

Biological anthropology must reassess museum collections for a more ethical future

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With growing attention on the remains of people held by museums and universities around the world, we outline ethical considerations that researchers working with human remains in anthropology must bear in mind.

In the 21st century the discipline of physical anthropology has been renamed 'biological anthropology', signalling recent changes from its genesis based in anatomy, zoology and medicine in the late 18th century¹, whence it came to provide a scientific rationalization for acquisitions, studies and racist interpretations of human diversity via phenotypic classification and comparative morphology. These disciplinary changes are supposed to include an increased emphasis on ethics, accountability and inclusivity, especially concerning communities who have been marginalized and harmed by physical anthropology and its entrenched traditions. However, many museum collections amassed for the study of human biological variation are unchanged from when they were created. Today, some of the world's largest natural history museums report holdings of deceased human bodies that range from approximately 4,000 (the Field Museum in Chicago) to over 30,000 (the National Museum of Natural History (NMNH) in Washington, DC) individuals². The British Museum lists more than 6,000 individuals, and Vienna's Natural History Museum tallies over 50,000 skeletal elements. The Musée de l'Homme in Paris holds 18,000 skulls alone, many from Indigenous people of France's former colonies³. Thus, among the racist legacies with which biological anthropology now grapples, human remains are a challenge for the field as much as a defining feature.

In this Comment, we examine this challenge from the vantage point of researchers and museum professionals. Using the NMNH as a primary example, we highlight problems and opportunities for different groups in relation to their responsibilities towards the remains of the deceased and the people that they represent. Although centred on the NMNH (and thus US-based in perspective), this discussion aims to provide helpful insights for the broader scientific community.

Catalysts for change

The American Association of Biological Anthropology has established a task force for the ethical study of human remains, and hosted a panel at their 2022 annual meeting on ethics in the curation and use of human skeletal remains⁴; the American Anthropological Association has created a commission for the ethical treatment of human remains⁵. Scholars and activists have protested that no federal legislation exists regarding the treatment of non-Native American ancestors (Box 1), such as those of African Americans⁶, and the commodification of human remains is a legal grey area in which bodies are bought and sold as

'medical antiques' on social media⁷. Many institutions are reevaluating their role and responsibilities in this arena, and some are reviewing their collections and seeking recommendations for how best to care for, commemorate and return individuals in their collections^{8,9}.

This work is only beginning, catalysed by demands for action as the dead – and stories of how museums came to possess them – capture headlines. In 2022, the Penn Museum announced intentions, without apparent consultation of the descendant community, to rebury the skulls of 13 Black Philadelphian individuals associated with the Morton Cranial Collection, whose remains were unethically obtained through graverobbing in the mid-19th century¹⁰. In February 2023, a judge ruled that the community who filed a formal opposition to the Penn Museum's plans has no legal standing regarding how their dead are treated¹¹. This continues the cycle of behaviour of treating the dead as property rather than people, and legality trumps ethics. The planned reburial follows another return of human remains, from victims of the 1985 MOVE bombing in Philadelphia, that were stored for decades at the Penn Museum and used for online teaching without the knowledge of surviving family members. An independent investigation commissioned by the Penn Museum and the University of Pennsylvania determined that the biological anthropologists involved in mishandling the MOVE remains demonstrated 'poor judgement' and 'insensitivity'¹². However, the investigators did not identify any specific violations of professional ethical standards. This verdict demonstrates a larger problem in the discipline, tied to inconsistent and unclear ethical standards in teaching, research and professional conduct.

Ethical research without consistent policies

At present, there is no standardized and widely implemented training for ethical research using human remains, which leaves many scientists underprepared to address ethical issues related to collections they wish to study. Despite decades of scholarship by Black scholars, Indigenous scholars and scholars of colour^{13–17} that details the ways in which scientific imperialism creates inequity in death just as it does in life, many ethical perspectives have yet to be integrated across the field, which ultimately reflects the history of anthropology as a space created by colonialism.

Nonetheless, the discipline is undergoing intense ethical scrutiny regarding research practices, funding and dissemination, without consistent policies across institutions. Research using human remains is not subject to review by the Institutional Review Board, a committee that approves and monitors biomedical research on living human subjects under US federal regulations, and thus lacks Institutional Review Board requirements such as informed consent. Permission for research is usually only sought from living descendants if mandated by those who control the remains. Therefore, depending on the policies developed by institutional collections, researchers may not encounter ethical concerns about data collected from human remains until they start to present and publish results.

BOX 1

The dead in a legislative context

Anatomical collections, such as the Hamann-Todd Human Osteological Collection (curated by the Cleveland Museum of Natural History) and the Robert J. Terry Anatomical Collection (held by the NMNH), provide examples of the ethical complexities that both researchers and curators face. Both are documented collections composed mostly of poor, marginalized individuals who were non-consensually anatomized in the early-to-mid 20th century. Anatomical legislation of the era indicated that individuals who were unclaimed at death and died in taxpayer-funded institutions — including charity or public hospitals, state mental hospitals, city infirmaries and poorhouses — were to be presented to state anatomical boards for distribution to anatomy or funerary schools. Through the process of dissection and curation, these individuals were non-consensually dissected, dehumanized and stripped of their names and identities, which were replaced with cadaver and subject numbers. They ceased to be people and became ‘elements’, ‘specimens’ and ‘objects’ for anthropological consumption that ultimately had critical roles in the creation of the then-nascent discipline of physical anthropology. The discipline was literally built on their bodies, as their skeletons were critical in the creation of human identification methods (for example, ageing, sexing or stature estimation) that enabled physical anthropology to advance. As these collections are documented, we do know the origins and identities of most of the individuals within them. Moving forward, scholars and curators must acknowledge who these individuals were and make

serious efforts to undertake work that not only restores the identities of these individuals, but also engages descendant communities. However, this can be challenging owing to a lack of legislation and professional standards.

Biological anthropology has been shaped by the decades-long fight for legislative protections of the Native American dead in the USA. In the USA, the remains of Native American ancestors can be repatriated under the 1990 Native American Graves Protection and Repatriation Act. The 1989 National Museum of the American Indian Act covers Native ancestral remains at the Smithsonian. Under this law, the NMNH has made approximately 6,000 individuals available for repatriation. These laws address the repatriation of Native American individuals, but not those from other communities.

The World Archaeological Congress co-created the Vermillion Accord with Indigenous community members in 1989 to provide a set of principles for the treatment of human remains. The accord dictates respect for the remains of the dead, for the wishes of the relatives and for the scientific value of human remains. The adoption of these principles signifies World Archaeological Congress’s emphasis on working with Indigenous communities to ensure their rights are protected. More than 30 years later, other archaeological organizations followed suit. The Society for American Archaeology changed their ethics code, noting that “Working with human remains is a privilege, not a right.”

For collaborative and community-centred research to flourish, museums must put more focus on the ethical stewardship of their collections, which can entail information sharing as well as repatriation. Until then, the best decision for researchers may be to not move forward with a project or to pause their research until ethical concerns are resolved. To that end, the Smithsonian Institution recently announced temporary restrictions on studies and acquisitions of human remains while a formal policy is developed¹⁸.

Challenges for ethical stewardship

For large museums with long histories of collecting human remains, data management is complicated. Early record-keeping practices invariably fall short of current standards, and decades of high turnover in personnel can leave gaps in institutional knowledge. At the NMNH, a collection created in the 19th century may have little documentation in digital databases that enables an ethical assessment of its research potential without a lengthy, in-person search of archival materials. There are also limited resources and insufficient staff available to assist with missing or inconsistent data for the enormous holdings accrued by 20th-century anthropologists. Unless one collection is prioritized over others, detailed information about its history may not become widely known, possibly delaying changes in the collection’s availability for continued study.

Curators have substantial control over research on human remains, from building collections to facilitating or approving research

access. Yet they cannot avoid their responsibility to the people of whose remains they are stewards. They should therefore understand, communicate and enforce ethical considerations in evaluating proposed research, as well as model ethical principles and practices in their own studies. These ethical considerations include the informed consent of the individuals or their descendants, which may require a long review and consultation process to identify the proper rightsholders even before actions such as reburial and memorialization are discussed. In their interactions with external researchers, curators can also influence the direction of the field by calling attention to ethical problems as we do here: suggesting or encouraging steps for researcher engagement with descendants and communities, and only permitting research that meets the ethical requirements and standards of the museum, funders, publishers and broader biological anthropology community. Curators can also require that proposed research incorporates an ethics-based component that benefits the individuals being studied.

Decisions about whether and how a museum should retain control over a collection requires involvement from administrative leaders. For instance, the NMNH is developing a plan for ethical returns and shared stewardship of its collections, as mandated by a new Smithsonian-wide policy announced May 2022 (refs. 19,20). The policy empowers the director of the NMNH and other Smithsonian museums to authorize deaccessions on ethical grounds, although the initial lack of initial funding for this programme was criticized²¹.



Fig. 1 | Health sciences students at Virginia Commonwealth University join in prayer for individuals discovered in an abandoned well on campus in 1994. These remains, mostly of people of African descent, are believed to have been discarded in the 19th century by medical staff who dissected the illegally obtained cadavers for anatomy training and surgical practice. Photograph by Kevin Morley, Virginia Commonwealth University.

Human remains are more than a scientific resource, and professional ethical standards need to be formalized in a manner that clearly defines what it means to treat these individuals and their descendants with care and respect. Biological anthropologists need more spaces and encouragement for discussions about where the people in collections came from, why they became objects of research and how their continued study may or may not be appropriate. Involving ethicists in these conversations could be helpful. We suggest that robust coursework in the ethics of data collection from human remains be required for early-career researchers.

Some questions to address before conducting research on human remains might include:

- What are the beliefs and wishes of the deceased and their community concerning the treatment of remains?
- How did the deceased become part of the museum's collections? Would these circumstances meet ethical standards for research today?
- Did the deceased or their descendants consent to proposed research? Can the descendants be identified and consulted?
- Does the research meet ethical criteria of the museum, funders, publishers and the broader biological anthropology community?
- How will the data and other products created by the proposed research (for example, photographs and 3D models) be disseminated? Who has the rights and responsibilities to determine their use?
- Can the stewardship environment be improved? Should a plan for repatriation begin?
- Whom does the proposed research serve?

For institutions, creating clearer guidance on what constitutes ethical research on human remains may prevent missteps and harm. Ideally, research can address questions held by descendant communities or help to 'flesh in' identifying information about the studied individuals²², and aid in recognizing ethical rightsholders who can make

informed decisions about shared stewardship and repatriation. Institutions need to increase and ringfence resources for ethical research and returns to carry out mandates for these policies. Collections staff can help to provide historical depth to collections if they are given the time, space and funding to do so. Transparency and accessibility are necessary to avoid information siloes but must be weighed against considerations of privacy and sensitivity.

What does ethical research on human remains look like?

Ideally, research should be conducted with the consent of the subject or subjects: some institutions have smaller or larger collections of individuals who donated their remains for the purpose of scientific study and/or education. However, research designed with descendant communities – including lineal relatives as well as social descendants – can also exemplify ethical research, especially when those collaborations prioritize the desires of the ethical rightsholders (Fig. 1). By establishing a clientage model of community engagement, the African Burial Ground Project identified and served the interests of descendant community members in designing studies of the hundreds of individuals of African ancestry who were interred in the colonial-era New York cemetery¹³. Informed by this, symbolic descendants of individuals recovered from the East Marshall Street Well site at Virginia Commonwealth University have guided research on these remains as well as their memorialization and interment²³. When it comes to legacy collections in museums, researchers are no less absolved of ethical obligations. For example, genetic studies involving human remains at the NMNH from the eastern Aleutian Islands, collected in the 1930s by early curator Aleš Hrdlička, were carried out following consultations with and permissions from local communities and authorities²⁴. More recently, researchers used ancient pathogen genomics to 'rehumanize' a young African American man in the Robert J. Terry Anatomical Skeletal Collection of the NMNH, which was created from the unclaimed bodies of people who died in public institutions in St Louis during the early-to-mid 20th century²⁵. The authors called for the repatriation of individuals for whom descendants could be identified, and plan to raise awareness of their findings by engaging with community members in St Louis²⁶.

These issues are not exclusive to biological anthropology nor to the USA, as parallel processes and problematic histories exist throughout science worldwide. Our suggestions are hopefully useful for those who are involved with the treatment of the dead in curating institutions, as well as other fields of study. Many natural history collections originate from the colonial exploitation of Indigenous people and their lands, and much knowledge about obstetrics, infectious diseases and cancer (to name only a few subjects) has been derived from the historical mistreatment of Black people by medical institutions. As these varied disciplines also grapple with their complicated legacies, there arise opportunities to learn – themes of critical introspection, active inclusion and decolonizing access across science to challenge the status quo^{27–30}.

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References

- Shapiro, H. L. *Am. Anthropol.* **61**, 371–379 (1959).
- The Field Museum. Human Remains Collection, <https://repatriation.fieldmuseum.org/map> (2022).
- Méheut, C. A Paris museum has 18,000 skulls. It's reluctant to say whose. *New York Times* (28 November 2022).
- Kiefer, P. Anthropologists are still wrestling with their obligations to the living and dead. *popsci.com*, <https://www.popsci.com/science/anthropology-human-remains-guidelines/> (13 April 2022).
- American Anthropological Association. The Commission for the Ethical Treatment of Human Remains (TCETHR). *americananthro.org*, <https://www.americananthro.org/ParticipateAndAdvocate/CommitteeDetail.aspx?ItemNumber=28451> (2021).
- Dunnavant, J., Justinvil, D. & Colwell, C. *Nature* **593**, 337–340 (2021).
- Graham, S., Huffer, D. & Simons, J. *Open Archaeol.* **8**, 196–219 (2022).
- Lepore, J. When Black history is unearthed, who gets to speak for the dead? *The New Yorker* (4 October 2021).
- Harvard University. *Report Of The Steering Committee On Human Remains In University Museum Collections* (Harvard University, 2022).
- Tumin, R. Penn Museum to bury skulls of enslaved people. *The New York Times* (10 August 2022).
- Jones, L. A. Judge tosses opposition to Penn's plan to reburial Black Philadelphians in Morton Collection. *Philadelphia Inquirer* (2 February 2023).
- Tucker Law Group. *The Odyssey of the MOVE Remains: Report of the Independent Investigation into the Demonstrative Display of MOVE Remains at the Penn Museum and Princeton University* (Tucker Law Group, 2021).
- Blakey, M. L. *Mus. Int.* **62**, 61–68 (2010).
- Watkins, R. J. *Hist. Archaeol.* **54**, 17–33 (2020).
- Teeter, W. G., Martinez, D. & Lippert, D. *Int. J. Cult. Property* **28**, 201–209 (2021).
- de la Cova, C. in *Theoretical Approaches in Bioarchaeology* (eds Cheverko, C. M. et al.) 150–169 (Routledge, 2020).
- Riding In, J. *Ariz. State Law J.* **24**, 11–34 (1992).
- Smithsonian Institution. Statement on human remains at the Smithsonian Institution. *si.edu*, <https://www.si.edu/newsdesk/releases/statement-human-remains-smithsonian-institution> (2023).
- Stevens, M. In a nod to changing norms, Smithsonian adopts policy on ethical returns. *New York Times* (3 May 2022).
- Smithsonian Institution. Smithsonian adopts policy on ethical returns. *si.edu*, <https://www.si.edu/newsdesk/releases/smithsonian-adopts-policy-ethical-returns> (2022).
- McGlone, P. Human bones, stolen art: Smithsonian tackles its 'problem' collections. *Washington Post* (27 July 2022).
- Lans, A. M. *Fem. Anthropol.* **2**, 130–142 (2021).
- Virginia Commonwealth University. Recommendations. *emsw.vcu.edu*, <https://emsw.vcu.edu/recommendations/> (accessed 6 February 2023).
- Flegontov, P. et al. *Nature* **570**, 236–240 (2019).
- Ortega, R. P. *Science* **378**, <https://doi.org/10.1126/science.adf1843> (2022).
- Austin, R. M. et al. *Commun. Biol.* **5**, 1050 (2022).
- David, R. & Collins, J. W. *Arch. Dis. Child.* **107**, 535–536 (2022).
- Bobbette, A. et al. *GeoHumanities* **7**, 647–655 (2021).
- Eichbaum, Q. G. et al. *Acad. Med.* **96**, 329–335 (2021).
- Trisos, C. H., Auerbach, J. & Katti, M. *Nat. Ecol. Evol.* **5**, 1205–1212 (2021).

Competing interests

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