be labeled. Throughout the text, the authors also do not mention if the collections they gathered data from were ethical sourced. While it is important to have data from a variety of populations, the use of skeletal material without the consent of the deceased or their kin is becoming harder and harder to excuse, especially when publishing photographs of them. This text is far from the only popular text with ethical concerns (such as the aforementioned text by White and Folkens, 2005), but that does not contradict the concerns within this text. Overall, this text is below subpar and should not be used by anyone wanting to move past the problematic history of biological anthropology.

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