The Identified Osteological Collections of South America and Their Ethical Dimensions

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Abstract: Recent years have brought an important increase in the interest in identified human osteological collections in South America. Their number has been systematically growing and their sizes have been expanding, allowing the development of the field of forensic anthropology, among other disciplines, in this region. These collections are used mainly for the validation of international forensic anthropology methods for national and local populations, as well as for the training of professionals and researchers. Despite their growth, important limitation related to the lack of variability in the representativeness of individuals within these collections represents a significant drawback. Likewise, their concentration in only a few countries constitutes a noteworthy concern. This article aims at mapping the existing identified human osteological collections in South America, discussing the advances in the area of forensic anthropology that they have allowed, and reflecting upon their ethical dimensions in the South American context.

Keywords: identified human osteological collections; ethics; South America

1. Introduction

The development of identified human osteological collections is inextricably linked to studies of human osteological variation and comparative anatomy within the field of biological anthropology [1]. Currently, identified human osteological collections also constitute the basic source for forensic anthropology research, enhancing their importance in the field of biological anthropology. They represent a fundamental source for the validation of existing and the development of new methodologies and procedures for the estimation of a biological profile of an unknown individual. These collections are also used for the training of professionals and researchers.

In various regions of the world forensic anthropologists, in their daily practice, apply methods developed on the reference collections, mainly the Hamman-Todd, Terry or the Coimbra Identified Skeletal Collection. While, in many cases, the outcomes are satisfactory, it is well documented and recognized that factors, such as biological affinity, nutritional status, physical activity patterns, or socioeconomic status, among other factors, highly influence skeletal manifestations of age, sex, or stature and are specific for each regional population [2–12]. In consequence, a growing tendency in the development of more local, regional collections can be observed with the aim of adapting existing methods for regional populations [13].

The substance of identified osteological collections are human remains. This fact itself constitutes the main concern regarding their ethical aspects. The treatment of human remains, their storage, management, and later use involves the ethical debate regarding the dignity and the rights of the dead. De Tienda Palop and Currás [14] provide an interesting reflection on the philosophical aspects of the treatment of human remains, the meaning of death, and the rights of the deceased. The authors indicate that the academic community...
did not yet establish any consensus regarding the treatment of human remains, and the approaches vary according to the regional, temporal, cultural, or religious context of a given situation.

The main ethical issues related to identified human osteological collections include, among others, their development and management, the creation of taphonomy facilities, destructive sampling, education and training, research and publications, or the trade of human remains [15–17]. These matters have been raised and already extensively debated, yet they do not constitute all of the ethical problems that can be discussed on this topic.

In the present article, we focus on the human identified osteological collections existing in South America. We provide a brief background of each of them, as well as their importance in the field of forensic anthropology, but we concentrate our reflection on their ethical dimensions in the South American context.

For this reason, it becomes relevant to acknowledge the existing differences in the pace of the development of forensic anthropology in South America in relation to the countries belonging to the so-called Global North [18]. The historical circumstances, together with political conjuncture and socioeconomic problems affecting the countries in South America, influence the development of various fields, including forensic anthropology [19]. This fact should shape our outlook on the topics related to these regions and allow for an individualized perspective that, due to these circumstances, may not always be in synchrony with the European or North American perception. A “Eurocentric” perspective on issues existing in other regions of the world, even though they may be parallel to the European or North American ones, obscures, or at least does not take into account, aspects that are particular to that region and which may be affecting the development and evolution of these issues in that precise context. For this reason, in the present article, we aim at presenting a Southern perspective regarding the ethical aspects related to identified human osteological collections with a special focus on the specificity of the political and socioeconomic conjuncture of South America.

2. The Collections

There exist a series of identified human osteological collections in South America. Their creation began in the twentieth century [17], and their number and sizes have been gradually increasing. The documented collections on the South American continent are listed in the Table 1. A more detailed description is presented in the text below.

2.1. Brazil

Brazil is the country with the greatest number of identified skeletal collections on the South American continent. The recent opening and the increase of the interest in forensic anthropology sparked several initiatives in order to create such references for the further development of this discipline. The existing Brazilian collections are relatively recent, yet they already provide an invaluable contribution regarding research and training in both biological and forensic anthropology.

The identified skeletal collection of the Faculty of Medicine FAP-Araripina, Araripina, Pernambuco, Brazil, is the most recent Brazilian collection, established in 2021 by Prof. Dr. Erasmo de Almeida Júnior. The material comes from the Public Cemetery of São João Batista in Aracaju, Sergipe, through a cooperation with the Municipal Urban Services Company (EMSURB—Empresa Municipal de Serviços Urbanos). The collection consists of 400 individuals (379 adults and 21 sub-adults) that were buried between 2015 and 2019 (Erasmo de Almeida Júnior, personal communication).
Table 1. Identified human osteological collections in South America.

| Country | Collection Name                                                                                                                                                                                                 | N     |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Argentina | The Lambre Collection in the Faculty of Medical Sciences, National University of La Plata, Argentina [20,21].                                                                                           | 445   |
|         | The Chacarita Collection at the University of Buenos Aires, Argentina [13]                                                                                                                                       | 146   |
| Brazil  | The 21st Century Osteological collection of the Centre for Studies in Forensic Anthropology (CEAF), Faculty of Dentistry of the University of Pernambuco, Pernambuco State (Evelyne Pessoa Soriano, personal communication).                          | 427   |
|         | The osteological and tomographic biobank Prof. Eudardo Daruge, of the Faculty of Dentistry, of the University of Campinas, São Paulo State [22].                                                        | 320   |
|         | The identified collection of Medicine Faculty of Faculdade Paraíso, Araripina (FAP) (Erasmo de Almeida Junior, personal communication).                                                                            | 400   |
|         | Salvado/Bahia Identified Skull collection of the Bahia State (Unit) [23].                                                                                                                                         | 241   |
|         | Aracaju/Sergipe Identified Skeletal Collection of Sergipanos of the University Tiradentes (Unit) [22].                                                                                                           | 223   |
|         | Osteological Collection of the Institute of Teaching and Research in Forensic Sciences (IEPCF) [22,23].                                                                                                           | 143   |
|         | Identified skull collection of the anatomy museum Alfonso Bovero, University of São Paulo (USP) [24].                                                                                                           | 354   |
|         | The Cranium Museum of the Department of Anatomy of the Escola Paulista de Medicina, Federal University of São Paulo (UNIFESP/EPM) [22].                                                                       | 403   |
| Chile   | The Modern Collection of Santiago at the University of Chile [24].                                                                                                                                               | 1282  |
| Colombia| The Collection of Human Skeletons of Reference of the Modern Colombian Population, at the National Institute of Legal Medicine and Forensic Sciences (INMLCF), Bogotá, Colombia [25]. | 600   |
|         | The Osteological Reference Collection of the Laboratory of Osteology and Forensic Anthropology of the Department of Anthropology of the University of Antioquia in Medellín-Antioquia [26]. | 494   |

The individuals belonging to the 21st Century Osteological collection of the Centre for Studies in Forensic Anthropology, Faculty of Dentistry, University of Pernambuco, come from the Santo Amaro Cemetery and were born between 1905 and 2001. This collection is composed of 427 individuals with information on birth date, sex and age at death available. The skeletons are well preserved and stored in individual boxes. Nevertheless, some may be partially incomplete due to a loss of some bones during the exhumation process [22,27].

The osteological and tomographic Biobank at the Physical and Forensic Anthropology Laboratory, Department of Health Sciences and Child Odontology, Faculty of Odontology in Piracicaba, University of Campinas (UNICAMP), is composed of individuals who died between 2008 and 2010, were buried at the Public Cemetery of Nossa Senhora da Conceição, and were exhumed between 2013 and 2014. The individuals belong to a modern population of the city of Campinas/São Paulo. Apart from the skeletal material, the Biobank has 225 computed tomography (CT) scans obtained from the principal collection (Francesquini Junior, personal communication).

The Salvador Identified Skull Collection of the State of Bahia (UNIT), housed at Aracaju, Sergipe, was collected between 2008 and 2009 from individuals obtained from Quinta dos Lázaroes cemetery in Salvador, Bahia. It consists of 241 individuals for which the information about the sex and age at death is available.

The Aracaju Identified Skeletal Collection of Sergipanos of the University of Tiradentes (UNIT) in the Sergipe state consists of 223 individuals within the age range of 22–108 who died between 2009 and 2015. The skeletons were donated to the University of Tiradentes in 2017 by the São João Batista Cemetery in Aracaju, Sergipe. The individuals aged from 22 to 108 years and died between 2009 and 2015 [22].

The osteological collection located at IEPCF is comprised of 143 complete skeletons from exhumations conducted at the Necrópole do Campo Santo Cemetery, in Guarulhos, São Paulo. The collection includes the extensive documentation of each individual, including sex, age at death, stature, ancestry, place of birth and death, and date of birth (from
1901 to 2007) and death (from 1986 to 2013), together with the cause of death obtained from public records and documentation, such as obituaries and the death certificates provided by the cemetery administration [22,23].

The Identified Skull Collection housed at the Alfonso Bovero Anatomy Museum of the University of São Paulo currently consists of 354 skulls from the initially catalogued 395. They belong to individuals from the period of 1913–1962. Although individuals of Brazilian origin constitute the majority, the collection also includes individuals from other South American countries, North America, Europe, Asia, Africa, and the Middle East [22].

The Cranium Museum of the Department of Anatomy of the Escola Paulista de Medicina, Federal University of São Paulo, was initially set in 1930 and currently includes 400 skulls of adult individuals who died between 1933 and 1970. The records of name, sex, age, ancestry, profession, and cause of death are available for each individual [22].

2.2. Chile

In Chile, there currently exists only one identified skeletal collection: the Modern Collection of Santiago (Colección Subactual de Santiago). It consists of subjects who died in 1960–1973, and it was collected primarily during the 1970s, and those deceased in 1986 were collected in 1993 [24,28]. The total number of individuals is not completely accounted for, but estimates indicate a minimum of 1400 individuals, of which 200 are available for research [29]. Information about their name, age, sex, cause of death, and in some cases full data on the date of birth and death is well documented. The individuals composing the collection come from transitory graves from the Santiago General Cemetery (Cementerio General de Santiago) that have not been reclaimed by relatives [24]. The burials that originated this collection corresponded to the most economical option, consequently it is assumed that most of the individuals represented in the collection come from lower socioeconomic classes of Santiago from that period [29]. The collection is curated at the Department of Anthropology, Faculty of Sciences, University of Chile.

The collection has been widely explored in the fields of biological [28,30] and forensic anthropology [27,31–35], mainly by national researchers, providing important scientific contribution in both disciplines.

2.3. Argentina

There are currently two documented modern osteological collections in Argentina: the Chacarita Collection at the University of Buenos Aires and the Lambre Collection at the Faculty of Medical Sciences, National University of La Plata.

The “Prof. Dr. Rómulo Lambre’ Collection” is composed of individuals from the Municipal Cemetery of La Plata (MCLP) that have not been reclaimed by relatives, in accordance with the Cemetery’s regulations. Since 2002, the MCLP has been periodically delivering skeletal material to the Faculty of Medical Sciences, University of La Plata. The last data on the collection indicates a total number of 420 individuals deceased in the period of 1936–2001, out of which 328 have complete information on age and sex from death certificates. In various cases, the nationality of the individual, as well as the cause of death, are available [21].

The Chacarita Collection represents a carefully planned project with the aim of gathering a representative sample of a contemporary Argentinian (Buenos Aires) population, with known information of nationality, age, sex, and date and cause of death for each individual in an equilibrated proportion of age and sex groups. An important aspect of this collection is the fact that the recovery of the material is, in each case, performed by the members of a qualified research team and following a carefully prepared protocol. The material comes from the Public Cemetery of Chacarita and belongs to individuals that have not been claimed by family members. Currently, the collection is composed of 146 adult individuals and is curated in a special laboratory specially designed for this purpose at the Chacarita Cemetery [13].
A great quantity of research in the fields of biological and forensic anthropology has been conducted to date on the skeletal material from the Argentinian collections [36,37]. A comprehensive summary of research lines carried out with the use of the Lambre collection is presented by Plischuk et al. [38]. Such active use of skeletal material from reference collections demonstrates their unquestionable importance in knowledge production and scientific development in both fields.

2.4. Colombia

Colombia currently has two documented skeletal collections of the modern population. These are located in Bogotá, “The Human Skeletal Reference Collection of the Modern Colombian Population” of the INMLCF, and in Medellín-Antioquia “The Osteological Reference Collection of the Laboratory of Osteological and Forensic Anthropology of the Department of Anthropology at the University of Antioquia” [25,39–41].

The Human Skeletal Reference Collection of the Modern Colombian Population began in 2009, through an agreement on the donation of identified bodies of the Special Administrative Unit of Public Services of the District (UAESP) to the INMLCF through a loan agreement. The sample comes from the four district cemeteries of Bogotá, and the agreement was approved by the Committee of Bioethics of the INMLCF, encompassing 600 identified adult skeletons, born between 1907 and 1989 and who died between 2004 and 2008. It contains information about the sex (194 women and 406 men), age at death (15 to 99 years old), cause of death, ancestry, height, city, date of birth, and facial photograph. Additionally, the information on the cause of death is also available for the whole sample (206 violent and 394 natural deaths). There is an intention to expand the collection to 3400 skeletons [25].

The Osteological Reference Collection of the Laboratory of Osteological and Forensic Anthropology of the Department of Anthropology of the University of Antioquia has shown continuous development, reporting a constant increase in the number of individuals over the years. In 2011, there were 101 fully documented individuals deceased between 2003 and 2005 that came from the Jardim Cemitério Universal de Medellín. The donation was a result of an agreement between the University of Antioquia and the municipality of Medellín. The initial aim was for the collection to grow up to 200 skeletons [39]. Nevertheless, in 2016, a sample of 400 skeletons is mentioned in a study on the expression of macromorphoscopic characteristics [42]. The increased sample was collected from individuals born in the period between the mid-XX and the XXI century. They all have information about their sex, age at the time of death, and region of birth and they come from the San Pedro Cemetery Museum and the Universal Cemetery and were donated by the family. In 2018, 500 individuals were reported and specified in a monographic work conducted at the University of Antioquia [40]. This work mentions the existence of two sections of the collection. One is intended exclusively for teaching purposes, and the second one, consisting of 494 fully documented individuals with information about age (foetal to 102), sex, place of birth, and occupation available for research [26].

3. Discussion

The ethical concepts in biological and forensic anthropology face complex political, cultural, ideological, and legal issues. In order to facilitate the researchers working with human remains to navigate through such complicated scenarios, various tools have been developed across the world. These include, for example, good practice guidelines, codes of ethics, and, recently, deontological codes. Nevertheless, such initiatives are frequently rather local, and no universally applied protocol has been yet established [17]. Considering the fact that the ethics and management of human remains vary greatly across the globe and carries a strong correlation with the religious aspects of a given society, it is not greatly surprising. In the main, generally accepted recommendations for the use of human remains is the duty to preserve the anonymity of the individuals and fidelity to bioethical guidelines, such as the approval of bioethics committees in the creation and use of skeletal collections,
as well as the respectful treatment of the skeletal material during analysis and research [17]. Ethical parameters are important in any scientific field. Many countries adopted such guidelines or are in a process of debating these issues, which demonstrates the concern and willingness to overcome the ethical problems related to the management and study of human remains [17].

3.1. Identified Osteological Collection and the Development of Science

The creation of identified osteological collections in South America started already in the 20th but significantly expanded in the 21st century. This fact is inextricably linked to the intensive development of forensic anthropology in this region. On the one hand, the leading role of the Argentine and the Peruvian Forensic Anthropology Teams (EAAF and EPAF, respectively) shows that forensic initiatives independent of the U.S. or European influence are possible in this region. On the other hand, socioeconomic and political conjuncture and the development of the region during the first years of the 21st century allowed for the accommodation of more resources and the consequent expansion of public universities, where a large number of such collections are concentrated. Moreover, a favorable political and economic context also permitted the development of actions and initiatives related to the search of people who disappeared for political reasons during dictatorship times that affected many countries in the region, triggering the need for better and more advanced training of professionals in forensic areas, in addition to the necessity of the validation of international methods for the local populations [23].

Considering solely the biggest Brazilian osteological collection—the CEAF—a quick research demonstrates that, since its beginning, over 30 scientific articles presenting the results of analyses based on this collection were published [43–71]. Moreover, five academic dissertations are currently being conducted on this material (Soriano, personal communication). The Biobank Eduardo Daruge produced over 10 papers already published [72–82]. Moreover, very recently, unprecedented results about the lag time of modern bomb-pulse radiocarbon in human bone tissues of a joint project between Brazilian and US researchers were published [43], and the samples used came from the three major Brazilian collections. This is only a small number of the examples of important contributions based on the identified collection that demonstrate their scientific usefulness and importance.

Parallel to the increase in the number of identified osteological collections, an important expansion of action directed towards the training of professionals in forensic anthropology can also be noted. Several courses aimed at specialization in forensic anthropology were recently created in Brazil. Among them, two full-time university courses stand out: one organized between 2014 and 2015 by the Unidade de Ensino Superior Ingá, in Lauro de Freitas, Bahia (with 3 students), and the second, a specialization course in Forensic Anthropology and Human Rights created at the Federal University of Sao Paulo in 2017 (currently during its second edition, with almost 40 students) [83]. Moreover, two short training courses were organized by the Federal Police in 2017 and 2019 (Carlos Eduardo Palhares Machado, personal communication).

The development of forensic anthropology in Colombia has been strongly influenced by the social context of this country combined with the political and economic issues that arose mainly as a result of the action of the illegal organized armed groups—GAOML (Grupos Armados Organizados al Margen de la Ley)—especially during the conflict between the Revolutionary Armed Forces of Colombia (FARC) and the government-supported paramilitary groups that resulted in an exceptionally high number of victims that require(d) identification. The situation led to the development of interdisciplinary methodologies by social anthropologists and archaeologists that goes far beyond skeletal analysis either on exhumation sites or inside forensic laboratories. The Colombian perspective includes a profound analysis of the cultural aspects of forced disappearance and the violence phenomenon. In this sense, judicial processes in the search for the construction of the truth and the clarification of human rights violations can be benefited by forensic anthropology through the scientific truth that it brings [39].
In Colombia, osteological collections were created by public entities, in order to meet the scientific and social needs generated by an undetermined number of victims of the most diverse violent acts due to the prolonged armed conflicts taking place in this country for decades [39]. The identification of human remains in the Colombian context is possible thanks to the creation of these collections, which led to the emergence of methods and techniques adapted for the local population, highlighting their importance as a forensic and investigative tool [40]. The Colombian identified osteological collections have been extensively studied, resulting in multiple publications that address the problem of the lack of specific standards for this population regarding the estimation of sex [84,85], age at death [86–89], individual and population variability [90], and the creation of new technologies [42]. Apart from osteological material, the collections also contain additional imaging resources, e.g., lateral cephalometric radiographs [91], skull base radiographs [92], and biographical data on isotropic values [93].

Despite their great contribution to the development of science and forensic methods, the existing Colombian identified osteological collections also bear an important drawback. The individuals composing these collections come mainly from the central and northwestern regions of the country. Due to the wide cultural, climatic and gastronomic diversity of Colombia and the effects that these factors can have on the skeleton, the collections do not properly represent the biological diversity of the inhabitants of this country. It is therefore necessary to establish skeletal collections that would cover other regions for an adequate representativeness of the Colombian population. This would allow for the collection of more diverse bioanthropological data necessary for the resolution of forensic anthropological cases resulting from the prolonged violence experienced across the whole country.

All of the above facts demonstrate the connection between the expansion of the number and size of the identified human osteological collections, the development of science, and the intensified movement towards teaching and research in South America. Without the collections, the application and validation of methods necessary for the teaching, research, and practice of forensic anthropology would be impossible.

3.2. Identified Skeletal Collections and Social Issues

As pointed out by Bernasconi [94], the growth and strengthening of research at universities in Latin America, even with national variations, began and has been developing mainly since the 1960s, given the economic growth in this region. There is no doubt that the science of all branches of criminalistics is based on scientific knowledge developed within the academic environment. In this same academic environment, we can observe a growth of research that deals with the issue of the high rate of violence present in South American countries, within the scope of human rights.

Academic research points to what Dulitzky [95,96] calls violations of economic, social and cultural rights (ESCR), that is, a series of human rights violations that culminate in the violation of the right to life of individuals. As is well demonstrated by this author, a series of cases analyzed by the Inter-American Court of Human Rights attest to ESCR violations in the South American context. It is a culture of violence based on political and cultural issues that are very specific to each of these countries and, at the same time, different from European or North American contexts.

The development of identified human osteological collections in the South American context is not related to central, political, or governmental decisions. It comes mainly from the personal efforts of researchers and professionals working in the field and understanding the need of such initiatives for the development of forensic anthropology within the particular context of each country. The importance of the validation of international methods for local populations and the consequent improvement of identification efforts stand out as the major drives behind such efforts. The negligence presented by local governments in relation to the growth and consolidation of forensic anthropology, manifested by the lack of investment in training and adequate equipment and the functioning of specialized
laboratories [97], together with the generalized lack of interest of foreign researchers in this region, hinders the development of a better understanding of the *modus operandi* of violence in these countries.

Without a doubt, identified human osteological collection constitute an inseparable factor in the process of development and strengthening of forensic anthropology in South America. At the same time, such resources have been recently widely criticized, especially in the so-called Global North countries, both by practitioners and researchers, in relation to their ethical aspects. The growing debate regarding the ethical aspects of osteological collections containing human remains, without a doubt, is important and necessary. Nevertheless, the discrepancies in the pace of the development of forensic anthropology between the Global North and the Global South result in a situation in which the necessary ethical debate that increases in the Global North countries negatively affects the development of such collections in other regions that are only at the beginning of this path. Regardless of the importance of ethical aspects necessary for the constitution of identified osteological collections, which are nevertheless frequently followed in South American countries, we should also reflect on whether the difficulties it brings at the moment of creating a new collection is not actually counterproductive in particular settings. To date, the existing collections in South America have proven, although timidly, to be a valuable source of data for researchers to expand and internationalize their research and results presenting data from their own biological context, as well as to improve and validate forensic methods for local populations.

Moreover, the criticism of the lack of ethics in the constitution of these collections is made under the allegation of the non-agency of the dead individuals (and/or their families) in the destination of their bodies for science. Paradoxically, these critiques present in the current specialized literature do not usually extend in equal proportion to anatomical collections that exist, in a much higher number across the globe, and are the basis for teaching and research in the area of health. Similarly, the use of archaeological collections for forensic purposes (e.g., training) in South America, but also in other countries, does not seem to generate similar ethical concerns [13].

Likewise, if we consider that the argument about the lack of agency of individuals and their families regarding the destination in favor of science (and, therefore, of society) is important and relevant, and without a doubt it is, the protocols for the constitution of new collections should be better formulated. At the same time, such an assertion does not hold up as a whole if we consider that, throughout history and currently, many cemeteries, especially of non-dominant social segments, have been and are recurrently violated for numerous reasons, such as the implementation of construction sites. Several other destinations for human bodies are also given, far beyond the scientific purpose, and in much greater numbers—something that has not been widely debated.

When considering the ethical aspect of human osteological collection, in addition to the fact of the non-agency in choosing the destination of one’s remains after death, we should also consider another problem. Many of the existing collections are formed by individuals who had suffered various forms of violence during their lifetime and therefore, their biological constitution does not necessarily correspond with the biological constitution of contemporary individuals and/or those who do/have not suffer(ed) the same conditions of violence and human rights violations during their lifetime [98,99]. Only recently this issue has been brought up to a broader debate. It has been argued [98,99] that the constitution of some of the major identified osteological collections (e.g., Hamman-Todd, Terry) that served as a base for the development of diverse methodologies used internationally by forensic and biological anthropologists and bioarchaeologists have been related to social violence. Many of the individuals constituting these collections had suffered different forms of violence during their lives that often culminated in their death, and subsequently, their skeletal remains have been collected without their families being able to consent. In such a way, the implications of the constitution of such biased collections add up to the issue of the rights of people from the past and culminate in the fact that the methods
available for the estimation of biological profile (e.g., ancestry/biological affinity) obstruct the results of the identification of people in the present [98,99]. Albanese [99] points out that every collection, always being only a sample of a population, will always have biases to be considered. The question lies in whether such factors are critically considered by the researcher and practitioners during the application of the methods and the interpretation of the results.

It has been argued [100] that people have different conceptions about death, and that the removal of individuals from their burial contexts to include them in identified osteological collections would be disrespectful and would violate the rights of the dead. However, it is also important to remember that the removal of individuals from their places has been practiced for countless of other reasons, even during the lifespan of those people. Such actions can be considered the focal point of social injustices [100]. It can be also interpreted that different visions and considerations regarding death tell us more about the fears of the living than about the actual concerns regarding the dead [100].

Through history, research on human remains has always been controversial. Although there is evidence that our prehistoric ancestors already understood the human body, performing, for example, surgeries [101–111], academic studies with human remains were banned for a long time, mostly for religious reasons that often attributed ethical obstacles to such actions [112].

Formal academic research, as understood and performed within the Western context—in contrast to other ways in which different societies learned about bodies and health in the past—is relatively recent. Nevertheless, it quickly provided to be an important leap in the knowledge of human body, medicine, cure for pathologies, and the immunization of the populations for countless diseases. Through the study of our ancestors’ bones, we were able to gain a better understanding of our species. We have learned about our origins [113,114], we found out about health conditions, mobility, diet, growth, and the development of populations within different environmental and political conditions.

The use of the human body for scientific purposes therefore has a long tradition, and, as controversial as it may be, it represents an invaluable teaching and training tool. Nevertheless, more and more obstacles are put in the way of such use, alleging various ethical considerations. Recently, in Brazil, forensic anthropologists and medical examiners have been focusing their efforts on developing important methodological contributions that would be of great use to other experts and also to international researchers. However, according to the assessment of their police superiors, many of them have been prevented from using images of human bones in lectures and courses, completely undermining the possibility of more advanced teaching and professional training. Such actions are only possible within a political context that does not provide for the solution of social problems, which perpetuates its attitude towards social injustice even while people are alive, making them more susceptible to countless forms of violence.

This is a simple example of how ethical premises, not always justified but used rather as a thoughtless excuse by administrative bureaucrats in order to comply with top-down instructions imposed without considerations of particular contexts and the evaluation of advantages vs. disadvantages of such actions, can affect the development and advancement of a scientific discipline. This directly transfers to a broader, social context in situations in which the scientific discipline is applied in a legal system, as in the case of forensic anthropology. We believe that ethical considerations in the development and management of identified osteological collections, as important and necessary as they are, should not negatively affect other aspects of social development and justice. The rights given to the dead should be equilibrated with the rights of the living that can still benefit, directly or indirectly, from the use of the remains of the dead.

With the arguments presented in this text, by no means are we urging the disposal of the collections that have so greatly expanded our knowledge of biological and forensic anthropology and enabled the creation of innumerous methods and protocols used worldwide. To the contrary, we believe that identified osteological collections have (had)
an important role in the identification of people that otherwise would have disappeared to their families forever, without the society understanding what happened to them. The use of these resources has also (indirectly) helped to prosecute human rights perpetrators in various regions of the world. Such postulation would be like “throwing the baby out with the bathwater”. Our aim is to highlight the necessity of improving the ethical criteria for the formation of such collections, but, above all, to discuss the ethical and political issues that are present in forensic anthropology, as well as throughout the history of science, based on reflections about the social conditions within different temporal, socioeconomic, and geographic contexts. It is important to take into account these divergences in our reflections in order to reach a comprehensive understanding of such complex issues [115].

In this sense, we believe that global, generalized movement to impose rules and universal guidelines for the constitution of identified human osteological collections can be harmful or at least counterproductive in certain socio-economic and political contexts. We advocate that the particular conditions of each country should be respected and that national associations should decide the best possible ethical conditions to be followed within the political and social context of each country.

Regarding osteological collections used for scientific purposes, as highlighted by Bekvalac and Redfern [116] in relation to archaeological material, an important curatorial ethical aspect is the demonstration of the active use of these collections for the development and accuracy of technical research methods that help to give feedback to society. This way our distant and more recent ancestors will be able to transfer to us the greatest inheritance of knowledge, so that we can increasingly fight for a fairer society with better living conditions for all.

4. Conclusions

The present article briefly summarizes the existing human identified osteological collections in South America. At the same time, we present a reflection on the ethical dimensions of such collections in the light of the social, economic, and political divergencies existing in different regions of the world. As, unfortunately, the production of knowledge is still mainly north-centric, and the southern perspective rarely reaches the academic vanguard, we advocate for a decolonization of initiatives that intend to create global and universal procedures without taking into account the particularities of each setting. Although the debate on the universality and relativity of ethics is far beyond the scope of the present article, we believe that ethical concerns and guidelines regarding the creation and management of identified osteological collections are vital for scientific integrity and, without a doubt, should be followed. We simply intend to highlight and bring to a broader debate the fact that measures adopted in one region can constitute a certain drawback for the development of a scientific discipline, in this case forensic anthropology, in regions in which historical, cultural, and political circumstances hinder(ed) the equal pace of its scientific advancement.

This is more important in the case of disciplines applied in the legal system and especially in social contexts characterized by a high level of violence, as is the case of South America. When developing ethical guidelines for the development and management of identified osteological collections, we should consider, apart from the rights of the dead, also the rights of the living. The construction of social justice is a complex process that requires multilevel actions, and forensic anthropology can highly contribute to its positive outcomes. For this reason, it should be equipped with tools necessary for research and the proper and advanced training of professionals. Ethical guidelines for the creation and management of identified skeletal collections should be constructed in a way that they would not impede such actions by postulating standards that can be difficult to meet in certain contexts. Therefore, local perspectives should always be taken into account and the ethical aspects of such initiatives should be equilibrated with their potential benefits. These factors, in our opinion, vary greatly from region to region.
We believe that this voice is important in the light of the growing discussion regarding the ethical aspects of identified osteological collections. We would like to draw the attention of interested researchers to consider such divergences at the time of debating these issues in order to bring more different perspectives and broaden the discussion.

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**References**

1. Santos, A.L. Un Patrimonio Particular. La Importancia de las Colecciones Osteológicas Identificadas. *Método: Revista de Difusión de la Investigación*. 2019, 101, 64–71.

2. Alunni-Perret, V.; Staccini, P.; Quatrehomme, G. Reexamination of a measurement for sexual determination using the supero-inferior femoral neck diameter in a modern European population. *J. Forensic Sci.* 2003, 48, 517–520. [CrossRef] [PubMed]

3. Asala, S.A. Sex determination from the head of the femur of South African whites and blacks. *Forensic Sci. Int.* 2001, 117, 15–22. [CrossRef]

4. Burrows, A.M.; Zanella, V.P.; Brown, T.M. Testing the validity of metacarpal use in sex assessment of human skeletal remains. *J. Forensic Sci.* 2003, 48, 17–20. [CrossRef]

5. Bruzek, J.; Murail, P. Methodology and reliability of sex determination from the skeleton. In *Forensic Anthropology and Medicine: Complementary Sciences from Recovery to Cause of Death*; Schmitt, A., Cunha, E., Pinheiro, J., Eds.; Humana Press: Totowa, NJ, USA, 2006; pp. 225–242.

6. Kemkes, A.; Göbel, T. Metric Assessment of the “Mastoid Triangle” for Sex Determination: A Validation Study. *J. Forensic Sci.* 2006, 51, 985–989. [CrossRef]

7. Mays, S.; Cox, M. Sex determination in skeletal remains. In *Human Osteology in Archaeology and Forensic Sciences*; Cox, M., Mays, S., Eds.; Greenwich Medical Media: London, UK, 2000; pp. 117–130.

8. Frutos, L.R. Brief communication: Sex determination accuracy of the minimum supero-inferior femoral neck diameter in a contemporary rural Guatemalan population. *Am. J. Phys. Anthropol.* 2003, 122, 123–126. [CrossRef]

9. Spradley, M.K.; Jantz, R.L.; Robinson, A.; Feccerelli, F. Demographic change and forensic identification: Problems in metric identification of Hispanic skeletons. *J. Forensic Sci.* 2008, 53, 21–28. [CrossRef] [PubMed]

10. Ubelaker, D. Issues in the global applications of methodology in forensic anthropology. *J. Forensic Sci.* 2008, 53, 606–607. [CrossRef] [PubMed]

11. Wiredu, E.K.; Kumoji, R.; Seshadri, R.; Biritwum, R.B. Osteometric analysis of sexual dimorphism in the sternal end of the rib in a West African population. *J. Forensic Sci.* 1999, 44, 921–925. [CrossRef]

12. Trancho, G.J.; Robledo, B.; López-Bueis, I.; Sánchez, J.A. Sexual determination of the femur using discriminant functions. Analysis of a Spanish population of known sex and age. *J. Forensic Sci.* 1997, 42, 181–185. [CrossRef]

13. Bosio, L.A.; García Guraieb, S.; Luna, L.H.; Aranda, C. ChaCARita Project: Conformation and analysis of a modern and documented human osteological collection from Buenos Aires City—Theoretical, methodological and ethical aspects. *Homo* 2012, 63, 481–492. [CrossRef] [PubMed]

14. De Tienda Palop, L.; Currás, B.X. The Dignity of the Dead: Ethical Reflections on the Archaeology of Human Remains. In *Ethical Approaches to Human Remains*; Squires, K., Errickson, D., Márquez-Grant, N., Eds.; Springer: Cham, Switzerland, 2019; pp. 19–38. [CrossRef]

15. Squirres, K.; Errickson, D.; Márquez-Grant, N. (Eds.) Ethical Approaches to Human Remains. In *A Global Challenge in Bioarchaeology and Forensic Anthropology*; Springer: Cham, Switzerland, 2019.

16. Márquez-Grant, N.; Passalacqua, N.V.; Pilloud, M.A.; Lester, N.; Decker, S.; Ford, J. Ethical Concerns in Forensic Anthropology. In *Ethical Approaches to Human Remains*; Squires, K., Errickson, D., Márquez-Grant, N., Eds.; Springer: Cham, Switzerland, 2019. [CrossRef]

17. Squires, K.; Manusco, R.C. Desafíos éticos asociados al estudio y tratamiento de restos humanos en las ciencias antropológicas en el siglo XXI Ethical challenges associated with the study and treatment of human remains in anthropological sciences in the 21st century. *Rev. Argent. Antropol. Biol.* 2021, 23, 34. [CrossRef]

18. Baraybar, J.P.; Blackwell, R. Where are they? Missing forensics and memory. *Ann. Anthropol. Pract.* 2014, 38, 22–42. [CrossRef]
19. Guimarães, M.A.; Francisco, R.A.; de Abreu e Souza, R.; Evison, M.P. Forensic archaeology and anthropology in Brazil. In Forensic Archaeology: Current Trends and Future Prospects; Groen, M., Márquez-Grant, N., Janaway, R., Eds.; Wiley: New York, NY, USA, 2015; pp. 215–222.

20. Salceda, S.; Desántolo, B.; Mancuso, R.G.; Plischuk, M.; Prat, G.; Inda, A.M. Integración y conservación de la colección osteológica "Profesor Doctor Rómulo Lambre": Avances y problemáticas. Rev. Argent. Antropol. Biológica 2009, 1, 133–142. Available online: https://revistas.unlp.edu.ar/raab/article/view/274 (accessed on 2 February 2022).

21. Salceda, S.; Desántolo, B.; Mancuso, R.G.; Plischuk, M.; Inda, A. The 'Prof. Dr. Rómulo Lambre' Collection: An Argentinian sample of modern skeletons. Homo 2012, 63, 275–281. [CrossRef] [PubMed]

22. Cunha, E.; Lopez-Capp, T.; Inojosa, R.; Marques, S.; Moraes, L.; Liberti, E.; Machado, C.; de Paiva, L.; Júnior, L.F.; Júnior, E.D.; et al. The Brazilian identified human osteological collections. Forensic Sci. Int. 2018, 285, 449.e1–449.e6. [CrossRef] [PubMed]

23. Plens, C.; Souza, C.D.; Albanese, J.; Capp, T.T.L.; Saavedra, L.A. Reflections on methods to estimate race and ancestry on reference osteological samples in the Brazilian context. Ethics Med. Public Health 2021, 18, 100680. [CrossRef]

24. Urzúa, C.L.; Rodríguez, M.; Yermani, R.R.; Lafontaine, E.A. Arqueología del depósito: Manejo integral de las colecciones bioantropológicas en el Departamento de Antropología de la Universidad de Chile. 2008. Available online: http://descubridor.academia.cl/Record/29187 (accessed on 2 February 2022).

25. Sanabria-Medina, C.; González-Colmenares, G.; Restrepo, H.O.; Rodríguez, J.M.G. A contemporary Colombian skeletal reference collection: A resource for the development of population specific standards. Forensic Sci. Int. 2016, 266, 577.e1–577.e4. [CrossRef]

26. Escudero, T.M.H. Características de la hiperrostosis esquelética idiopática difusa en una colección osteológica contemporánea de Medellín, Colombia. Trabajo de Grado para Optar al Título de Estudiante de la Universidad de Medellín. 2011. Available online: http://hdl.handle.net/10495/14342 (accessed on 2 February 2022).

27. Carvallo, D.; Retamal, R. Sex estimation using the proximal end of the femur on a modern Chilean sample. Forensic Sci. Int. Rep. 2020, 2, 100077. [CrossRef]

28. Abarca, V. Efectos de la Nutrición Sobre el Dimorfismo Sexual Expresado en la Estatura (SSD) de una Muestra de Población Chilena Subactual; Memoria para Optar al Título Profesional de Antropóloga Física; Facultad de Ciencias Sociales, Universidad de Chile: Santiago, Chile, 2011; Available online: https://repositorio.uchile.cl/handle/2250/106343 (accessed on 2 February 2022).

29. Barreaux, N.; Espinoza, M.C.; Flores, S.; Galimany, J.; González, R.; Jara, K.; Krapivka, S.; Morales, H.; Quiñones, E. Puesta en Valor de la Colección Osteológica Subactual de Santiago. In Proceedings of the V Congreso Chileno de Conservación y Restauración, DIBAM-AGCR, Santiago, Chile, 22–24 October 2015.

30. Eyquem, A.P.Q.; Kuzminsky, S.C.; Aguilera, J.; Astudillo, W.; Toro-Ibacache, V. Normal and altered masticatory load impact on the range of craniofacial shape variation: An analysis of pre-Hispanic and modern populations of the American Southern Cone. PLoS ONE 2019, 14, e0225369. [CrossRef]

31. Soto, M.H. Evaluación del Método de Estimación a Través de la Superficie Auricular de Ilión en una Muestra Chilena Subactual (Cementerio General). 2021. Available online: http://repositorio.uchile.cl/handle/2250/173947 (accessed on 2 February 2022).

32. Garrido-Varas, C.; Thompson, T.; Campbell, A. Metric parameters for sex determination of modern Chilean skeletal remains. Chungara Rev. Antropol. Chil. 2013, 46, 285–293.

33. Sandoval, D.C. Estimación de Sexo en Población Chilena Moderna a Partir del Fémur Proximal. 2018. Available online: http://repository.uchile.cl/handle/2250/137947 (accessed on 2 February 2022).

34. Vargas, M.E. Evaluación del Método de Estimación de Edad al Momento de la Muerte en Superficie Auricular en una Muestra de Población Chilena Subactual (Colección Subactual de Santiago). 2015. Available online: http://repository.uchile.cl/handle/2250/143888 (accessed on 2 February 2022).

35. Herrera, M.J.; Retamal, R. Reliability of age estimation from iliac auricular surface in a subactual Chilean sample. Forensic Sci. Int. 2017, 275, 317.e1–317.e4. [CrossRef] [PubMed]

36. Luna, L.; Aranda, C.; García Guraieb, S.; Kulluck, T.; Salvadorre, A.; Pappalardo, R.; Miranda, P.; Noriega, H. Factors of differential preservation of modern human bone remains from the “Chacarita collection” (Ciudad Autónoma de Buenos Aires, Argentina). Rev. Argent. Antropol. Biol. 2012, 14, 53–67. Available online: https://revistas.unlp.edu.ar/raab/article/view/555 (accessed on 2 February 2022).

37. Luna, L.H.; Bosio, L.; Guraieb, S.G.; Aranda, C. Adult sex estimation from the minimum supero-inferior femoral neck diameter in a contemporary osteological sample from Buenos Aires, Argentina. Sci. Justice 2021, 61, 528–534. [CrossRef]

38. Plischuk, M.; Garizoain, G.; Petrone, S.; Desántolo, B.; Mancuso, R.G.; Salceda, S.; Inda, A.M. El aporte de las colecciones osteológicas documentadas: Líneas de investigación en la Colección “Prof. Dr. Rómulo Lambre’ (La Plata, Argentina). Jangwaa Para 2019, 19, 102–127. [CrossRef]

39. Isaza, J.; Vargas, T.M.; Vargas, J.M. Biological Characterization of the Universidad de Antioquia’s Human Skeletal Reference Collection; Medellín, Colombia. Preliminary Report. Bull. Anthropol. Univ. Antioq. 2011, 25, 287–302. Available online: https://www.redalyc.org/articulo.oa?id=55722568011 (accessed on 2 February 2022).

40. Martínez, A.L.; Hernández, N.R.; Hernández, N.A.R. Las colecciones de referencia osteológica como una herramienta forense e investigativa en Colombia: Las colecciones de referencia osteológicas como un recurso y herramienta de investigación a nivel forense. Cuad. Med. Forense 2018, 24, 43–49.

41. Santos, A.L. A particular heritage: The importance of identified osteological collections. Metode 2020, 10, 91–97.
42. Monsalve, T.; Heñner, J.T. Macromorphoscopic trait expression in a cranial sample from Medellin, Colombia. *Forensic Sci. Int. Int. 2016*, 266, 574.e1–574.e8. [CrossRef]

43. Ubelaker, D.H.; Plens, C.R.; Soriano, E.P.; Diniz, M.V.; Junior, E.D.A.; Junior, E.D.; Júnior, L.F.; Machado, C.E.P. Lag time of modern bomb-pulse radiocarbon in human bone tissues: New data from Brazil. *Forensic Sci. Int. Int. 2023*, 331, 111143. [CrossRef]

44. Bento, M.I.C.; Crosato, E.M.; Santiago, B.M.; Soriano, E.P.; Carvalho, M.V.D.; Rabello, P.M.; Júnior, L.E.F.; Almeida, A.C.; Campello, R.I.C. Análises Quantitativas em Mandíbulas Para Estimativa do Sexo. *Res. Soc. Dev. 2021*, 10, e45910414284. [CrossRef]

45. Silva, C.R.X.; Soriano, E.P.; Pereira, E.A.; Carvalho, M.V.D. Avaliação morfo-métrica de esternos pertencentes a esqueletos humanos brasileiros identificados. *Braz. J. Dev. 2021*, 7, 81040–81054. [CrossRef]

46. Soriano, E.P.; Queiroz, R.A.; Nascimento, E.A.; Rabello, P.M.; Junior, L.G.T.M.C.; Carvalho, M.V.D. Biological Sexual Profile Based on Linear Dimensions of Humeri and Femurs of Adult Brazilian Human Skeletons. *Int. J. Res. Granthamalah 2021*, 9, 277–290. [CrossRef]

47. Soriano, E.P.; Carvalho, M.V.D.; Nascimento, E.A.; Queiroz, R.A.; Marques, C.; Cunha, E. Differential diagnosis of metastatic bone disease: A case study from the CEAF Identified Skeletal Collection of the University of Pernambuco, Brazil. *Braz. J. Forensic Anthropol. Leg. Med. 2021*, 4, 152–170.

48. Pereira, E.A.; Carvalho, M.V.D.; Nascimento, E.A.; Kobayashi, S.B.T.; Petraki, G.G.P.; Soriano, E.P. Diffuse Idiopathic Hyperostosis in Human Skeletons from a contemporary Brazilian collection. *Braz. J. Dev. 2021*, 7, 44706–44721.

49. Nascimento, E.A.; Carvalho, M.V.D.; Petraki, G.G.P.; Rendeiro, S.L.M.; Queiroz, R.A.; Machado, M.P.S.; Soriano, E.P. Estimativa Do Sexo Por Meio De Análises Morfológicas e Métricas Da Segunda Vértebra cervical em esqueletos humanos. *Braz. J. Dev. 2021*, 7, 48857–48876.

50. Kobayashi, S.B.T.; Soriano, E.P.; Nascimento, E.A.; Campina, R.; Carvalho, M.V.D. Freqüência de ossos wormianos em esqueletos humanos brasileiros identificados. *Braz. J. Dev. 2021*, 7, 102435–102452. [CrossRef]

51. Pereira, E.A.; Pessoa, A.W.; Santos, G.M.A.; Santana, M.B.L.; Rodrigues, N.G.B.; Galvão, R.C.S.; Carvalho, M.V.D.; Soriano, E.P. Impactação e inversão de cânions superiores permanentes: Importância para a identificação humana. *Braz. J. Health Rev. 2021*, 6, 25407–25417. [CrossRef]

52. Lima, J.B.; Pereira, E.A.; Nascimento, E.A.; Galvão, R.C.S.; Carvalho, M.V.D.; Soriano, E.P. Perfil das suturas palatinas transversas de uma coleção brasileira de esqueleto identificados. *Braz. J. Forensic Anthropol. Leg. Med. 2021*, 4, 101–113.

53. Pereira, E.A.; Nascimento, E.A.; Lira, V.F.; Petraki, G.G.P.; Carvalho, M.V.D.; Soriano, E.P. Síndrome de Eagle e sua contribuição para a identificação humana. *Braz. J. Forensic Anthropol. Leg. Med. 2021*, 4, 186–197.

54. Rendeir, S.L.M.; Queiroz, R.A.; Carvalho, M.V.D.; Soriano, E.P. Dimorfismo sexual: Análises métricas dos ramos e cóndilos mandibulares. *Braz. J. Forensic Anthropol. Leg. Med. 2020*, 2, 53–70.

55. Gusmão, C.L.V.; Bento, M.I.C.; Lira, V.F.; Fernandes, L.C.C.; Soriano, E.P.; Leite, V.M.; Almeida, A.C.L. Distances in Brazilian Human Dry Skulls for Sex Estimation/Distances Lineares Em Crânicos Secos Humanos Brasileiros Para Estimativa De Sexo. *Braz. J. Dev. 2020*, 6, 66577–66386. [CrossRef]

56. Carvalho, M.V.D.; Lira, V.F.; Nascimento, E.A.; Kobayashi, S.B.T.; Araujo, L.F.; Almeida, A.C.; Porto, G.G.; Cunha, E.; Soriano, E.P. New acquisitions of a contemporary Brazilian Identified Skeletal Collection. *Forensic Sci. Int. Rep. 2020*, 2, 100050. [CrossRef]

57. Leite, V.M.; Placidó, C.F.S.; Gusmão, C.L.V.; Soriano, E.P.; Almeida, A.C.; Antunes, A.A.; Petraki, G.G.P. Sternal Variation: Anatomical-Forensic Analysis. *Int. Arch. Med. 2020*, 13, 1–12. [CrossRef]

58. Bento, M.I.C.; Soares, A.C.M.; Soriano, E.P.; Carvalho, M.V.D.; Antunes, A.A.; Campello, R.I.C.; Rabello, P.M.; Fernandes, L.C.C. The Applicability of The Baudoin Index for Sex Estimation in Brazilian Skulls. *Braz. J. Dev. 2020*, 6, 66343–66350. [CrossRef]

59. De Almeida, S.M.; Carvalho, M.V.D.; De Lyra Menezes, M.C.T.; Petraki, G.G.P.; Cunha, E.; Soriano, E.P. Validation of the DSP2 Tool in a Contemporary Identified Skeleton Collection from Northeastern Brazil. *Adv. Anthropol. 2020*, 10, 169–180. [CrossRef]

60. Guerreiro, A.M.C.S.; Bento, M.I.C.; Soares, A.C.M.; Soriano, E.P.; Rabello, P.M.; Fernandes, L.C.C. Applicability of the Foramen Magnum Index on Human Skulls of Individuals FromNortheastern Brazil. *Rev. Bras. Odontol. Leg. 2019*, 6, 26.

61. De Queiroz, R.A. Análise Da Confiabilidade Dos Métodos Quantitativos De Diagnose Sexual Através de Dimensões Lineares de Úmeros Fêmures Humanos. Master’s Thesis, Universidade De Pernambuco, Recife, Brazil, 2021.

62. De Almeida, S.M. Estimativa do Sexo Pelo Método DSP2 Numa Amostra Populacional Contemporânea do Nordeste Brasileiro. Master’s Thesis, Universidade De Pernambuco, Recife, Brazil, 2020.

63. Nascimento, E.A. Estimativa do Sexo Por Meio das Análises Morfológica e Métrica do Axis em uma Amostra Brasileira De esqueletos Identificados. Master’s Thesis, Universidade de Pernambuco Inst., Recife, Brazil, 2020.

64. Fernandes, L.C.C. Estudos Antropométricos em Palato, Abertura Nasal e Cavidade Orbits para Estimativa de Idade, Determinação de Sexo e Ancestralidade. Master’s Thesis, Universidade de Pernambuco Inst., Recife, Brazil, 2017.

65. Kobayashi, S.B.T. Frequência de Osos Wormianos em Esqueletos Humanos. Master’s Thesis, Universidade de Pernambuco, Recife, Brazil, 2020.

66. Gusmão, C.L.V. Estimativa do Sexo Através de Medidas Lineares e Areas Interseccionais Triangulares de Pontos Cranianos. Master’s Thesis, Universidade de Pernambuco Inst., Recife, Brazil, 2019. Available online: <https://w2files.solucaotrio.net.br/atrizi/ipe-pf-up1/THESIS/71/dissertacao_carolina_veloso_final_20200331152234977.pdf> (accessed on 21 January 2022).

67. Menezes, M.C.T.L. Estimativa do Sexo Pelo Método DSP2 em Linha Amostra de Esqueletos Identificados do CEAF/UPE: Contribuição Forense. Curso (Odontologia); Universidade de Pernambuco: Recife, Brazil, 2020.
96. Dulitzky, A. *Corte Interamericana de Direitos Humanos, desaparecimentos forçados e direitos econômicos, sociais e culturais: O caso brasileiro* In *Direitos Humanos Sob a Perspectiva do Direito à Vida, da Antropologia Forense e da Justiça no Caso de Violações*; Plens, C.R., Ed.; Editora Annablume/HHRRC (AAFS): São Paulo, Brazil, 2022. (in press)

97. Górka, K.; Plens, C.R. In search of identity: The field of forensic anthropology in Brazil—Profession and practice. *J. Forensic Sci.* 2020, 66, 44–55. [CrossRef]

98. Albanse, J. Strategies for Dealing with Bias in Identifies References Collections. In *Identified Skeletal Collections: The Testing Ground of Anthropology?* Henderson, C.Y., Alves-Carsoso, F., Eds.; Archaeopress Publishing Ltd.: Oxford, UK, 2018.

99. Albanse, J.; Halliday, J. Muitas maneiras de desaparecer: Defendendo os direitos humanos por meio de padrões éticos e pesquisas mais rigorosas em uma antropologia forense crítica. In *Direitos Humanos Sob a Perspectiva do Direito à Vida, da Antropologia Forense e da Justiça no Caso de Violações*; Plens, C.R., Ed.; Editora Annablume/HHRRC (AAFS): São Paulo, Brazil, 2022. (in press)

100. Henderson, C.Y.; Alves-Carsoso, F. *Identified Skeletal Collections: The Testing Ground of Anthropology?* Archaeopress Publishing Ltd.: Oxford, UK, 2018.

101. Broca, P. *La triépanation chez lês Incas*. *Bull. Acad. Natl. Méd.* 1867, 32, 866–871.

102. Horsley, V. Trephining in the Neolithic period. *The Journal of the Anthropological Institute of Great Britain and Ireland. J. Anthropol. Inst. Great Br. Irel.* 1888, 17, 100–106.

103. Persuad, T.V.N. *Early History of Human Anatomy*; Charles C Thomas Publisher: Springfiled, IL, USA, 1984.

104. Alt, K.W.; Jeunesse, C.; Buitrago-Téllez, C.H.; Wächter, R.; Boës, E.; Pichler, S.L. Evidence for stone age cranial surgery. *Nature* 1997, 387, 360. [CrossRef] [PubMed]

105. Lillie, M.C. Cranial surgery dates back to Mesolithic. *Nature* 1998, 391, 854. [CrossRef] [PubMed]

106. Piek, J.; Lidke, G.; Terberger, T.; von Smekal, U.; Gaab, M.R. Stone Age skull surgery in Mecklenburg-Vorpommern: A systematic study. *Neurosurgery* 1999, 45, 147–151.

107. Marino-Junior, R.; Gonzales-Portillo, M. Preconquest peruvian neurosurgeons: A study of Inca and Pre-Columbian trephination and the art of medicine in ancient Peru. *Neurosurgery* 2000, 47, 940–950. [CrossRef]

108. Clower, W.T.; Finger, S. Discovering Trepanation: The Contribution of Paul Broca. *Neurosurgery* 2001, 49, 1417–1426. [CrossRef]

109. Finger, S.; Fernando, H.R.E. George Squier and the discovery of cranial trepanation: A landmark in the history of surgery and ancient medicine. *J. Hist. Med. Allied Sci.* 2001, 56, 353–381. [CrossRef]

110. Liu, C.Y.; Apuzzo, M.L.J. The genesis of neurosurgery and the evolution of the neurosurgical operative environment: Part I—Prehistory to 2003. *Neurosurgery* 2003, 52, 3–19.

111. Rossi, R.R.; Froment, A. Earliest animal cranial surgery: From cow to man in the Neolithic. *Nature* 2018, 5536.

112. Harrisson, P. “Ciência” e “Religião”: Construindo os Limites. *Rev. Estud. Relig.* 2007, 7, 1–33.

113. Mellars, P. *Archaeology and the Origins of Modern Humans: European and African Perspectives*. *Proc. Br. Acad.* 2004, 106, 31–47.

114. Hoffecker, J.F. *Modern Humans: Their African Origin and Global Dispersal*; Columbia University Press: New York, NY, USA, 2017.

115. Plens, C.R. (Ed.) *Direitos Humanos sob a Perspectiva do Direito à Vida, da Antropologia Forense e da Justiça no caso de Violações*; Editora Annablume/HHRRC (AAFS): São Paulo, Brazil, 2022. (in press)

116. Bekvalac, J.; Redfern, R. *Archaeological human skeletal collection: Their significance and value as an ongoing contribution to research*. In *Identified Skeletal Collections: The Testing Ground of Anthropology?* Henderson, C.Y., Alves-Carsoso, F., Eds.; Archaeopress Publishing Ltd.: Oxford, UK, 2018.