Human Biologists in the Archives

Many physical anthropologists study populations using data that come primarily from the historical record. For this volume's authors, the classic anthropological 'field' is not the glamour of an exotic locale, but the sometimes tedium of the dusty back rooms of libraries, archives and museum collections. This book tells of the way in which archival data inform anthropological questions about human biology and health. The authors present a diverse array of human biological evidence from a variety of sources including the archeological record, medical collections, church records, contemporary health and growth data and genetic information from the descendants of historical populations. The chapters demonstrate how the analysis of historical documents expands the horizons of research in human biology, extends the longitudinal analysis of microevolutionary and social processes into the present and enhances our understanding of the human condition.

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Demography, Health, Nutrition and Genetics in Historical Populations

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Foreword

History embodies knowledge, tradition, and identity, which are at the core of the human condition. Anthropology has access to a vital record of history represented by the past study of cultures that no longer endure, of languages now extinct, of earlier conditions of health and human biology, and, in general, of the material and written evidence of patterns of existence from the near and distant past. That record is as essential to our understanding of humankind as is the ongoing data collection of the discipline today.

The historical records that incorporate anthropological knowledge consist of many things beyond the finished products that appear in publications: the raw data of research projects; the process of analysis and interpretation that led to published conclusions, contained in notes and worksheets and written drafts; the personal papers of the anthropologists themselves, which give context to the research and document the biographical and social realities of the researchers' lives; and the vast array of materials created by others and for other purposes that anthropologists discover they can mine for use in their own work. What all these things have in common is that they are 'records' only by virtue of the fact that someone has saved them and deposited them in archives.

Individual researchers in all the subfields of anthropology have long made use of such records, but until recently the discipline as a whole has had a certain ambivalence toward them. In cultural anthropology, fieldwork with living populations was always accorded greater value than archival research. Moreover, the unpublished papers produced by anthropologists in the course of their professional lives, including field notes, were considered by many to be of little significance and often discarded, on the mistaken assumption that everything important would have been published. An added complication was fieldworkers' sensitivity about their notes, whether because of unease over the prospect of someone else examining their methods and data or because of ethical concerns, warranted or not.

Other subfields have also undervalued unpublished records, for a variety of reasons. Linguistic anthropology has struggled against time to describe and analyze the large number of the world's rapidly disappearing languages, and there have been minimal resources available for preservation of the paper slips and sound recordings that represent the original data. In archeology, the pressure

has long been toward excavating ever more sites and the reward system has favored new data, while unanalyzed collections and the paper records that support them have accumulated and often lain neglected. Where collections have been deposited in museums, priority is given to the care of artifacts (especially the more dramatic ones), whereas the documents that describe their collection and accession – without which the artifacts make no sense – are considered expendable. In biological anthropology there is a wealth of data just begging for new analysis and for comparative studies; on a positive note, some early twentieth century anthropometric databases have been computerized, and researchers have been increasingly inclined to seek information from archival and historical sources.

About ten years ago, a small group of anthropologists began some conversations to see how the historical records of the discipline could be more fully valued and better conserved. With the support of the Wenner-Gren Foundation for Anthropological Research, these conversations grew into a series of conferences and workshops, attended by an ever expanding network of anthropologists from all the subfields, along with archivists and librarians responsible for anthropological records. Recognizing the need for an institutional structure that would keep their efforts alive over time, these concerned scholars and practitioners created the Council for the Preservation of Anthropological Records (CoPAR).

The purpose of CoPAR is to identify, encourage the preservation of, and foster the use of the records of anthropological research. Its activities span four areas: (1) awareness of and education about preservation needs; (2) records location and access, including the development of a comprehensive database identifying significant materials in repositories; (3) consulting and technical assistance to individuals and organizations on preservation issues; and (4) advocacy for existing anthropological-archival facilities. CoPAR is also dedicated to encouraging appropriate use of the archived records by researchers, students, members of the communities in which the records originated, and other interested groups. (The background and initial efforts of CoPAR are described in Silverman and Parezo (1995); see also the CoPAR web page[1] at: http://copar.asu.edu/.)

Much progress has already been made in raising the consciousness of those who produce or hold records about the importance of archival preservation; in devising strategies and providing guidelines to assist with preservation; and in

[1] The publisher has used its best endeavors to ensure that the URLs for external websites referred to in this book are correct and active at the time of going to press. However, the publisher has no responsibility for the websites and can make no guarantee that a site will remain live or that the content is or will remain appropriate.

developing tools for more effective utilization of records. For example, concerted efforts to survey biological anthropologists about the disposition of their papers not only yielded the beginnings of a compilation of locations but also succeeded in saving valuable biographical material from imminent destruction. An extensive computer file of archival locations of the papers of anthropologists in all fields is now available through the National Anthropological Archives web page (http://www.nmnh.si.edu/naa/).

Once records are deposited in archives, they serve two major functions. First, as primary data, they can be returned to again and again to clarify, critically evaluate, or reinterpret the research for which they were gathered; to elucidate the development of approaches to a topic; and, especially, to answer new questions. When they refer to peoples or cultures no longer extant, they may be our only link to those parts of the record of human activity and human diversity. Data records are therefore more than merely of historical interest; they will remain current as long as the anthropological enterprise continues. Second, these records contain the intellectual and social history of anthropology in its own right and as part of the history of science. It is only through the documents of anthropologists' lives and those of anthropological institutions and organizations that we can come to understand the processes through which our discipline, its work and its ideas, unfolded and the directions in which it is moving.

Human Biologists in the Archives is directed at the first of these functions: the use of records as primary data to solve scientific problems, including those that may not have been conceptualized at the time of the original data collection. It explores the rich sources of archival records from the past, compiled by anthropologists and non-anthropologists alike, that can be applied to new problems or to old questions rephrased in new ways. It finds pay dirt in sources ranging from church registers of vital events to government documents on emigration, from measures of the health status of schoolchildren to accounts of the devastating effects of epidemics and famine. The collection suggests that research based on archival materials might signal a newly emerging area of biological anthropology, *human biohistory*: the historical reconstruction of the human biology of past populations.

Skeletal biologists have been studying human history and prehistory and attempting to reconstruct the health and biology of human populations from skeletal remains for nearly a century. For example, paleodemography investigates past age/sex population distributions, mortality, and fertility; paleopathology considers diseases that are apparent from skeletal features; paleonutrition deals with the combined evidence from archeology and skeletal biology to reconstruct dietary status and health; and paleoepidemiology is likely to incorporate both skeletal and archeological evidence and historical and archival sources.

Burial grounds, cemeteries, battlefields, and other sites where skeletal populations may be found provide evidence for human biohistorical reconstruction and problem solving. Skeletal biologists have always drawn on historical documents, when available, to support their interpretations of hard-tissue evidence. However, the traditional means of reconstructing human health and biology from skeletal remains is now being augmented by a variety of new and renewed approaches that allow for a broader historical understanding of human population biology. It is worth considering briefly some of these studies, the sources of data they have used and the innovative approaches they have applied in their analyses.

Demographic data are abundant in the archival record, but compiling them for research purposes is often a tedious and time-consuming activity. In Mexico and Peru, parish records of births, deaths, and marriages may date back to the late sixteenth or early seventeenth centuries; in Europe records may go back much further. Other demographic data may be found in government censuses, actuarial data, military records, and government health records. Most of us are familiar with the migration study conducted during the early twentieth century by Franz Boas (1911), in which a demographic pattern (migration) was used to demonstrate a biological phenomenon (plasticity). Fewer may be aware of the fact that these data were published and are available for reanalysis (Boas 1928). Archival demographic data are most valuable when they are applied to interesting problems, including evolutionary problems. Differential fertility and mortality are the primary means of selection; out-migration is a response to deteriorating environmental, social, economic, and/or health conditions; genetic drift is a function of population size; and gene flow is tied to social and ethnic boundaries, mating practices, physical migration, and a host of other variables that have evolutionary implications. Basic data on such processes are often found in previously unexplored archives.

Historical information on child growth and maturation can be discovered in unusual places. It has for many years been recognized that the size of children is greater and maturation earlier in present times than in the past. This is known as the *secular trend* in growth (Tanner 1962: 143–55); it has been attributed to a number of factors, but principally it can be ascribed to improved health and nutritional status. Historical data from the past two centuries have been used to document these trends. Now, we are beginning to draw on archival records to provide the fine resolution in growth variation, variation most often linked to socioeconomic differentials. Increasing evidence is bringing to light cyclical patterns of growth and maturation linked to economic cycles, warfare, ethnic persecution, modernization, and social reform.

One study using archival records may serve as an example of just what can be done with imagination and good research design. Although there is

abundant evidence that girls reach menarche earlier today than in the past, puberty indicators in boys are more difficult to document. Voice changing or 'breaking' is one indicator of maturation in boys, and where better to find this documented than in baroque boys' choirs of the eighteenth century? Daw (1970) used voice breaking or *cambiata* (transfer from treble to lower voice status) in boys who were members of J. S. Bach's Leipzig Thomasschule choir from 1727 to 1749 as an inferred measure of the transition through puberty. He found that the estimated age of maturation of these boys was in the late teens, compared with the early teens among contemporary boy choristers.

Health and epidemiological data can be found in numerous sources, including colonial archives (such as the Kenya Archives), public health records, military chronicles, and parish records of mortality. Reconstruction of catastrophic epidemics is not only a challenging intellectual venture in population history; these historical examples may also provide important lessons about social, environmental, and health patterns of epidemic disease transmission. A case in point is the awakened interest in the worldwide influenza epidemic that struck at the end of World War I. Hundreds of thousands of Americans died during the latter months of 1918, and few families remained untouched by this major pandemic. Again, a finer-grained resolution of those infected with the 1918 flu strain by socioeconomic level, ethnicity, and residence should be possible through careful work with archival sources. There are many problems of this nature that can only be solved with anthropological and human biological expertise.

The most challenging archival explorations are likely to be those that require integrated approaches in human biology. Archival demographic data can be used in studies of health, disease, growth, evolution, and social change, and to reconstruct longitudinal trends. Each problem will call for a variety of sources of historical evidence. Even individual biographical evidence can be drawn on to provide biobehavioral information about the past. Hints about marriage practices in the past, such as degrees of consanguinity permitted, can be found in biographical and historical documents; for instance, the prevalence of first-cousin marriages may be detected, as in the case of Charles Darwin and Emma Wedgwood. Another example of archival records being used to approach problems of contemporary interest is the study of Floud and colleagues (1990) of heights of boys in United Kingdom military schools between 1750 and 1980. They found remarkable variations in height, reflecting economic and health conditions at specific times. Finally, an interesting integrated problem might be approached with Peace Corps records, good evidence that has never been explored. These records include heights and weights of tens of thousands of volunteers over more than three decades of international (and often rigorous) experiences. A question that could be asked is: why do young men

lose body weight and young women gain body weight during their Peace Corps years? Among the variables that might be germane are level of maturation, body composition, health status, stress response, Peace Corps duties, and physical activity.

Human Biologists in the Archives is an important first step toward demonstrating the value of archival records for the exploration of contemporary problems in biological anthropology. Anthropologists have skills for understanding social behavior, population processes, evolution, development, and genetics through the integration of perspectives on human biology and on human society and culture. Abundant sources of archival data are available that can be exploited for such integrated analysis. This kind of research will surely grow as new records are discovered and as more anthropologists recognize their importance.

Sydel Silverman and Michael A. Little

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