Book Reviews

DENTAL MORPHOLOGY 1998: PROCEEDINGS OF THE 11TH INTERNATIONAL SYMPOSIUM ON DENTAL MORPHOLOGY. Edited by John T. Mayhall and Tuomo Heikkinen. Oulu, Finland: Oulu University Press. 1999. 492 pp. ISBN 951-42-5481-3. $100.00 (paper).

As the title indicates, this volume presents a compilation of papers given at the recent International Symposium on Dental Morphology in Oulu, Finland. It contains a forward by L. Alvesalo, an introduction by Mayhall and Heikkinen, a short history of the Symposia series by Mayhall, and 54 articles. As detailed by the editors, the first symposium was organized by Dahlberg, Pedersen, and Alexandersen in 1965. Its purpose was to bring together a myriad of international researchers from a variety of fields to discuss all things dental. The meeting was a success, and a symposium has been organized every 3 years since. The present volume shows that the broad, international flavor of the original symposium continues. One hundred eighteen authors from 18 countries, representing the fields of anatomy, archaeology, biological anthropology, dentistry, genetics, histology, oral biology, paleontology, and zoology (among others), address everything from fossil hippopotamus teeth to three-dimensional computer imaging.

The first of six sections, entitled "Dental Anthropology," contains 23 short articles. Due to space limitations it is impossible to list titles, let alone provide article summaries. Instead, I will cite the authors, and highlight some of the more notable contributions. The authors are Butler, Lesot et al., Mayhall, Antoine et al., Haeussler, Swindler et al., Moskona et al., Reid and van Reenen, Fitzgerald et al., Hillson et al., Rinaldi, Watt and Lunt, Brook, Loevy and Goldberg, Peretz et al., Kleber and Eipel, Kondo et al., Nagai and Kanazawa, Sasaki and Kanazawa, Billia and Graovac, Smith et al., van Reenen et al., and Liversidge. Topics include dental formation, growth and development, affinity assessment using morphology and size, developmental defects, aging techniques, and field concept(s). Most articles appropriately pertain to human subjects, both early and recent. However, seemingly misplaced in a section on dental anthropology are studies of the mouse, fossil marmots, and a Pleistocene rhinoceros. Several articles are excellent; I found those on human premolar reduction, root trunk variation, enamel defects, Aborigine molar size, and premolar morphology of particular interest. Other articles are praiseworthy as well, although a few are hampered by small samples, atypical/nonstandardized traits, and curious quantitative analyses.

The second section, "Dental Evolution," contains 11 articles. The authors are Gantt et al., Niskanen, Haydenblit et al., Mazza, Popowics, Turnbull and Cifelli, Kozawa et al., Rustioni, Sasagawa and Ishiyama, Suzuki et al., and Mazza and Rustioni. Three articles pertain to humans; topics include tooth and facial size reduction, evolution of enamel growth, and tooth fracture. The latter article, which describes cusp compression and stress in modern samples, is good but out of place in a section on evolution. The remaining articles use both diachronic and synchronic approaches to investigate dental features in extinct and extant animals, including monkeys, hippopotamuses, triconodonts, reptiles, primitive mammals, Pleistocene steppe asses, teleosts, and fossil deer. Subjects range from histological considerations to morphology. The research and presentation quality in all articles is consistently good. Biological anthropologists may be particularly drawn to the study on origins of the anatomically modern human face.

"Ontogeny" is the title of the third section; it comprises seven papers written by Risnes, Schwartz et al., Harris et al., Honda and Kozawa, Mishima et al., Mukaida and Kozawa, and Renz et al. Two articles concern humans. One engaging study examines the effectiveness of using enamel thickness variation as a sexual dimorphism and ethnic indicator in white and black children. The other involves an SEM analysis of cementum annulations. The remaining five articles pertain to micro- and macroscopic dental features in rats, chimpanzees, opossums, crocodiles, and seals. Some *AJPA* readers may find the chimpanzee study on dental aging useful. The quality of all seven articles is again consistent, though small sample size is a problem in one ($n = 2$), and most describe work that may be tangential to anthropological research.

The fourth section is entitled "Technology." Four articles, by Brook et al., Smith et al., Willmot et al., and Pirttiniemi et al. discuss computer imaging to measure teeth, CT scans in detecting hominid developmental rates, imaging of enamel opacities in a clinical setting, and three-dimensional recording of occlusal morphology. As a dental anthropologist interested in tooth size and shape, I am particularly taken with the first and last articles. These approaches provide levels of accuracy that old-fashioned recording by eye/hand cannot match. However, the equipment cost, difficulty of transporting it to the field or museum, and other factors (e.g., the last method requires exclusive use of casts) may make these approaches impractical to most researchers. Regardless, the articles are well-written, and provide much to think about.

The fifth section is saddled with the unwieldy title of "Morphological Integration Within the Dental and

Craniofacial Complex." It consists of seven articles, by Osborne et al., Kohn and Osborne, Kohn et al., Nilsson et al., Radlanski et al., Klinge, and Hillmann and Geurtsen. Only the first three papers fit this section; they compare and contrast craniofacial and dental variation in Caucasian twins and Australian Aborigines. The remaining articles represent a mixed bag of topics, including correlations between spinal position/posture and occlusion, three-dimensional animation of craniofacial growth and development, dentin structure in the hooded seal, and collagen types in human pulp. All would be better served in other sections (e.g., the three-dimensional article in "Technology"). All articles are well-written; however, a biological anthropologist might find the craniofacial articles most relevant.

Finally, the sixth section, "Dental Genetics," contains two papers by Townsend et al. and Heikkinen et al. The first explores tooth size and the incidence of Carabelli's trait, using twin studies. The second looks at the effect of sex and ethnicity on eruption timing and symmetry in American whites and blacks. Both are informative articles that might be of interest to *AJPA* readers (e.g., geneticists, dental anthropologists).

Overall, the 118 contributors should be congratulated for producing, in large part, such well-written and researched papers. The 54 articles are often profusely illustrated (many are in color), and most include numerous references that greatly enhance their research utility. I found several articles to be very informative, and relevant to my own research. The editors did an admirable job of assembling such a disparate collection of manuscripts. Regarding the quality of the book, page layouts are good, misspellings are present but few, and the grammar throughout is mostly uneventful. The inclusion of a volume index helps tie the many diverse articles together, and will prove useful as a reference aid.

However, there are a few problems that detract from the volume. First, some articles have enough flaws that they would be hard-pressed to be accepted in most peer-reviewed journals. Such a situation is often an unavoidable artifact of edited works. Second, the volume's organization is somewhat distracting. As noted, several articles are present in unrelated or incompatible sections, and a number of those covering nonhuman teeth may have been better served in sections on paleontology or zoology. Third, the quality of printing (including illustrations) has the look of a manuscript produced on a color ink jet printer that, considering the price, is disappointing. Finally, typical symposium volumes contain contributions that share a unifying theme. Most of the present articles began as contributed papers whose only common thread involves teeth. This fact probably made the editors' job difficult indeed. Thus, the very feature regarded as an asset of the International Symposium on Dental Morphology, i.e., diversity, may limit the volume's appeal. For example, an anatomist may find a few articles useful, a dental anthropologist might read a dozen, and a dentist may be drawn to several. However, it would require an exceptional researcher to benefit from a more comprehensive use of the book. Despite these concerns, the quality and reference utility of many individual articles help make *Dental Morphology 1998,* as a whole, a decent contribution to the ever-expanding literature on dental research.

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TABOO: WHY BLACK ATHLETES DOMINATE SPORTS AND WHY WE'RE AFRAID TO TALK ABOUT IT. By Jon Entine. New York: Public Affairs. 2000. 400 pp. ISBN: 1-891620-39-8. $25.00 (cloth).

This is an important book for biological anthropologists. It is a sports book, written by a journalist and former television producer, which treats issues that have plagued our discipline for more than a century. *Taboo* tackles three themes: 1) the history of racism in amateur and professional sports, 2) the genetic basis of "race," biological variability, and human performance in sport, and 3) a critique of "The Environmentalist Case Against Innate Black Superiority in Sports" (the title of Chapter 20).

On balance, I recommend this book for use in biological anthropology classes and for students of Sciences of Sport in general—ranging from introductory survey courses to graduate level seminars on human genetics, human adaptability, and theory in human biology. The clarity, thoroughness, and humor that characterize Entine's history of racism in sports will captivate students and their professors. That part of the book, 129 out of 338 pages of text, covers "The Origins of Race Science" (Chapter 9) to "Sports and IQ" (Chapter 18). The whole of this section of the book presents a cogent argument for the social selection of top athletes in sports.

I was particularly taken with the chapter, "The 'Scheming Flashy Trickiness' of Jews." This chapter covers the history of Jewish domination of basketball. Entine writes, "From 1918 to 1950, the South Philadelphia Hebrew Association, better known as the SPHAs, barnstormed across the East and Midwest, playing in a variety of semiprofessional leagues that were precursors to the modern game." Basketball was, and still is, an urban game, and a way out of the ghetto. For the Jewish superstars of the SPHAs, and many other teams, basketball was freedom from ethnic prejudice, including quotas in

education and employment. Jewish boys became basketball stars the same way all sports heroes excel: practice, practice, practice. These basketball "mavens" were idolized by the Jewish community. My mother has two cousins who were part of the Jewish basketball mythology of Philadelphia in the 1940s. For many years, their mother, my beloved Aunt Sarah, kept 8 × 10-inch photographs of each of them, in uniform and dribbling down court, on a table in the entryway to her house. The title of this chapter in Entine's book comes from the 1930s statement by sports writer Paul Gallico that Jews excel in basketball because of "an alert, scheming mind, flashy trickiness, artful dodging and general smart aleckness." This opinion was popular throughout the period, as my mother's cousins were informed by an anti-Semitic spectator that Jews were good in basketball because they were "short and wiry" and could get under the taller gentile players to make shots.

Today African-Americans dominate basketball. To explain this fact, need we go any further than the social selection hypothesis that explains Jewish domination until 1950? That question leads to Entine's second theme. Entine tries to show that the domination of basketball, American football, both short and long distance running, and several other sports by African-Americans and other people with some African roots is due to a combination of a genetic advantage coupled with social selection. Entine also points out that athletes of Asian and European origin dominate in other sports. Europeans, for example, dominate sports that emphasize upper body strength, and they do so because of an innate genetic advantage coupled with social selection and training.

Few biological anthropologists will argue that human phenotypes and human performance are the result of some combination of genes and environment. My discomfort with Entine's presentation is that he applies the gene-environment interaction unevenly. Entine never ascribes a genetic advantage to the Jewish, or to the Irish, sports stars that he writes about (including baseball and boxing in addition to basketball). But he does explain the superiority of African-derived sports stars in basketball, American football, and running in genetic terms. Moreover, he says that the genetic advantage of black elite athletes is a population characteristic, rather than just the genetic good luck of the individual athletes.

Entine starts doing so on page 4, when he rejects a social explanation for black superiority in sports by stating, "The decisive variable is in our genes—the inherent differences between populations shaped over many thousands of years by evolution." This statement implies that human populations can be segregated into biologically distinct groups, i.e., "races." Entine states, on page 113, that the "race" concept is fuzzy at best because "human populations are continually subdividing, expanding, declining, and disappearing along genetic and cultural tracks." But the very next sentence reads, "Although there is considerable disagreement, the three major racial groupings—Caucasian, Mongoloid, Negroid—split from 100,000 years ago to as recently as the beginning of the last ice age, some 14,000 years ago."

Yes, there is "considerable disagreement" with everything that sentence states and implies (Entine tells me that the date of the last ice age is a typographical error and will be fixed in the paperback edition). Quite a few biological anthropologists have written at length to discredit the idea of three, or five, or any number of major racial groupings. More to the point of *Taboo,* there is a fundamental difference between the distribution of genes in populations and individuals. Entine cites some of our colleagues on this point, e.g., Robert Malina is quoted: "Elite athletes are by definition rarities; they are statistical aberrations" (p. 271). Entine seems reluctant to accept that elite athletes are not representative of the biological or social populations they come from, for he states on the same page that "all the hard work in the world will go for naught if the roulette wheel of genetics doesn't land on your number. And the unassailable truth is that the genetic pool of potential champions is a lot wider and deeper in Africa than anywhere else."

The following chapter is titled "The Environmentalist Case Against Innate Black Superiority in Sports." In this chapter, Entine states several times that a proper environment is necessary to make a sports star. However, he always places the importance of environment second after the primacy of innate (meaning genetic) advantages. In a brief 2-page section, Entine tries to support the genetic argument with comparisons to dog breeding. This is an unfortunate section, for Entine writes, "Like in humans, some dog's diseases are 'breed specific' " (p. 280). The section concludes, "Although any one athlete may bootstrap himself to stardom, the pattern of athletic success is circumscribed by the biology of human evolution" (p. 281).

I also find that a kind of ambivalence pervades the whole of the book with regards to the role of genes in sports performance. This is made most clear in the first and last chapters. The last two sentences of Chapter 1 read, "After all, in the end, for all our differences, we are far, far more similar. That's *Taboo's* only real message" (p. 10). The last sentence of the final chapter reads, "It's time to acknowledge and even celebrate the obvious: It's neither racist nor a myth to say that 'white men can't jump' " (p. 341). It is hard to imagine that Entine wrote both lines as a characterization of the same book.

The third theme of *Taboo* is a critique of those people Entine calls "environmental determinists." In addition to several people writing today, Entine critiques the work of Franz Boas, Margaret Mead, and Ashley Montague. They are chastised for embracing "the nurture argument with the zeal of fundamentalists" (p. 215). Entine describes accurately the historical and

scientific environment of racism and genetic determinism that Boas and his followers were fighting against. Unfortunately, Entine does not present a balanced case in favor of the biocultural theory that motivated Boas, Mead, and Montague, and still motivates many others. I have written, "The newer, expanded biocultural view of the last decade is that there is a recurring interaction between the biology of human development and the sociocultural environment. Not only does the latter influence the former, but human developmental biology modifies social and cultural processes as well. It is now understood that environmental forces, including the social, economic, and political environment, regulate the expression of DNA as much, or more so, than DNA regulates the growth process" (Bogin, 1999, p. 397). My chapter goes on to describe several examples of environmental regulation of DNA expression.

In a way, Entine's book *Taboo* may help to further develop and spread knowledge of the new, expanded biocultural view of human biology and performance. The book will engender debate (perhaps an understatement), and it will force readers to think more clearly about the usefulness of the "race" concept, about racism, and about the nature of both science and sport as social and cultural processes.

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The Gullah People and Their African Heritage. By William S. Pollitzer. Athens, GA: University of Georgia Press. 1999. 298 pp. ISBN 0-8203-2054-4. $40.00 (cloth).

After more than 40 years of research into the biology and history of the Gullah people of the South Carolina and Georgia Sea Islands, William Pollitzer has published an ambitious book that describes and evaluates the many lines of evidence illustrating the African heritage of the Gullah culture, language, and people. Although the book is based on academic research, the author adds that it is also a personal account of his lifelong search to better understand the process of creolization that resulted in the most African culture to survive in North America. The introduction summarizes his goals:

> "My study fills important gaps in history, confirms and expands the thesis proposed by Melville Herskovits over half a century ago of the rich African heritage of American blacks, illustrates the way it is expressed, delineates when and how African traits came to the coast of Carolina and Georgia, and explains how they evolved. It points out the crisis facing the Gullah people today, recounts some of the reasons for their pride in their culture, and promotes respect for them. In addition, it increases knowledge of the biological basis and history of some diseases more common in African Americans and thus contributes to their health" (pp. xix–xx).

This is the most comprehensive summary and consideration of Gullah research to date, using ethnographic, linguistic, archeological, and biological accounts of African traits that have survived in the Sea Islands and, to a lesser extent, in other African American populations. Few scholars could have managed such a broad analysis. Pollitzer's commitment to holistic anthropology has made him an authority on numerous aspects of the Gullah experience, resulting in an engrossing book that is attractive to both the academic and general audience.

The book is divided into five major parts, beginning with an introduction to the unique people and culture known as "Gullah." In this initial section ("Part 1: Who They Are"), Pollitzer convincingly argues that Gullah populations have experienced little admixture with Europeans, rendering them the most biologically African of all African Americans. This physical heritage is explained in the next section, a detailed history of the Atlantic slave trade to South Carolina and Georgia ("Part 2: Where They Came From"). Part 3, entitled "What They Have Been," describes the experiences of enslaved Africans and their descendants in South Carolina, including chapters on African contributions to agriculture and the plantation era economy. Material culture and intellectual characters forged by African/European creolization are considered in Part 4 ("What They Created"), covering religion, social organization, magic, music, and basketry. "What They Have Become," the final section, provides a thoughtful discussion of the modern consequences of cultural creolization and biological admixture, introducing the difficult issues facing Gullah communities today, from cultural and economic survival to their disproportionate disease burden. His final analysis argues that, at its height through the early twentieth century, Gullah was as African as the Creole cultures of the Caribbean and Brazil, deserving of a higher score on Herskovits' Scale of Intensity of Africanisms than Herskovits himself assigned (Herskovits, 1952).

The text is clearly written and flavored with Polltizer's dry wit and appreciation of irony, including a section on sickle-cell disease entitled "That Sick as Hell Anemia" and a chapter on the Atlantic slave trade he calls "The In-Human Trade." His respect for the Gullah people and their culture is evidenced by the sensitivity with which he approaches the material and the tone of his language. The book does

not promote any theory of specific African origins of the Gullah culture, but rather focuses on the processes of creolization and admixture among enslaved Africans brought to the Lowcountry.

Chapter 6, entitled "Parasites, Disease, and Hardships," deserves special mention as a contribution that researchers in nonbiological fields might not expect to find in a volume of this nature. As a human biologist, Pollitzer rightly argues that the natural environment and differences in disease susceptibility between Europeans and Africans shaped the current population(s) because they determined who lived and who died. He reminds us of the colonial worldview, in which the causes of disease remained unknown and typological categorization of human populations was the norm. The natural histories and courses of many historically important diseases are described in fascinating detail, as is each malady's history in the Lowcountry. In addition to the anthropological audience, physicians and medical students would likely be interested in this description of historic scourges and views of disease.

Pollitzer draws upon studies from the colonial, antebellum, and Reconstruction years, the WPA's Depression-era Georgia Writer's Project, the explosion of research spawned by the Civil Rights movement and growing pride in African American culture and history, and almost five decades of his own research. The clear text, endnotes, and extensive bibliography indicate the chronological context of cultural traits, and where possible, Pollitzer indicates if a behavior remains a viable part of Sea Island culture. Readers should be aware that determining the fate of cultural behaviors can be difficult, even for contemporary scholars working in the Lowcountry and Sea Islands. With the continuing privatization of Gullah culture, one may be unable to determine if a cultural behavior or belief has become extinct, has been significantly modified, or is simply not shared with persons outside the community.

With a self-proclaimed "compulsion for counting and a passion for percentages," Pollitzer includes 28 tables and discusses slave importation estimates and other such numbers throughout the text. He does not indulge in complex statistics, but rather uses summary data and simple tabulations to assess historical trends and patterns. This makes the text friendly to lay persons and undergraduates, and may be a pleasant change for advanced scholars. Although lumped together at the end of the text, the extensive endnotes provide helpful commentary and citations of interest to the scholarly audience without distracting nonscholars. A central set of plates includes 23 black and white photos illustrating similarities between the material culture of Gullah and African societies described throughout the text.

David Moltke-Hansen's foreword underscores the importance of Pollitzer's contribution, the broadest attempt to synthesize more than a century of scholarship in a book that "opens a hundred doors that have opened before, but never together" (p. xv). Those new to the unique culture of the Lowcountry and Sea Islands will come to appreciate the dynamic process that allowed enslaved Africans to retain elements of their culture and adapt to the hardships forced upon them. Those familiar with Gullah studies will appreciate Pollitzer's organized synthesis and insightful analysis of this formidable body of information. *The Gullah People and Their African Heritage* is sure to become the definitive reference on the history and origin of the Gullah people and their culture.

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