

11-10-2021

## Changing the Landscape of Identity in Forensic Anthropology

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### Recommended Citation

New, Briana T. and Algee-Hewitt, Bridget F.B., "Changing the Landscape of Identity in Forensic Anthropology" (2021). *Human Biology Open Access Pre-Prints*. 190.  
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## **Changing the Landscape of Identity in Forensic Anthropology**

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Short Title: Changing the Landscape of Identity in Forensic Anthropology

KEY WORDS: FORENSIC ANTHROPOLOGY, IDENTITY, CASEWORK, MULTIDISCIPLINARY.

The papers that now make up this special issue grew from a symposium titled “Expanding Boundaries: Embracing the Intersectionality of Forensic Anthropology to Account for the Changing Landscape of Identity in Current Casework.” They were intended to be presented at the 2020 meeting of the American Association of Physical Anthropologists (now the American Association of Biological Anthropologists). We are grateful that, despite the events that changed many of our personal and professional lives over the last few years, the symposium participants transformed their contributions into the rich body of research presented here.

This two-part special issue focuses on the expanded potential of forensic anthropological research as the discipline continues to develop multidisciplinary approaches for understanding identity, incorporating new sources of information and new methodologies, or leveraging preexisting approaches but in new ways. The research showcased here uses diverse data and forward-thinking applications (from historical, demographic, dental, skeletal, to genomic) in order to tackle the complexities of identity in forensic casework by engaging critically with parameters of the biological profile from many different perspectives but with shared concern for practical applications within the field.

Operating in the context of this theme, all of the contributing papers highlight the need for a renewed dialogue in the field. Kenyhercz, Konigsberg and colleagues, and Spake *et al.* problematize the straightforward adoption of prevailing methodologies through their presentation of advanced theory. In doing so, they demonstrate risks of methodological misuse and misidentification that results from uncritical acceptance of standard practice. Kenyhercz challenges the ancestry estimation methodology that has been employed by forensic anthropologists for decades by providing an exploratory methodology of unsupervised learning techniques that does not require *a priori* group selection or assumptions when comparing an

individual against different groups. In doing so, the author contests the norms of analysis, encouraging practitioners to broaden their perspectives on what it means to assess human variation at the level of the individual or group. Konigsberg *et al.*, in surfacing procedural fallacies, underscore the sobering reality of the real human consequences in poor methodology. Asking us to rethink our role as experts in the production and acceptance of forensic evidence, the authors analyze the consistency in development of the first and second mandibular molars for predicting minimum age thresholds. Thus, Konigsberg and colleagues demonstrate the bounds of juvenile age estimation within this context and assert that usage of biological markers for minimum age of criminal responsibility is not reliable. Spake *et al.* explore the potential of incorporating body mass estimation regression formulae for use on modern juvenile remains into the forensic toolkit. Their research emphasizes the contribution of population variation to body composition and argue that while body mass estimation methodology has potential, the consistent underestimation of weight may result in inaccurate exclusions during the investigative process. Therefore, the authors suggest continued exploration of the topic and a deep integration of broad anthropological methodologies that consider population specific contributors, such as socioeconomic status, to body composition, as well as incorporation of growth patterns.

New *et al.* bring to the fore data use strategies that provide access to nuances in United States southern Border death identities, problematizing what are often taken to be single, stable forensic populations by researchers who stand at a distance from the actual casework and evolving crisis. The authors demonstrate the investigative potential of genetic population data for persons whose communities of origin are unknown, arguing that mobilizing the breadth of genetic data available to forensic investigators in tandem with multiple modes of analysis provides an additional tool that help caseworkers refine their investigation. Their research views

genetic data under a biocultural lens of significance for forensic anthropology and shows how valuable population learnings can be surfaced from data that is already collected during forensic investigative process (CODIS STRs). Similarly, Afra *et al.* problematize any assumptions of straightforward relationships between genetic, skeletal, and soft tissue data, yet they also bring key insight to how we might leverage these findings in integrated approaches to the study of human variation and forensic identification. The authors integrate these data to bring clarity to their points of intersection. Their work underscores how, without better foundational knowledge of these relationships, we miss out on the potential advantages offered by approaching human identification as a co-dependent process between forensic genetics and forensic anthropology.

Finally, both Adams and Pilloud and Taylor *et al.* anchor this collection in the often-underserved social side of forensic anthropology. Adams and Pilloud demonstrates the technical reach of biological anthropology as we tackle questions of identity through survey methodology. The authors present the results of a survey on current attitudes, perspectives, and approaches to race and ancestry within biological anthropology. Through this research, the authors provide a variety of recommendations to address the different levels of discordances that their survey identified in teaching modes, research techniques, and public engagement strategies: from the language used and how our discussions are structured to the modernization of communication methodologies. Taylor *et al.* deliver case discussions, which, while learning tools themselves, drive home a bigger message that forensic casework should be first informed by the fundamentals of “doing” anthropology. In this light, they encourage readers to reevaluate how we reconcile discordant lines of evidence and to embrace the ways that the often-muddied waters of culture can bring unexpected clarity to our understanding of biology. Their research addresses the complexities and possible inconsistencies between different lines of biological, social, and

material evidence that must be addressed for identifications to move forward. Furthermore, the authors show how mobilizing social theory in casework and case building can assist with contextualizing or grounding fluid of social identities through time. This article advocates for a holistic biosocial anthropological approach to identity building, arguing that it is necessary for facilitating forensic identifications in not just the historic context discussed by the authors, but also in other humanitarian or disaster victim identification contexts.

As forensic anthropologists, who seek to meet the professional expectations of the medico-legal system and serve the wishes of the families and communities for whom our efforts are deeply personal, we are positioned at the junction of the methods and theories that inform biological anthropology and the unique identification demands of our casework. To better respond to needs of the field, the research presented in this special issue indicates that we must continue to develop a cross-disciplinary discourse that transgresses boundaries between many social and natural science subjects and their modes of analysis. By adopting an intersectional perspective in the identification of human remains, we believe that forensic anthropologists are well-equipped with the knowledge and resources necessary to perform transformative scientific and social justice work. More specifically, we argue that forensic anthropologists must act as a conduit for the practical application of the academic theories underlying the estimation of the parameters of identity that define the biological profile.

In all of these papers, runs a common thread. The contributing authors provide different but complementary frameworks for analysis, thinking, and self-reflection. Through these, we as biological anthropologists and forensic specialists, can continue to refine our research and improve the success of our casework by thinking critically, more holistically, and with an interest in advancement to a better consensus.

*Received 18 September 2021; accepted for publication 26 September 2021.*